

**T.R.**  
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**ENHANCING EFL PREP-CLASS STUDENTS' READING  
COMPREHENSION SKILLS THROUGH VISUAL  
DISCOURSE AT ONDOKUZ MAYIS UNIVERSITY**

Master's Thesis

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Supervisor

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2023

## ACCEPTANCE AND APPROVAL OF THE THESIS

The study entitled “**ENHANCING EFL PREP-CLASS STUDENTS’ READING COMPREHENSION SKILLS THROUGH VISUAL DISCOURSE AT ONDOKUZ MAYIS UNIVERSITY**” prepared by **Selda ALTUNIŞIK**, and supervised by **Prof. Dr. Nalan KIZILTAN**, was found successful and unanimously accepted by committee members as Master thesis, following the examination on the date 4.8.2023 .

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This thesis has been approved by the committee members that already stated above and determined by the Institute Executive Board.

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I hereby declare and undertake that I complied with scientific ethics and academic rules in all stages of my Master's Thesis , that I have referred to each quotation that I use directly or indirectly in the study and that the works I have used consist of those shown in the sources, that it was written in accordance with the institute writing guide and that the situations stated in the article 3, section 9 of the Regulation for TÜBİTAK Research and Publication Ethics Board were not violated.

Is Ethics Committee Necessary?

Yes ☒ (If it necessary, please add appendices.)

No ☐

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## DECLARATION OF THE THESIS STUDY ORIGINALITY REPORT

**Thesis Title :** ENHANCING EFL PREP-CLASS STUDENTS' READING COMPREHENSION SKILLS THROUGH VISUAL DISCOURSE AT ONDOKUZ MAYIS UNIVERSITY

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## ÖZET

### ONDOKUZ MAYIS ÜNİVERSİTESİ İNGİLİZCE HAZIRLIK SINIFI ÖĞRENCİLERİNİN OKUDUĞUNU ANLAMA BECERİLERİNİ GÖRSEL SÖYLEM YOLUYLA GELİŞTİRME

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Okuma, dilin temel becerilerinden biridir, ve okuduğunu anlama, okuma etkinliğinin en önemli sürecidir, ancak öğrenciler metinleri anlama ve yorumlamada bazı zorluklarla karşılaşabilirler. Bu noktada görsel söylem kullanımı öğrencilerin okuduğunu anlama becerilerini geliştirmelerine destek olabilir. Bu amaçla, bu çalışma Ondokuz Mayıs Üniversitesi'ndeki İngilizce hazırlık sınıfı öğrencilerinin okuduğunu anlama becerilerini görsel söylem yoluyla geliştirmeyi amaçlamaktadır. Bu çalışma, deneysel bir çalışmadır ve çalışmaya Ondokuz Mayıs Üniversitesi'nden 50 İngilizce hazırlık sınıfı öğrencisi katılmıştır. Deney grubunda 25 öğrenci, kontrol grubunda ise 25 öğrenci yer almıştır. Deney grubundaki öğrencilere görsel söylem ile okuma metinleri ve okuduklarını ne kadar anladıklarına yönelik anlama soruları verilmiştir. Kontrol grubundaki öğrencilere ise aynı okuma metinleri ve deney grubunda kullanılan aynı anlama soruları herhangi bir görsel destek olmadan verilmiştir. Deney on saat sürmüş ve her okuma oturumundan sonra deney grubundaki öğrencilere Öğrenci Eğilim Ölçeği verilmiştir. Verilerin analizinde Bağımsız Örneklemeler t-testi ve Mann-Whitney U testi kullanılmıştır. Çalışmanın bulguları, metinlerle ilişkili, görsel söylem ölçütlerine göre seçilen görsel kullanımının öğrencilerin okuduğunu anlama becerilerini geliştirdiğini, aynı zamanda öğrenci görüşlerine göre görsel söylemin okuduklarını anlamada öğrencilere yardımcı olduğunu ortaya çıkarmıştır. Ayrıca, görsel söylem yazılı metinlerin verdiği iletiyi güçlendirebileceğinden, yabancı dil sınıflarında ölçütlere uygun görseller daha sık kullanılmalıdır.

**Anahtar Sözcükler:** Görsel söylem, Okuduğunu anlama, Görseller, Dil öğrenimi

## ABSTRACT

### ENHANCING EFL PREP-CLASS STUDENTS' READING COMPREHENSION SKILLS THROUGH VISUAL DISCOURSE AT ONDOKUZ MAYIS UNIVERSITY

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Reading is one of the fundamental skills in language, and comprehension is the heart of reading activity, however, students may face some difficulties while understanding and interpreting the texts. At this point, using visual discourse may support students to develop their reading comprehension skills. This study aims at enhancing EFL prep-class students' reading comprehension skills through visual discourse at Ondokuz Mayıs University. The current study is an experimental study and 50 EFL prep-class students from Ondokuz Mayıs University participated in the study. There were 25 students in the experimental group and 25 students in the control group. The students in the experimental group were given reading texts with visual discourse accompanied and comprehension questions. The same reading texts and comprehension questions were given to the students in the control group without any visual support. The experiment lasted for ten hours and after each reading session, the students in the experimental group were given Students' Disposition Scale. Independent Samples t-test and Mann-Whitney U test were used for the analysis of the data. The findings of the study indicate that the use of visual discourse enhances the reading comprehension skills of the students and the students state that the texts supported by visuals enhance their reading comprehension. Moreover, appropriate visuals should be utilized more frequently in language classrooms, since visual discourse may strengthen the message given by the written texts.

**Keywords:** Visual discourse, Reading comprehension, Visuals, Language learning

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## CONTENTS

ACCEPTANCE AND APPROVAL OF THE THESIS.....	i
DECLARATION OF COMPLIANCE WITH SCIENTIFIC ETHIC .....	ii
DECLARATION OF THE THESIS STUDY ORIGINALITY REPORT .....	ii
ÖZET .....	iii
ABSTRACT .....	iv
ACKNOWLEDGEMENTS .....	v
CONTENTS.....	vi
SYMBOLS AND ABBREVIATIONS.....	viii
FIGURES LEGENDS.....	ix
TABLES LEGENDS.....	x
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1. Problem Statement.....	1
1.2. Aim of the Study .....	2
<b>2. REVIEW OF LITERATURE.....</b>	<b>3</b>
2.1. Defining Reading .....	3
2.2. Comprehension of Reading.....	4
2.3. Effective Reading Comprehension and Comprehension Problems in Reading.....	5
2.4. Scaffolding Strategies for Reading and Visuals as one of the Suggested Strategies...	10
2.5. Visual Discourse .....	13
2.6. Visual Discourse and Reading Comprehension .....	14
2.7. Visual Discourse Analysis .....	16
2.7.1. Ideational Metafunction .....	17
2.7.2. Interpersonal Metafunction .....	20
2.7.3. Textual Metafunction.....	22
<b>3. METHODOLOGY .....</b>	<b>26</b>
3.1. Research Design.....	26
3.2. Participants and Setting.....	26
3.3. Data Collection Tools and Procedures.....	26
<b>4. FINDINGS AND DISCUSSIONS.....</b>	<b>31</b>
4.1. Present Study .....	31
4.2. The Results and Discussion .....	31
4.2.1. Reading Text 1 .....	31
4.2.1.1. The Most Preferred Visual .....	32
4.2.1.2. The Least Preferred Visual .....	34
4.2.2. Reading Text 2.....	34
4.2.2.1. The Most Preferred Visual.....	36
4.2.2.2. The Least Preferred Visual .....	37
4.2.3. Reading Text 3.....	38
4.2.3.1. The Most Preferred Visual .....	39
4.2.3.2. The Least Preferred Visual .....	40
4.2.4. Reading Text 4.....	41
4.2.4.1. The Most Preferred Visual .....	42
4.2.4.2. The Least Preferred Visual .....	43
4.2.5. Reading Text 5.....	44
4.2.5.1. The Most Preferred Visual .....	46
4.2.5.2. The Least Preferred Visual .....	47
4.2.6. Reading Text 6.....	47
4.2.6.1. The Most Preferred Visual .....	49
4.2.6.2. The Least Preferred Visual .....	49
4.2.7. Reading Text 7.....	50
4.2.7.1. The Most Preferred Visual .....	52
4.2.7.2. The Least Preferred Visual .....	53
4.2.8. Reading Text 8.....	53

4.2.8.1. The Most Preferred Visual.....	55
4.2.8.2. The Least Preferred Visual .....	56
4.2.9. Reading Text 9.....	56
4.2.9.1. The Most Preferred Visual.....	58
4.2.9.2. The Least Preferred Visual .....	59
4.2.10. Reading Text 10.....	60
4.2.10.1. The Most Preferred Visual.....	61
4.2.10.2. The Least Preferred Visual .....	62
<b>5. CONCLUSION .....</b>	<b>67</b>
5.1. Concluding Remarks.....	67
5.2. Suggestions for Teachers .....	68
5.3. Limitation of the Study and Suggestions for Further Studies .....	69
<b>REFERENCES.....</b>	<b>71</b>
<b>APPENDICES .....</b>	<b>74</b>
<b>CURRICULUM VITAE.....</b>	<b>99</b>





## **SYMBOLS AND ABBREVIATIONS**

CEFR	: Common European Framework of Reference for Languages
DCT	: Dual Coding Theory
EFL	: English as a Foreign Language
VDA	: Visual Discourse Analysis



## FIGURES LEGENDS

Figure 2.1. Some of the component processes in reading .....	2
Figure 2.2. Processes in reading comprehension .....	6
Figure 2.3. Analysis of ideational meaning. ....	20
Figure 2.4. Analysis of interpersonal meaning .....	22
Figure 2.5. The dimensions of visual space .....	23
Figure 2.6. The textual meaning in a visual .....	24
Figure 2.7. Components of VDA .....	24
Figure 3.1. Rubric for the analysis of the visuals.....	30
Figure 4.1. Visual 12.....	32
Figure 4.2. Visual 3.....	34
Figure 4.3. Visual 20.....	36
Figure 4.4. Visual 2.....	37
Figure 4.5. Visual 2.....	39
Figure 4.6. Visual 3.....	40
Figure 4.7. Visual 3.....	42
Figure 4.8. Visual 13.....	43
Figure 4.9. Visual 3.....	46
Figure 4.10. Visual 2.....	47
Figure 4.11. Visual 20.....	49
Figure 4.12. Visual 10.....	50
Figure 4.13. Visual 7.....	52
Figure 4.14. Visual 1.....	53
Figure 4.15. Visual 7.....	55
Figure 4.16. Visual 9.....	56
Figure 4.17. Visual 12.....	58
Figure 4.18. Visual 2.....	59
Figure 4.19. Visual 4.....	61
Figure 4.20. Visual 1.....	62
Figure 5.1. A rubric for teachers to choose appropriate visuals.....	70

## TABLES LEGENDS

Table 2.1. Process and participant types .....	18
Table 3.1. The framework of the reading texts .....	27
Table 4.1. Cross table of the achievement scores of the students in the experimental and control groups for the first text.....	31
Table 4.2. The frequency of the students' choices of visuals for the first reading text.....	32
Table 4.3. Cross table of the achievement scores of the students in the experimental and control groups for the second text .....	35
Table 4.4. The frequency of students' choices of visuals for the second reading text (Part I) .....	35
Table 4.5. The frequency of students' choices of visuals for the second reading text (Part II) .....	36
Table 4.6. Cross table of the achievement scores of the students in the experimental and control groups for the third text.....	38
Table 4.7. The frequency of the students' choices of visuals for the third reading text .....	39
Table 4.8. Cross table of the achievement scores of the students in the experimental and control groups for the fourth text.....	41
Table 4.9. The frequency of the students' choices of visuals for the fourth reading text .....	42
Table 4.10. Cross table of the achievement scores of the students in the experimental and control groups for the fifth text.....	44
Table 4.11. The frequency of the students' choices of visuals for the fifth reading text (Part I).....	45
Table 4.12. The frequency of the students' choices of visuals for the fifth reading text (Part II) .....	45
Table 4.13. Cross table of the achievement scores of the students in the experimental and control groups for the sixth text.....	47
Table 4.14. The frequency of the students' choices of visuals for the sixth reading text (Part I).....	48
Table 4.15. The frequency of the students' choices of visuals for the sixth reading text (Part II) .....	48
Table 4.16. Cross table of the achievement scores of the students in the experimental and control groups for the seventh text .....	50
Table 4.17. The frequency of the students' choices of visuals for the seventh reading text..	51
Table 4.18. Cross table of the achievement scores of the students in the experimental and control groups for the eighth text .....	54
Table 4.19. The frequency of the students' choices of visuals for the eighth reading text (Part I).....	54
Table 4.20. The frequency of the students' choices of visuals for the eighth reading text (Part II) .....	55
Table 4.21. Cross table of the achievement scores of the students in the experimental and control groups for the ninth text .....	57
Table 4.22. The frequency of the students' choices of visuals for the ninth reading text (Part I).....	57

Table 4.23. The frequency of the students' choices of visuals for the ninth reading text (Part II) .....	58
Table 4.24. Cross table of the achievement scores of the students in the experimental and control groups for the tenth text .....	60
Table 4.25. The frequency of the students' choices of visuals for the tenth reading text (Part I).....	60
Table 4.26. The frequency of the students' choices of visuals for the tenth reading text (Part II) .....	61
Table 4.27. Differences between the achievement scores of the students in the experimental and control groups .....	63
Table 4.28. The frequency of the students' responses for the first statement in the scale .....	64
Table 4.29. The frequency of the students' responses for the second statement in the scale.....	64
Table 4.30. The frequency of the students' responses for the third statement in the scale .....	65



# **1. INTRODUCTION**

Act of reading is a kind of ability that we use intentionally or unintentionally in our everyday life. It is among the basic skills in language and we encounter with different situations in our daily life in which reading ability has great importance. For instance, we read the names of the products that we buy in a supermarket or we read the names of stops while travelling on buses or trains. Thus, having the ability to read and comprehending what we read become significant. During comprehension process, visuals in text may help readers to understand and comprehend the text they read. We are living in a world of visual information, we all are surrounded by visuals, so the visuals dominate society more and more each day. With the enhancement of technology, the visuals are getting more important as people interact more with computers and visually aided information. In addition, visuals not only give information, but they also communicate and interact with the viewers to convey several types of meanings, special messages and ideas as language does with the texts. Thus, visuals play a significant role in every part of our life. Education is one of the areas in which visuals have an important place. It is commonly accepted that if the given information is supported by visuals, people may remember the information better when compared to the verbally given information. Thus, in learning and teaching environments visuals are widely used and the significance of visuals is acknowledged in language learning, as well. It is assumed that visuals may help second language learners to improve their reading comprehension skills. Therefore, this study attempts to investigate the enhancement of English as a Foreign Language (EFL) prep-class students' reading comprehension skills through visual discourse at Ondokuz Mayıs University.

## **1.1. Problem Statement**

Reading comprehension is one of the fundamental skills in language and people use their reading skills to read billboards, books, newspapers, magazines and different kinds of texts in their native tongue throughout the day. To understand and interpret the texts they read, readers use their comprehension skills, as well. Moreover, it is significant to know that more and more people across the world learn to read in second language for various purposes. Thus, reading comprehension skills become important for people, especially for students in their first and second languages. Learners of second language should be good readers to be succesful in

language they learn and this can be achieved by developing their reading comprehension skills. There are several ways of improving reading comprehension skills of learners and using visuals with reading texts is one of these ways. Students may face some difficulties in understanding and interpreting the texts they read because of several reasons. At this point, visuals in text may function as facilitators to construct meaning for learners. Therefore, enhancing reading comprehension skills of learners through visual discourse should be investigated.

### **1.2. Aim of the Study**

Using visual discourse in reading texts may be facilitator for students to comprehend the text, still the use of visual discourse in developing reading comprehension skills receives less attention than other study skills. To the best of our knowledge, the number of studies conducted on the use of visual discourse in developing reading comprehension skills of EFL Prep-Class students in Turkey is limited. The need for investigating the place of visuals in reading comprehension seems clear. Therefore, this study attempts to investigate the use of visual discourse in enhancing reading comprehension skills of EFL prep-class students at Ondokuz Mayıs University. It aims to answer the following question:

- To what extent may the visual discourse affect the reading comprehension skills of EFL Prep-class learners?
- Is there a significant difference between the achievement scores of the experimental group and those of the control group?
- What is the disposition of EFL Prep-Class students to visuals in reading skills?

## **2. REVIEW OF LITERATURE**

### **2.1. Defining Reading**

Reading does not have innate roots and people were not born with the ability of reading, however, when they acquire this ability, it assists them to make sense of the world around them, improve their life skills, expand their lives and the ways they think. Most of the people around the world can read and act of reading may be done with different purposes at different levels of comprehension. For instance, people can read the general texts, such as social media messages, ads, price tags of the products, and so forth. They may also read more complicated texts, such as academic texts and books and this type of reading act generally requires readers to use their comprehension skills more to understand, interpret, and synthesize what they read. Thus, it is evident that reading is an essential skill and people living in today's world should be good readers in order to fulfill the necessities of modern societies. Moreover, many people all around the world can read in a second language for several reasons, such as academic studies, better job opportunities, travelling etc. Thus, it can be said that ability of reading is a concern for people not only in their native tongue but also in their second language to catch up with the necessities and the opportunities of the modern life. At this point, definition of reading skill needs to be argued.

Many definitions of reading have been made and Grabe (2008) discusses one of the definitions of reading made by Urquhart & Weir (1998) in which they simply define reading as “the process of receiving and interpreting information encoded in the language form via the medium of print” (p. 22). However, Grabe (2008) states that this definition does not reflect the complexity of reading activity, it is because reading is a combination of many processes, and cannot be described by a simple expression. Readers coordinate all of these processes while reading, however “Reading is centrally a comprehending process” (Grabe 2008, p. 14) and comprehension is the main goal of the readers. In order to achieve this goal, readers make use of many skills and Oakhill, Cain, & Elbro (2014) say that word reading ability, vocabulary knowledge, syntactic skills, memory and discourse level skills, knowledge about text structure and metacognitive skills of readers work together for better comprehension.

## 2.2. Comprehension of Reading

The comprehension process begins with the decoding of the words in a text. Beyond decoding the words, comprehension also requires good language understanding which means that the reader needs to understand the meaning of the words and the meaning of the sentences formed by the words. As a final stage of the comprehension process, these words and sentences should be combined into a meaningful whole by the reader. In line with these views, according to Simple View of Reading proposed by Gough & Tunmer (1986), word decoding ability and language comprehension ability are two independent but highly significant skills for reading activity. As shown in Figure 2.1., word reading ability involves letter-sound knowledge, accurate word decoding and automaticity in decoding. Language comprehension ability involves activating word meanings, understanding sentences, making inferences, comprehension monitoring and understanding text structure (Oakhill, Cain, & Elbro, 2014).

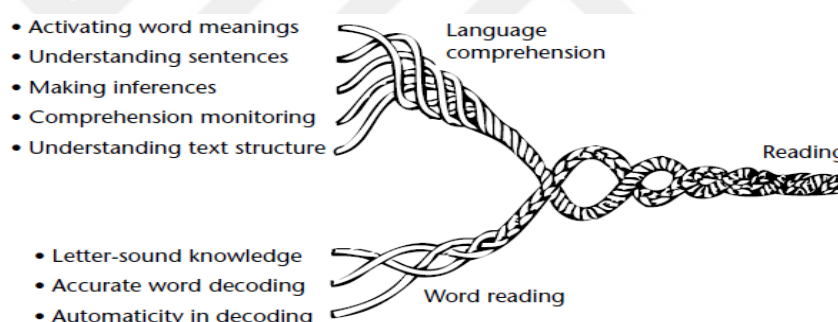


Figure 2.1. Some of the component processes of reading (Oakhill, Cain, & Elbro, 2014)

Word reading ability is the initial step of reading activity and one of the significant processes helping reading comprehension. To emphasize the importance of word reading for the success of comprehension, Perfetti (2007) says “Comprehension depends on successful word reading. Skill differences in comprehension can arise from skill differences in word reading.” (p. 357). Recognition of words in an accurate, automatic and a rapid way is crucial for word reading ability, and a reader must “activate links between the graphic form and phonological information, activate appropriate semantic and syntactic resources, recognize morphological affixation in more complex word forms, and access her or his mental lexicon.” (Grabe, 2008, p. 23). Word reading ability should be supported for the success of reading activity. However, reading activity does not solely depend



on word reading ability. Language comprehension ability is another significant component of reading. Interplay of word reading ability and language comprehension ability is necessary for a successful reading.

Language comprehension ability helps reader to construct a mental model of the text. When readers start reading a text, they immediately start developing a mental representation of the text in their mind which makes the meaning of the text easy to understand and remember for readers. There are some sub-skills in language comprehension ability which interact with each other for the development of mental model of the text. First of all, readers must recognize the words and activate their meaning so that they can figure out how the words are related to each other and they can link sentences to understand the overall text. Making inferences is another sub-skill of language comprehension which requires more than understanding the meaning of sentences. Readers should combine their background information with the information given in a text to make inferences. Making inferences helps readers to link the ideas in the text for better comprehension. Comprehension monitoring is another sub-skill which enables readers to think on their reading activity and to find out whether the text makes sense or not. Language comprehension ability involves understanding text structure, as well. Having the knowledge of the structure of the text may support readers while creating a mental model of the text.

The enhancement in the sub-skills of word reading ability and language comprehension ability may help readers to build mental model of the text and enhance their reading comprehension skill.

### **2.3. Effective Reading Comprehension and Comprehension Problems in Reading**

The complexity of reading comprehension evidences that cognitive processes which work during reading comprehension are complicated, as well. In order to understand how effective reading comprehension is built, the role of these cognitive processes should be recognized.

Effective reading comprehension combines lower-level processes and higher level processes and these two processes work simultaneously during comprehension. Lower-level processes, referred to as bottom-up processes, involve the recognizing words, using grammatical information, constructing clause-level meaning, and with

the help of working memory resources, these processes are operated. On the other hand, higher-level processes, also known as top-down processes, include building text model and situation model, strategies, goals, inferences, background knowledge and comprehension monitoring. It is significant to note that top-down and bottom-up processes do not work in isolation, rather their interaction seems important for the effective reading comprehension. On this point, Grabe (2008) states “The processes centrally involved in reading comprehension are so remarkably fine-tuned, and integrate so efficiently, that fluent reading abilities border on the miraculous.” (p.56).

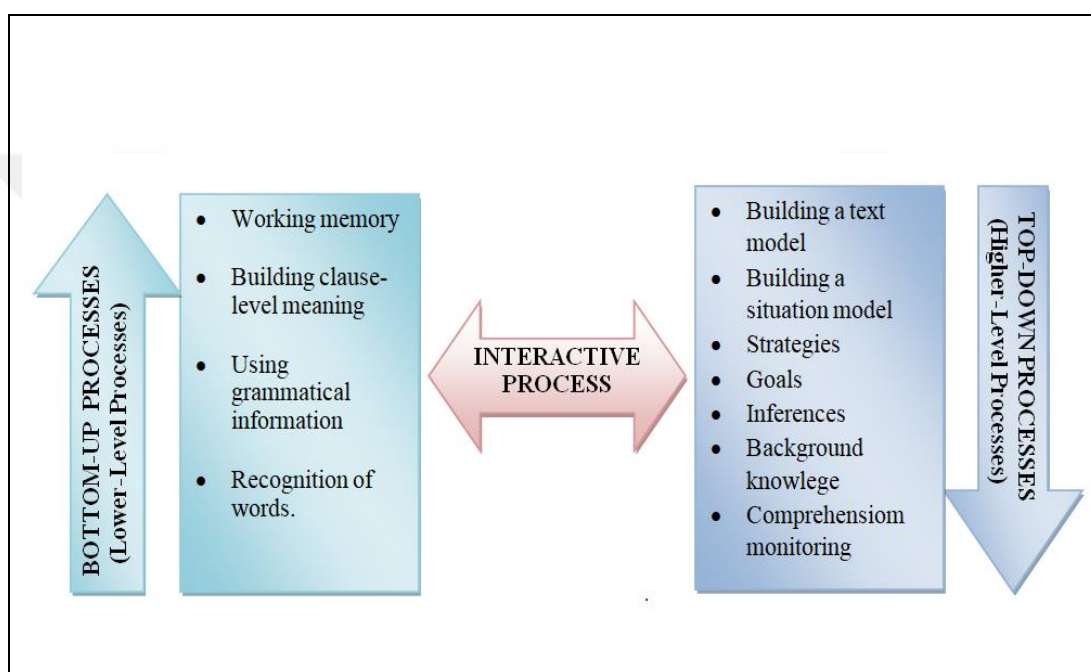


Figure 2.2. Processes in reading comprehension

*Note.* This figure has been developed on the basis of Grabe’s (2008) *Reading in a Second Language* book.

As is shown in Figure 2.2., effective reading comprehension develops out of the combination of top-down and bottom-up processes and the problems which may be experienced by readers at any level of these processes may end up with the failure of reading comprehension.

Since language comprehension ability is said to be the key for the success of reading activity, both in L1 and L2 settings, vocabulary knowledge is strongly associated with effective reading comprehension (Thorndike 1973, Verhoeven, van Leeuwe & Vermeer, 2011). Thus, readers need to read the words and know their meaning in order to comprehend the text well. If most of the words in a text are

unknown or ambiguous for the readers, it is very difficult for them to understand the text. For this reason, the level of readers' vocabulary knowledge should be increased in order to enhance their reading comprehension.

Knowing the meaning of words is evidently vital for reading comprehension. However, not only knowing the meanings of the words but also knowing how these words form and link sentences is necessary to create a mental model of the text, that is, comprehending sentences is another significant step to comprehend the text well. For a good reading comprehension, grasping syntactic structures of sentences is necessary as difficulties in comprehension may arise from inadequate syntactic knowledge. However, syntactic knowledge may not be one of the fundamental predictors of reading comprehension. Oakhill and Cain (2012) have found that their "measure of grammatical knowledge (comprehension of single sentences) was significantly related to reading comprehension (comprehension of passages) at each time point but did not emerge as a unique predictor." (p. 112). They further state that for the comprehension of a text, the grammatical knowledge is not insignificant, however its role is not strong when compared to the significance of other processes. Nevertheless, although syntactic knowledge is not the unique predictor, it contributes to reading comprehension and it deserves attention for successful comprehension. Furthermore, during reading activity, comprehension of some sentence types may be more determinant than others for the accomplishment of text comprehension. Sentences can be classified as simple, complex, compound and compound-complex sentences. Simple sentences consist of one independent clause and do not include conjunctions or dependent clause. Complex sentences consist of at least one independent and one dependent clause. Compound sentences include at least two independent clauses which are connected by a comma and a conjunction. A compound-complex sentences comprise several independent clauses and at least one dependent clause. It may be challenging for the reader to comprehend sentences in which words intervene between items that are generally closer together in a properly constructed sentence. Thus, simple sentences might be assumed as basic sentences and the rest might be labelled as difficult sentences for the readers. The results of the study by Ecalle et al. (2013) have revealed that reading comprehension scores of readers decrease as the linguistic complexity of the sentences increases. Sorenson Duncan et al. (2021) have handled the issue from a different aspect and they have

reported that understanding of basic sentences is significantly linked to reading comprehension scores of readers and supports their reading comprehension. These studies provide evidences that the type of sentences has a substantial impact on comprehension of the text and should be paid attention. Apart from grammatical knowledge, cohesive ties are also important, as the meaning of isolated sentences does not help to create coherent text. Sentences should be connected to each other to be integrated into a meaningful whole. This can be achieved by cohesive ties. The function of cohesive ties should be known by the readers. By this way, they can build coherent mental representation of the text for better reading comprehension.

To create a mental model of the text, readers have to do more than understanding the words and the sentences, they should make several inferences by combining the background information they already have with the information presented in the text. By this way, they can connect the ideas in the text and construct the mental model for adequate comprehension. However, different readers may reach different inferences based on the same reading text. In addition, the number of inferences made by readers from a text is countless. Some of these inferences may support readers to comprehend the text while other inferences may prevent them from understanding the ideas in the text. Thus, inference making should be restricted by the readers by focusing on the necessary inferences and omitting the redundant ones. During reading activity, readers focus on what they are reading and consistently think on their reading activity to reflect on their understanding and to make sense of the text. If they realize that they can not connect the ideas in the text and the text does not make sense they try to make up for failure. By reading reflectively, readers actually monitor their comprehension. Comprehension monitoring is one of the processes in reading activity and it should be improved to enhance reading comprehension skill of readers.

Understanding text structure is also a significant component of reading activity. When readers are familiar with the text structure, they may use this knowledge to guide and build their reading comprehension. It is because, when readers have the knowledge of text structure “they know what to expect from different parts of the text, where to search for particular types of information, and how the different parts of the text are linked together.” (Oakhill, Cain, & Elbro, 2014, p. 82). Text types can be divided into two categories; narrative texts and informational (expository) texts

and these text types use different organizational patterns for presenting information to the readers. Narrative texts generally aim at telling a story to the readers which can be fictional or non-fictional. They mainly follow a typical structure and involve introduction which presents information about the characters, setting, events and conflict of the story; middle which includes unfolding of the conflict; and an end presenting the resolving of the conflict. On the other hand, informational (expository) texts generally give information or descriptions to the readers and they may follow a large variety of structures, such as compare and contrast, cause and effect, description, problem and solution, and so on. As can be seen, different text types follow different structures and since the knowledge of text structure aids readers to comprehend relations between information presented in the text and helps them to build mental model of the text, readers need to be aware of the text structure.

Successful reading comprehension has several definitions, however, most definitions include a common constituent which is constructing of a mental representation of the text in reader's mind. The continuous interaction between the text and the linguistic, pragmatic and world knowledge of the reader is necessary for the construction of the mental model (Glenberg et al. 1987). The features of mental models are explained by Glenberg et al. (1987) as follows:

- Mental models are updatable, since they can be modified when the new information is added,
- Mental models are manipulable as parts of the mental representations can be reorganized and can construct new connections,
- Mental models are perceptual-like since they combine information from different senses,
- Mental models are significant for the comprehension of discourse.

At this point, it is important to state that what gives mental models their power is the way information is arranged in the working memory (Glenberg & Langston, 1992). Working memory is an active function of long term memory which helps reader to store information from one sentence while reading and processing the next sentence i.e. it has the functions of active storage and processing with limited capacity (Cain, 2006). Since the mental models represent what the text is about, constructing mental model is the key for the comprehension and the interpretation of

the text. Thus, the underlying processes of mental model construction should be developed for an adequate comprehension.

#### **2.4. Scaffolding Strategies for Reading Comprehension and Visuals as one of the Suggested Strategies in Reading**

Word reading ability is the first step to efficient reading comprehension and one of the most significant processes promoting comprehension. Thus, word reading ability of readers should be improved. There are many ways to develop readers' vocabulary knowledge. One of these ways is integrating direct vocabulary instruction with developing vocabulary learning strategies, extensive reading to learn from the context, and motivation to use words (Grabe, 2008). One of the techniques that improves vocabulary via direct instruction is exposure to words. Exposure to words for several times in different contexts will develop learners' vocabulary learning (Nation, 2001). Moreover, in order to comprehend the text well, readers should know the meanings of unknown words and ambiguous words which have two or more definitions. For the unknown and ambiguous words in a text, readers may use glosses which give the definitions of words in a simple way. The use of glossing words supports readers to learn words which are present in a text (Schmitt, 2000). The techniques to teach vocabulary through direct instruction are numerous. These techniques should also be combined with vocabulary learning strategies so that readers can carry on learning words independently. Using dictionaries, flash cards, word lists may be counted among vocabulary learning strategies which support readers for learning vocabulary (Gardner, 2007; Schmitt, 2000). Visual support can be proposed as an another way to enhance readers' vocabulary knowledge. Providing necessary visuals may support readers to work out the meaning of unknown and ambiguous words of the texts. Bazeli & Olle (1995) suggest that video, drawing, computer, visual perception, and organizational visuals are some of the practical visual methods which enhance vocabulary. They further state the huge effect of visuals on students' lives, and suggest visuals as practical tools to improve vocabulary and reading comprehension skills of students. The above mentioned implications for vocabulary development may be exploited by the readers and the instructors for enhancing language comprehension ability and to create a mental model of the text for a better reading comprehension.

Vocabulary knowledge is significant for reading comprehension. Further to that, the construction of coherent mental representation or structures is the aim of comprehension (Gernsbacher, 1997). Thus, readers should know how to form sentences by using words and how to connect sentences to each other coherently. Understanding syntactic structure of sentences and some particular sentence types is necessary for readers during reading activity. Even though syntactic skill is not counted among the main predictors of reading comprehension, it is considerably related to it (Oakhill & Cain, 2012). Therefore, readers should be taught grammatical structures when they encounter with the structures several times in a text or when the structures affect comprehension (Grabe, 2005). Thus, exposing readers to text, which are written well, may be more beneficial than directly teaching them complex grammatical structures. The structures from the text can be used as the sources of input to teach syntactic structures implicitly. Moreover, visuals may be exploited in grammar teaching tasks, as Novawan (2012) states that visuals improve inductive, consciousness raising, and communicative grammar teaching methods. In addition to syntactic structures, cohesive ties are also helpful for readers during reading comprehension process. Thus, they should be taught cohesive ties and their use for the success of reading activity. Readers' understanding of cohesive ties can be boosted by highlighting these ties in a text before reading (Geva & Ryan, 1985) so that readers can be aware of these ties and understand their functions in order to connect the ideas coherently in a text. Moreover, visuals may be used to represent the chain of events in a text which can be helpful for readers to understand the meanings and the functions of cohesive ties. Results of studies by Cain (2003) and Oakhill et al. (1990) support the idea that using visuals improves the performance of using connectives to link the events coherently.

Inferencing is another fundamental skill to build mental model of the text while reading. To improve inference making ability of the readers, questions can be asked by the teacher during reading activity to make students think on the text and make necessary inferences. Questioning may positively affect readers' inference making ability (Hansen & Pearson, 1983; Yuill & Oakhill, 1988) and may improve reading comprehension. Additionally, in order to help readers to draw necessary inferences, visuals can be used. Visuals accompanying the reading text may assist readers to avoid non-necessary inferences, so that readers may build more coherent mental

model of the text and understand the text better. Furthermore, the building blocks of inference making are strong memory, good vocabulary knowledge and world knowledge (Oakhill, Cain, & Elbro, 2014). If one of these necessities is weak, then visuals presented with the text may help readers to minimize the effect of this weakness and to generate inferences.

While reading, readers continuously monitor their comprehension by checking whether the text makes sense for them. One way to improve reader's comprehension monitoring skill can be to make readers to read texts which have errors so that they can learn to detect the errors they may encounter during reading. Moreover, they can learn to think why the comprehension fails and what can be done to solve these problems. In addition, readers can be encouraged to summarize what they have read (Oakhill, Cain, & Elbro, 2014). By summarising the text they read, reader may evaluate whether they have understood the text or not. Providing visuals with the text may also be helpful for readers to monitor their comprehension as visuals that summarising the text as a series of combined pictures may assist them to check their comprehension and improve comprehension monitoring skill.

Having the knowledge of text structure is significant for readers to build their reading comprehension and the structure of text can differentiate across text types. For narrative texts (having core elements, such as characters, setting, plot, resolution and mainly following the structure of introduction, middle and end), it can be said that when readers have difficulty in understanding the core elements and the structure, they may have difficulty in comprehending the texts. Thus, teaching narrative text structure awareness as a comprehension strategy may help readers to improve their comprehension of this text type (Dymock, 2007). In addition to narrative texts, readers should be familiar with the informative texts, as well. Informative texts include wide range of structures and readers should have the knowledge of these different structures in order to comprehend the text well. At this point, graphic organizers as a kind of visual may be used to enhance readers' knowledge of text structure for different text types. With the help of graphic organizers, readers can visualise different text structure and their comprehension may improve for effective reading.

Both in L1 and L2 settings, the implications discussed above may be beneficial for readers to enhance their reading comprehension by supporting and improving the



sub-processes of comprehension ability. Especially the visuals may be exploited as a powerful tool in every stage of comprehension process.

## **2.5. Visual Discourse**

In today's world, there are many factors which have led the society of our modern age to become surrounded and dominated by the visuals. The development of technology is one of these factors which helps people to generate and spread visuals more easily. As a result, people of modern world have started to interact more with visuals and the increasing impact of visuals becomes visible in every part of our lives. At this point, it is necessary to look at some definitions of visual. The term visual is explained by Oxford Advanced Learners' Dictionary (2006) as "a picture, map, piece of film, etc. used to make an article or a talk easier to understand or more interesting". Moreover, Canning-Wilson (2001) states that visual can come in the form of illustrations, visuals, pictures, perceptions, mental images, figures, impressions, likeness, replicas, reproductions, or anything that helps learners to see an immediate meaning. Kayacan (2018) says that visuals address to any element of something that depends on sight. Some examples of visuals are pictures, photographs, maps, diagrams, illustrations, flashcards, picture books, graphics and cartoons.

Visuals are not only used to give information, they also interact and communicate with their viewers and they certainly have social meaning. At this juncture, the concept of visual communication emerges as a significant feature of contemporary world to mention. Visual communication comprises a large range of visual types and its role is impactful for the transmission of ideas and information. With the dissemination of visual messages and visual communication in daily life, visual literacy has become the required ability of modern people. A person should be visually literate in order to grasp the intended meaning of visual communication. A detailed definition of visual literacy has been made by the Association of College and Research Libraries (ACRL) as:

... a set of abilities that enables an individual to effectively find, interpret, evaluate, use, and create images and visual media. Visual literacy skills equip a learner to understand and analyze the contextual, cultural, ethical, aesthetic, intellectual, and technical components involved in the production and use of visual materials. A visually literate individual is both a critical consumer of visual media and a component contributor to a body of shared knowledge and culture (ACRL, 2011, para. 2).

Visual literacy is becoming an increasingly significant skill of society as information is conveyed not only through written or oral texts but also through visual texts. Visuals have huge impact on many areas in life and their effects are apparent in educational context as well. According to Debes (1968), learning experiences of individuals should contribute to the enhancement of their visual literacy skills. To highlight the importance of visual literacy in education, Apkon (2013) states: “Throughout the history of education, communication has been at the centre of the experience, regardless of subject matter. We can’t learn (or teach) what we can’t communicate and, increasingly, that communication is being done through visual media.” (p. 213). Thus, equipping learners with the skills of visual literacy should be among the goals of education policies.

## **2.6. Visual Discourse and Reading Comprehension**

The aim of many teachers is to help their students to enhance their reading comprehension skills in their native and foreign languages. For this development, it is significant to use a great variety of resources in the language classroom. Visuals are among these resources. Wright (1989) says that verbal language constitutes only a part of the way we usually get the meaning from the contexts. What we hear and read affect us while we predict, deduce and infer. What is more, the things we see play an important role in affecting us. Therefore, it can be said that visuals support learners to get the meaning of verbal and written text and visuals make learning process more meaningful and memorable and have a key role in teaching four basic language skills, i.e. reading, writing, speaking and listening.

Kayacan (2018) presents the summary of Bowman (2011) for reasons of using visuals in teaching as follows:

1. “*The brain loves images*”. The more detailed, colourful, eye-catching, descriptive and emotional the image, the longer the brain stays interested.
2. “*Images evoke emotion*”. Images evoke the kind of emotion that words alone cannot achieve. Images can be humorous or serious, simple or complex; whatever type of image is included, learners react emotionally and, in turn, pay more attention and retain more later.
3. “*Images trigger long-term memory*”. Long-term memory relies on images and their associated emotions. The more image-rich you can make the content, the more it will be retained.
4. “*Images create shortcuts*”. Describing even the simplest procedure takes time. It takes far less time to demonstrate the same procedure. (p. 30)

Due to the above mentioned reasons, the integration of visuals in enhancing reading comprehension skills is significant as they facilitate learning process by helping readers to predict and infer information, improve clarity, and give meaning to text.

When readers are left with only text while reading, they may have to interpret meaning through words which may result in difficulties in comprehension and the text may seem more complicated for the reader. In such a case, visuals accompanying text may help reader to comprehend the text. In order to demonstrate the ways in which visuals can be exploited to develop readers' comprehension of text, Seburn (2017) has separated two uses of visuals with reading texts, 'decoration based' and 'utility based'. Decoration based visuals, as the name suggests, are used for decoration to take away the monotony of the text. These types of visuals may engage the attention of reader, however, they may not support comprehension of the text. Utility-based visuals, on the other hand, support readers to understand meaning of individual words and text concepts so that readers may improve their comprehension with the assistance of utility- based visuals. Therefore, teachers should consider the effect of visuals on comprehension while selecting the visuals for the reading text.

Reading is one of the essential language skills for the students learning English as a foreign or second language. Research has demonstrated that reading comprehension skills of learners can be improved by using visuals in text. The role of visuals in giving the meaning to text has its roots in the work of Paivio (1971). According to Paivio's dual coding theory (DCT), human brain uses two distinct but continuously interacting systems i.e. the verbal system and the imagery system. These systems involve different representational units which are called words and images. The verbal system is related to linguistic codes, such as words, speech or language and the imagery system deals with visual codes, such as images or pictures (Pan & Pan, 2009). Paivio (1971) claims that verbal system is always facilitated by the nonverbal imagery system. When verbal and imagery systems interact with each other, they work better. Therefore, activating both verbal and visual systems may facilitate the interpretation and comprehension of reading text. Thus, while suggesting additional contextual information to comprehension, visuals may also

trigger referential connections between verbal and nonverbal systems and provide an extra way to comprehension (Kayacan, 2018).

Many studies have been conducted to see the effects of visuals on learner's reading comprehension skills. One of them is conducted by Pan & Pan (2009) and they investigate the extent to which the presence of pictures in text benefits low-proficiency Taiwanese EFL college students. Results show that the low-proficiency learners have significantly higher scores when pictures are used with the text. In his study, Erfani (2012) investigates the impact of using pictorial context in English for Specific Purposes (ESP) reading comprehension ability and the results of the study demonstrate that the reading comprehension skills of ESP students improve when pictorial context is used. In another study, Merç(2013) studies the effects of comic strip on the reading comprehension of Turkish EFL students and the findings of the study indicate that all students with a comic strip effect, regardless of proficiency and text level, performed better than the ones without the comic strips.

## **2.7. Visual Discourse Analysis**

Cook (1989) states “Discourse analysis examines how stretches of language, considered in their full textual, social, and psychological context, become meaningful and unified for their users.” (p. ix) Discourses are unified for their users because the background of these users affects their interpretation of discourses. Today's world can be called as the world of visual information. With the development of technology, the visuals are getting more significant in many fields, as people interact more with computers and visually aided information. Discourse is one of these areas which was generally related to spoken and written language in the past, however, it has turned its face to extralinguistic features and semiotic processes which has caused visual text to be accepted as a kind of discourse. For this reason, it can be said that every text is a discourse and every visual text is a visual discourse. Like discourse analysis, visual discourse analysis (VDA) examines the discourse within visual text.

Kress and van Leeuwen (2006) have suggested a systematic way to study the meaning of things in visual texts. They show that visuals may express the meaning as language does; however visuals say things in a different way, thus, visuals can also be analyzed. Kress and van Leeuwen's (2006) work called as visual grammar is built

on the Halliday's (1994) Systemic Functional approach to language. The social semiotic approach of Halliday proposes that language should be thought in its social context and can not be isolated from society. Since social relations are the povital aspect of society, language evolves through the necessity to conduct these relations. Therefore, Halliday's functional theory says that ideational, interpersonal and textual metafunctions are three types of meanings expressed by language. Kress and van Leeuwen's (2006) theory of visual grammar has been based upon Halliday's functional approach and they state that they have adopted the ideational, interpersonal and textual metafunctions from Halliday's work and these metafunctions are not unique to spoken or written language but they are valid for all semiotic modes in an another way.

### **2.7.1. Ideational Metafunction**

Ideational metafunction is the way to represent the models of experience in language. In ideational metafunction, which is also called transitivity, meaning is constructed by language as arrangements of participants (actor, goal; senser, phenomenon; carrier, attribute; and so on), processes (material, mental, relational, verbal, behavioral, existential), and circumstances (cause, location, manner, accompaniment) (Nørgaard, 2014). Participants are those who or what are involved in the process either in a transitive mode or intransitive mode. Processes are happenings or course of events reflected in a clause. Circumstances add extra and optional information to the processes. Two types of variant in ideational metafunction, which are process types and participant types, are summarized in Table 2.1.:

Table 2.1. Process and participant types

PROCESS TYPES	PARTICIPANT TYPES	PROCESS VERBS
Material Process	Actor (who did it?) Goal (who was it done to?)	Verbs of doing, happening (run, jump)
Mental Process	Senser (who thought it?) Phenomenon (what did they think about?)	Verbs of mental activity (hear, think)
Relational Process	Carrier (who is being described?) Attribute (what is said about them?)	Verbs show a connection (to be, seem)
Verbal Process	Sayer (who said it?) Verbiage (what was said?) Receiver (who heard it?)	Verbs of saying (say, scream)
Behavioural Process	Behaver (who did it?)	Mental processes with the addition of conscious choice (see and watch)
Existential Process	Existent (what exists?)	Starts with “there”, and followed by “to be” or verbs like “to be”.

The following example would be beneficial to show the relations between participants, processes, and circumstances in a clause:

Participant:	Process:	Participant:	Participant:	Circumstances:
Actor	Material	Goal	Recipient	Location
Mary	is reading	a book	for her	in the garden.
			daughter	

In the sentence above, one of the participants is *Mary* who affects the other participant *book* through a transitive process. For this reason, *Mary* is the *Actor* of this process and *book* is the *Goal*. Another participant is the *daughter* as a *Recipient* who benefits from the process. The type of process is *Material* as it involves the verb

of doing (to read). *Circumstance* accompanying the process is *in the garden* which gives the location of the process as an extra information.

For ideational metafunction, Kress and van Leeuwen (2006) have used the same terminology of Halliday for visuals and they state: “any semiotic mode has to be able to represent the aspects of the world as it is experienced by humans” (p. 42). As in language, visuals make ideational meaning by arranging participants, processes, and circumstances. In visuals, the most outstanding volumes which have the most significant roles in the structure that create the meaning of the visual are called participants (Kress and van Leeuwen, 2006). If there is a vector in the visual, the participant from which the vector emanates is called as the Actor, and the participant to which the vector is directed is called as the Goal, i.e. something done by an Actor to a Goal (Kress and van Leeuwen, 2006).

The vectors in visuals are also the signs of processes. If there is more than one participant in the visual, i.e. the Actor and the Goal, and if the vector departs from the Actor and goes to the Goal, then it can be said that there is a transactional process. If the vector emanates from a participant and does not go to any other participant, then the process is non-transactional.

Secondary participants in the visual which are not connected to main participants via vectors and which can be taken out from a visual without affecting the basic information given by it are called as circumstances, and in Kress and van Leeuwen’s Approach (2006), setting is one of these circumstances (Locative Circumstances). In visuals, setting is usually realized by the foregrounding and backgrounding of the participants. Foregrounded participants are generally the Actor and the Goal and backgrounded participants are setting. The following visual has been analyzed according to Kress and van Leeuwen’s (2006) ideational metafunction:

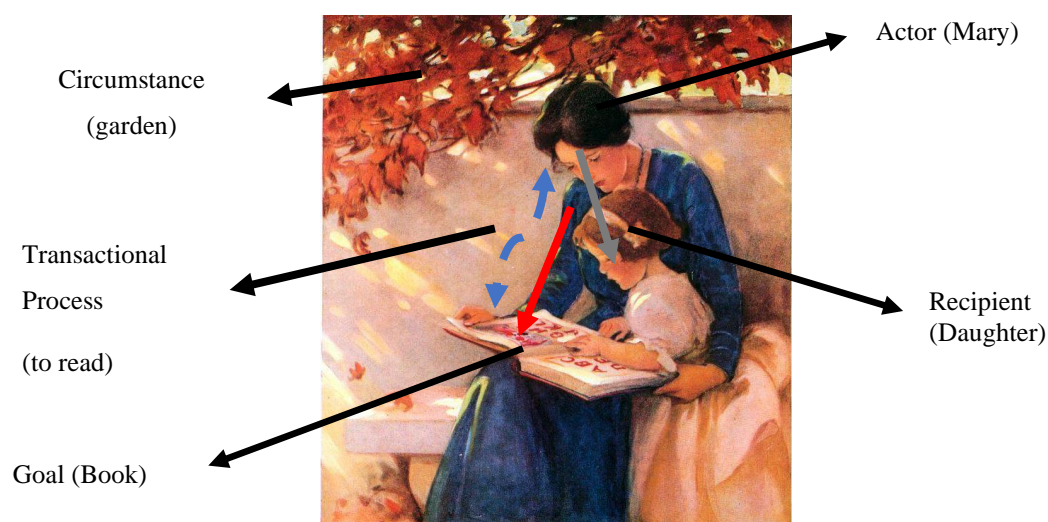


Figure 2.3. Analysis of ideational meaning

### 2.7.2. Interpersonal Metafunction

Besides constructing meaning, people interact with other people whenever they use language. While they are interacting with others in several contexts, people build and represent their social roles via their preferences of mood, modality, naming and forms of addressing. Mood choices can be made between declarative, interrogative and imperative structures. The truth value of statements are represented by modality and it reflects “the speaker’s commitment to what is said in terms of probability, usuality, obligation and inclination and may, for instance, reflect the degree of (un-)certainty or (im-)politeness of a given speaker in a particular interpersonal context” (Nørgaard, 2014, p.472). Probability can be expressed by *may*, *might*, *must*, *possibly*, *probably*, *certainly*; usuality can be expressed by *usually*, *sometimes*, *always*; obligation can be expressed by *may*, *should*, *must*; and inclination can be expressed by *can*, *will*, *must*. How a person addresses other people in their social interaction represents the position of this person towards others. Therefore, vocatives and namings have interpersonal meaning. All these choices reflect people’s social roles and this metafunction of language is called interpersonal metafunction (Halliday, 1994).

Kress and van Leeuwen’s interpersonal metafunction for visuals concerns with the position of the viewer, producer, and the objects in the visual. Gaze is one of the systems to analyze interpersonal meaning in the visual. If the participant in the visual looks directly at the viewer, this conveys a message of interaction between the



viewer of the visual and the person in it. This kind of visual is called “demand” visual and it demands something from its viewer. However, if the participant in the visual depicted as turned away from the viewer, then there is no contact between them and no demand is made. Therefore, these types of visuals are suggested as “offer images” (Kress & van Leeuwen, 2006).

Angle of interaction is another system of analyzing the visuals. The position from which the visuals are depicted can be associated with different social meanings. The horizontal angle of a visual represents the involvement or detachment of the viewers. If the angle of visual is frontal, this creates an engagement between the viewers and the visuals, and the viewers feel more involved to the events they see. The visuals with oblique angle give the sense of detachment and the viewers feel less engaged with the things in the visual. Vertical angle of the visual refers to power and related with superiority or inferiority. If the participants of the visual are seen from a “high angle”, it represents that viewers are more superior than the participants of the visual. However, if the participants of visual are seen from “low angle”, the participants of the visual have the power over the viewers. When the participants of an image were seen at the eye-level, then the participants are neither superior nor inferior to viewers in power but they are equal (Kress & van Leeuwen, 2006).

Modality represents the reality degree of visuals, as a visual can reflect people, places and things as if they are real or not. Kress and van Leeuwen (2006) discuss the markers of modality in terms of color saturation, color differentiation, color modulation, contextualization, representation, depth, illumination and brightness. They further state that:

When colour becomes more saturated, we judge it exaggerated, ‘more than real’, excessive. When it is less saturated we judge it ‘less than real’, ‘ethereal’, for instance, or ‘ghostly’. And the same can be said about other aspects of representation, the rendition of detail, the representation of depth, and so on. Pictures which have the perspective, the degree of detail, the kind of colour rendition, etc. of the standard technology of colour photography have the highest modality, and are seen as ‘naturalistic’. As detail, sharpness, colour, etc. are reduced or amplified, as the perspective flattens or deepens, so modality decreases (2006, p. 159).

The visual below has been analyzed according to Kress and van Leeuwen’s (2006) interpersonal metafunction:

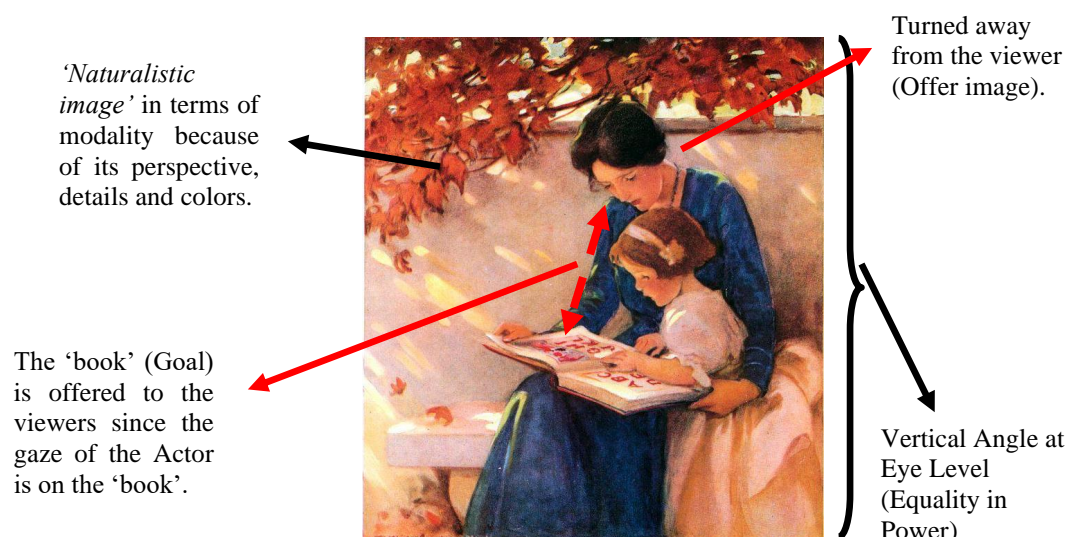


Figure 2.4. Analysis of interpersonal meaning

### 2.7.3. Textual Metafunction

Halliday's textual meaning refers to arrangement of language into text through theme-rheme structures and cohesive devices. The first element of a clause is called Theme and it is realized by initial position. Theme is expected to include old or previously given information in a text. Rheme, on the other hand, is the rest of the message in a clause and realised by non-initial position. The information should flow from Theme to Rheme for the impressiveness of the messages. Cohesion is another component of textual meaning which makes the text easier to understand by arranging the given and new information.

In Kress and van Leeuwen's approach, compositional meaning is the equivalent of the textual meaning and it concerns with placements of the objects in the visual. It is the way in which representational and interactive elements are made into a whole (Kress & van Leeuwen, 2006). Information value, salience and framing are three principles of compositional meaning.

Information value of the visual object can be changed according to its placement on the page i.e. left (given) and right (new), top (ideal) and bottom (real), center and margins. The objects which are situated on the left side of a visual are represented as Given which means that the viewer is already familiar with these objects. On the other hand, if the objects are situated on the right of a visual, then these objects are presented as New that is something that the viewer is not familiar with. Moreover, the objects which are situated in the upper part are shown as the

Ideal which means that it is the most salient part of the general information. The objects at the bottom are offered as the Real which indicates that it is presented as the specific information, i.e. details. Centre and Margin are the other positions of objects in a visual. If one item is placed in the middle and surrounded by other items, the item in the middle refers to Centre and the items around it refer to Margins. Centre reflects the core of information and supported by margins around it.

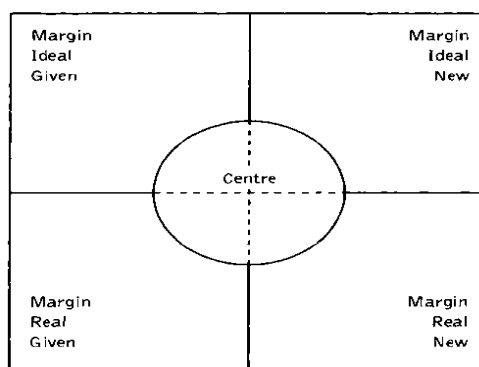


Figure 2.5. The dimensions of visual space (Kress & van Leeuwen, 2006)

Salience means that some objects in the visual attract viewer's attention more than other objects do. The size, color, tone differences of the objects and their placement in the foreground or background have a significant role to make them salient or not. The bigger size of an object in a visual composition makes it more salient than the other objects. The areas in which tonal and color contrasts are used have the high salience. Furthermore, the foregrounded objects attract more attention and they are more salient than the backgrounded ones.

The degree of framing devices signifies whether the objects in a visual are connected to each other or not. Strong framing of an item in a visual composition reflects that this item is disconnected and represented as "a separate unit of information", however, if the item in a visual composition has weak or no framing devices then this item is depicted as connected and represented as "a single unit of information" (Kress & van Leeuwen, 2006).

The following visual has been analyzed according to Kress and van Leeuwen's (2006) textual metafunction:



Mary (Actor), Book (Goal), and Daughter (Recipient) are salient and attract attention since they are bigger in size and foregrounded. They are at the center and presented as important

No framing devices (Connected).

Figure 2.6. The textual meaning in a visual

Kress and van Leeuwen's (2006) approach is one of the prominent works in the field and has prompted many studies to analyze visuals and other semiotic modes in the field. One of these studies was conducted by Albers (2007) on visual texts which were created by students, and she states that viewers are not passive with aesthetic point of view, rather they read visual texts actively with a critical eye. Albers (2014) defines Visual Discourse analysis as a general term for an approach to analyzing visual language use. Albers (2007) also states that "VDA is concerned with a theory or method of studying the structures and conventions within visual texts, and identifying how certain social activities and social identities get played out in their production" (p. 83). Kayacan (2018) visualised the components of VDA as follows:

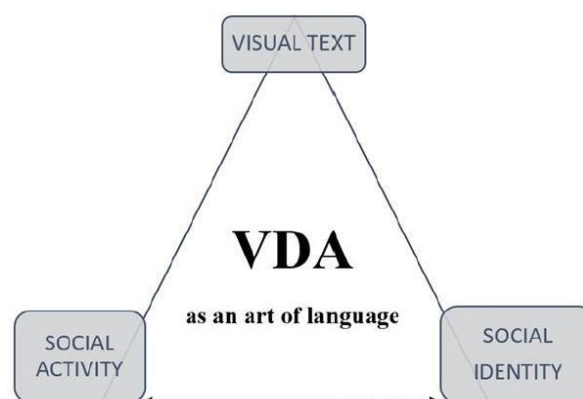


Figure 2.7. Components of VDA

In order to explain the perspective of visual discourse analysis, Albers (2014) says:

From a visual discourse analysis perspective, visual texts—like written texts—contain structures that can be analyzed both in how something is said (grammar of visual texts: media, object placement, space, color, etc.), and within critical literacy or what is said (composition: messages conveyed and discourses) (p. 95).

Language forms through which the information flows must be broader than written or oral texts. With the dissemination of visual messages and visual information at a great pace, the analysis of visuals becomes significant. For this reason, the role of visual analysis at every part of modern life is getting crucial.



### **3. METHODOLOGY**

#### **3.1. Research Design**

This is an experimental study in which quantitative data collection tools are used by the researcher. The aim of an experimental research is “to determine if a specific treatment influences an outcome. The researcher assesses this by providing a specific treatment to one group and withholding it from another and then determining how both groups scored on an outcome” (Creswell & Creswell, 2018, p. 50).

#### **3.2. Participants and Setting**

The participants of this study included 50 EFL prep-class students at Ondokuz Mayıs University. Most of the students were native speakers of Turkish. In order to determine participants' English proficiency level before the experiment, English proficiency exam, which was designed in accordance with the Common European Framework of Reference for Languages (CEFR), was administered and their English proficiency at the time of the experiment was said to be A2 according to CEFR. They studied English for 26 hours per week and this research did not hinder their learning, instead it helped students to practice and enhance their reading comprehension. EFL prep-class students at Ondokuz Mayıs University took part in this study as a sample since they were thought to be a representative of population of the study. The sample of this study consisted of experimental and control groups and the participants were randomly assigned to these groups. There were 25 students in the experimental group and 25 students in the control group. The study was carried out in Spring Term of 2021-2022 Academic Year.

#### **3.3. Data Collection Tools and Procedures**

To collect the data, ten reading texts were used as data collection instruments in this study. The reading texts were chosen from *Talent 1* which is an English Student's Book published by Cambridge University Press in 2018. The level of reading texts was A2 according to CEFR. The reading texts of experimental group included comprehension questions and visuals which were pertinent to the content of the texts. On the other hand, the reading texts of control group did not involve any visuals. The following table summarizes the reading texts, questions types and visuals types which were used during the process of data collection.

Table 3.1. The framework of the reading texts

Reading Text Numbers	Reading Texts Topics	Questions Types	Number of Questions	Visual Types
1	The big question: Nature versus Nurture	1 Identifying Main Idea Questions 2 Open-ended Questions 3 True/False Questions (TFQs)	1 6 6	Photographs Pictures Drawings
2	School but not as you know it	1 Open-ended Questions 2 TFQs	6 9	Photographs Pictures Drawings Symbols Timetable
3	Technophobia	1 MCQs 2 TFQs	5 9	Photographs Drawings Pictures Cartoons
4	Fashion is a passion	1 Matching 2 Open-ended Questions 3 TFQs	5 6 6	Photographs Pictures Drawings
5	Are you going to be a Gig Worker?	1 Cloze-test 2 Open-ended Questions 3 TFQs	4 4 7	Drawings Pictures Photographs Symbols
6	Are we too clean?	1 Open-ended Questions 2 TFQs	6 7	Photographs Pictures Drawings Cartoons Symbols Filmstrips
7	Feng Shui for beginners	1 Matching 2 Open-ended Questions 3 TFQs	6 6 6	Drawings Pictures Photographs Symbols
8	Microhomes	1 Matching 2 Open-ended Questions 3 TFQs	4 5 6	Drawings Pictures Photographs
9	Teens Need More Time	1 Identifying Main Idea 2 Open-ended Questions 3 Essay Questions	1 8 3	Photographs Pictures Drawings Symbols Filmstrips
10	Travel and Learn	1 Open-ended Questions 2 TFQ	4 8	Photographs Pictures Drawings Symbols Filmstrips

As an initial step of the experiment, the researcher entered the classroom and handed out the first reading texts with visuals to the students of experimental group. Then the students and the researcher discussed on the visuals accompanying the texts. After discussing on the visuals, students were asked to read the texts silently and they were asked to answer the written comprehension questions on the paper related to their reading texts. According to the length of the text, students were given sufficient time to answer written questions on the paper. The visuals were chosen considering the topic and the type of the texts. The students in the control group were given the same reading texts and the same related comprehension questions without any visuals and they were asked to read the texts silently and answer the written comprehension questions on the paper. The experiment lasted for ten hours and in each session the same steps were followed. At the end of the experiment, the researcher scored all the responses. To establish reliability, all the responses were scored by an experienced Turkish teacher of English independently as well. No differences were observed between two assessors' (double raters') scores.

For the experimental group, the students were given the Students' Disposition Scale (shown in Appendix 23) after each reading session. The scale aimed at revealing students' disposition towards visuals and they were asked whether the visuals helped them to comprehend what they have read, and to comprehend the words and sentences in the reading texts. The students answered the questions by choosing between Yes, No, and Undecided options. Moreover, the students were asked to write the numbers of visuals which helped them to comprehend the reading texts from several aspects and which did not helped them during their reading comprehension. The visuals which were most chosen by the students were analysed according to the Rubric for the Analysis of the Visuals (shown in Figure 3.1.) which was developed by Prof. Dr. Nalan KIZILTAN on the basis of Halliday's Systemic Functional Grammar and Kress and van Leeuwen's Grammar of Visual Design. The rubric was used by KIZILTAN's permission.

In the statistical analysis part of the study, the averages of the correct answers between the experimental and control groups were tested with mean comparison tests. The normality of the scores of the number of responses was examined with the Shapiro-Wilk test. Descriptive statistics, such as mean (Mean), standard deviation (SD), median (MED), minimum (Min) and maximum (Max) are given in the



findings. Independent samples t-test was used for two independent group comparisons for normally distributed data, while Mann-Whitney U test was used for non-normally distributed data. Homogeneity of variances was checked with Levene's test; Welch's correction was made in t-test results for cases where homogeneous variance condition was not met. All statistical findings were obtained with the R Project program with a margin of error of 0.05.



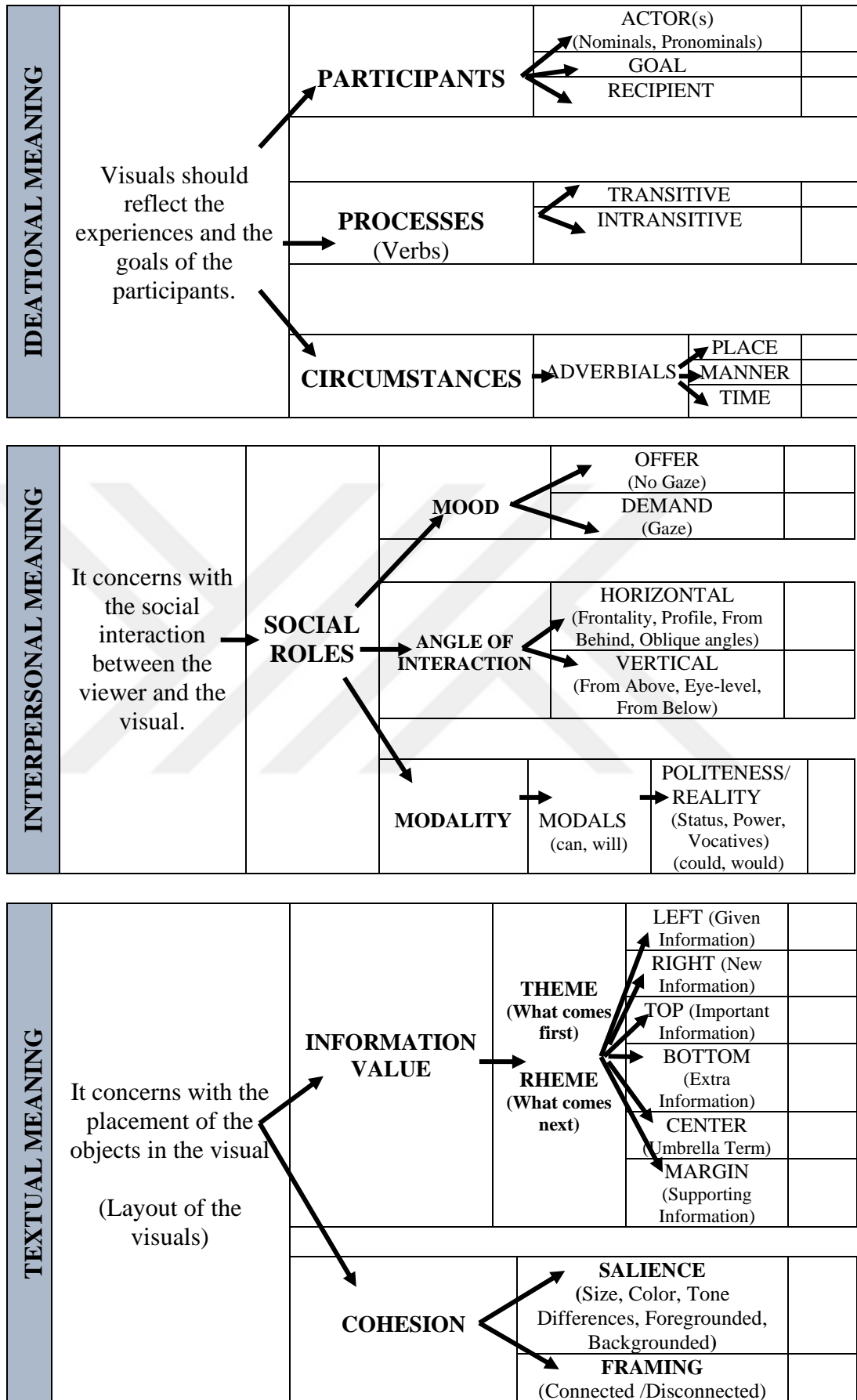


Figure 3.1. Rubric for the analysis of the visuals

## 4. FINDINGS AND DISCUSSIONS

### 4.1. Present Study

This study attempts to investigate the use of visual discourse in enhancing reading comprehension skills of EFL prep-class students at Ondokuz Mayıs University. The sample of this research involves control and experimental groups. There are 25 students in the control group and 25 students in the experimental group.

### 4.2. The Results and Discussion

The statistical analysis of the students' achievement scores in control and experimental groups has been performed with R Project program. The averages of the correct answers between the experimental and control groups for each reading text were tested with mean comparison tests. Independent samples t-test was used for two independent group comparisons for normally distributed data, while Mann-Whitney U test was used for non-normally distributed data. The results have been discussed in accordance with the research questions.

#### 4.2.1. Reading Text 1

The first reading text was about the effects of nature and nurture on individuals and the text discussed these effects by telling the life of twins who were brought up in completely different environments. There were 13 questions for the first reading text involving one identifying main idea question, six open-ended questions and six TFQs.

Table 4.1. Cross table of the achievement scores of the students in the experimental and control groups for the first text

Group	Mean	SD	MED	Min	Max	Z	p
Experimental	9,23	2,46	10	4	13	1,919 <sup>MW</sup>	0,055
Control	7,84	1,17	8	5	9,5		

MW: Mann-Whitney U test

In Table 4.1. the mean comparison results for the correct answers between the experimental and control groups in the first text are given. According to these results, there is no statistically significant difference between the mean scores of the correct answers of the experimental and control groups in text 1. ( $p>0,05$ ). The possible reason for this result might be the choice of visuals. Visuals accompanying the first reading text may not be sufficient enough to support the content of the text. Thus, the

students in the experimental group might not have taken advantage of visuals as a source of information.

After each reading session, the students in the experimental group were given Students' Disposition Scale. The results presented in the following table were obtained from the scale and the table below shows the students' choices of visuals for the first reading text. As can be seen in Table 4.2., the 12th visual (given in Figure 4.1. ) was the most preferred visual by the students.

Table 4.2. The frequency of the students' choices of visuals for the first reading text.

1 <sup>st</sup> Reading Text	Number of the Visuals											
	1	2	3	4	5	6	7	8	9	10	11	12
Questions	Frequency of the Choices											
-Which visuals helped you more in comprehending what you have read?	11	9	2	1	4	5	3	5	1	3	4	7
-Which visuals helped you to comprehend the words more?	5	3	1	1	0	3	4	3	6	5	6	7
-Which visuals helped you to comprehend the sentences more?	5	4	0	1	1	4	4	3	3	2	5	6
-Which visuals showed the goals and experiences of the characters in the text?	4	6	3	3	1	6	7	3	1	2	4	5
-Which visuals had more social interactions with you?	3	2	1	2	3	3	5	3	2	7	1	2
-In which visuals do the locations of objects make it easier for you to comprehend the visual?	3	5	1	2	4	0	3	1	4	7	3	8
TOTAL	31	29	8	10	13	21	26	18	17	26	23	35
-Which visuals did you never use?	2	7	15	12	10	7	5	5	7	5	4	2

#### 4.2.1.1. The Most Preferred Visual

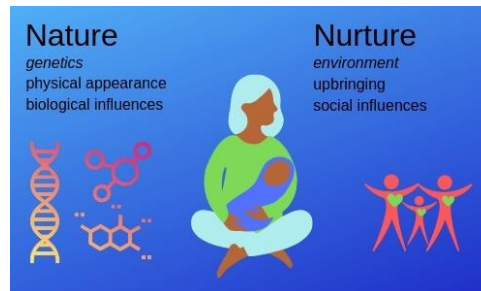


Figure 4.1. Visual 12

The first thing that catches the attention of the person looking at the visual is the multimodality of the visual which means that the visual provides the written and visual information at the same time. The use of two different modes in one image (visual and written) may reinforce the message given by the image and may support the content of the text. Moreover, the students may not be familiar with the abstract words 'nature' and 'nurture' and these abstract concepts become more concrete by being supported by the visual mode.

Moreover, in terms of Kress and van Leeuwen's ideational meaning, visuals should reflect the experiences of the people. Participants of this visual are 'mother' (Actor), 'baby'(recipient), and the 'figures' (Goal) which symbolize the nature and nurture. There is a transitive process in which the *mother (Actor)* is looking at the *figures (Goal)* which may have an effect on her *baby(recipient)* to make his/her an individual.

Kress and van Leeuwen's interpersonal metafunction for visuals concerns with the position of the viewer, producer, and the objects in the visual in terms of social interaction. In the 12th visual the gaze of the participant(mother) is not directed to the viewer, thus the mother presents offer image and her picture offers information to the viewers. On the other hand, the gaze of the baby is towards the mother. It demands something from its mother for the nurture as a nature. The angle of the visual is horizontal and frontal, this creates an involvement of the viewer to the events in the visual.

Textual metafunction concerns with the placement of the objects in the visual. The participants, mother and baby, are at the center of the visual which are presented as the core of information i.e. 'individuals'. The objects in the margins are about 'nature' and 'nurture' and presented as supporting information. The mother and the baby are the most salient figures in the visual which enable viewers to realize the participants of the visual easily. The visual does not have any indicator of framing devices, thus the elements in the visuals are represented as 'a single unit of information'. The factors just mentioned might have been effective in students' choice of the visual 12.

#### 4.2.1.2. The Least Preferred Visual



Figure 4.2. Visual 3

*Visual 3* does not supply any sufficient information about the text. The text mentioned about twins' life to explain the effects of '*nature and nurture*' on individuals. In this visual, the viewer does not see twins but a single person. Moreover, the participant of the visual is a *girl (Actor)*, however, no Goal or transitive processes are observed in the visual. Thus, the visual does not adequately reflect the goals and experiences of the twins. This is an offer visual and does not demand anything from its viewer. The angle of the image is vertical from eye-level which indicates that there is no power superiority between the viewer and the participant of the visual. In the light of these facts, the *Visual 3* does not give any detailed information about the text and the interaction between the *Visual 3* and its viewers is weak. As a result, the students may not have chosen this visual.

#### 4.2.2. Reading Text 2

The second reading text was about a school which is quite different from traditional schools. For this reading task, the students in both groups answered 15 comprehension questions related to their reading text. There were 15 including, six open-ended questions and nine TFQs. Table 4.3 shows the mean comparison results for the correct answers between the experimental and control groups for the second reading text.

Table 4.3. Cross table of the achievement scores of the students in the experimental and control groups for the second text

Group	Mean	SD	MED	Min	Max	t	p
Experimental	9,23	2,57	9,5	4,5	14,5	2,430 <sup>t</sup>	0,021
Control	7,76	1,28	8	5,5	10		

t: Independent samples t-test

These results above show that there is a statistically significant difference between the mean scores of the correct answers of the experimental and control groups in text 2 ( $p < 0.05$ ). The average number of correct answers of the experimental group was found to be significantly higher than that of control group in the second text. It may be inferred from the results that the visuals used with the text seemed quite sufficient for the students to comprehend the text better. The highest score of the experimental group is 14,5 out of 15 questions. The students were completely unable to answer the open-ended question '*Which subjects and courses are studied at this school?*'. The possible reason of this might be the complicated layout of the visuals on the same page.

Table 4.4. The frequency of students' choices of visuals for the second reading text (Part I)

2 <sup>nd</sup> Reading Text				Number of the Visuals										
				1	2	3	4	5	6	7	8	9	10	11
Questions				Frequency of Choices										
-Which visuals helped you more in comprehending what you have read?				4	3	9	2	11	9	4	2	2	4	4
-Which visuals helped you to comprehend the words more?				2	1	4	3	5	5	3	4	2	3	3
-Which visuals helped you to comprehend the sentences more?				3	4	2	2	2	2	2	3	1	2	4
-Which visuals showed the goals and experiences of the characters in the text?				1	0	2	1	0	1	2	3	1	0	6
-Which visuals had more social interactions with you?				1	0	1	1	2	1	1	0	0	1	4
-In which visuals do the locations of objects make it easier for you to comprehend the visual?				3	1	3	4	3	4	4	4	2	1	6
TOTAL				14	9	21	13	23	22	18	16	8	11	27
-Which visuals did you never use?				5	9	4	4	3	4	6	5	7	5	3

Table 4.5. The frequency of the students' choices of visuals for the second reading (Part II)

2 <sup>nd</sup> Reading Text	Number of the Visuals												
	12	13	14	15	16	17	18	19	20	21	22	23	
Questions	Frequency of Choices												
-Which visuals helped you more in comprehending what you have read?	4	3	5	4	1	1	1	2	6	4	2	3	
-Which visuals helped you to comprehend the words more?	3	3	3	2	0	1	2	1	4	5	5	2	
-Which visuals helped you to comprehend the sentences more?	4	5	4	4	2	5	3	4	4	1	1	2	
-Which visuals showed the goals and experiences of the characters in the text?	7	5	10	9	6	5	4	4	7	5	4	2	
-Which visuals had more social interactions with you?	4	2	2	2	0	3	3	3	4	4	3	5	
-In which visuals do the locations of objects make it easier for you to comprehend the visual?	7	1	1	2	1	2	3	1	6	4	2	1	
TOTAL	29	19	25	23	10	17	16	15	31	23	17	15	
-Which visuals did you never use?	4	3	2	2	3	4	5	5	4	5	2	5	

The most and least preferred visuals of the second text can be seen in the tables above.

#### 4.2.2.1. The Most Preferred Visual



Figure 4.3. Visual 20

*Visual 20* is the most chosen visual of the second reading text, it is because it provides adequate information about the participants, *the teacher, the students and the test equipments*, and give the sense of school. There is a transitive process (doing



experiment) between *the teacher* (Actor) and the *test equipments* (Goal). *The students* (Recipients) are the beneficiaries of the process. The *laboratory* is the circumstance giving the information about the place of the event. With regards to ideational meaning, this visual reflects the experiences and the goals of the participants. This text gives information about the school which is different from traditional schools, and in this visual it is seen that students are learning by doing and practicing which is one of the features of non-traditional education.

In terms of interpersonal meaning, it can be said that this is an offer image since the participants of the visual do not directly look at its viewer. The visual is horizontal and frontal which indicates the engagements of viewer with the events in the visual. The colors and the details of the visual have the highest modality making the visual more naturalistic and realistic.

The placement of the participants in *Visual 20* reflects the feeling of school ambience, since the students and the teachers are placed at every part of the visual. Furthermore, participants are depicted as the most salient figures of the visual. No framing device is used in the visual and they are presented as a connected whole.

#### **4.2.2.2. The Least Preferred Visual**



Figure 4.4. Visual 2

*Visual 2* is the least preferred visual of the reading text two, since it does not supply enough information about the text. The participants of the visual are not represented as students because of the clothing style and the setting. The place of the process (circumstance) does not contain any information related to school. As a consequence, *Visual 2* might not have attracted the attention of the students.

### 4.2.3. Reading Text 3

The third reading text was about Technophobia and some instances of technophobia from the past and present life. Although technology is indispensable part of our lives today, anything else new to people may violate the reality of people psychologically. For this reading task, the students in both groups answered 14 comprehension questions, five MCQs and nine TFQs.

Table 4.6. Cross table of the achievement scores of the students in the experimental and control groups for the third text

Group	Mean	SD	MED	Min	Max	Z	p
Experimental	11,3	1,56	11	9	14	0,531 <sup>MW</sup>	0,596
Control	10,7	2,29	11	5	14		

MW: Mann-Whitney U test

Mean comparison results for the correct answers between the experimental and control groups for the third text are shown in Table 4.6. As can be seen, there is no statistically significant difference between the mean scores of the correct answers of the experimental and control groups in text 3 ( $p > 0.05$ ). This result may be due to the topic of the text, since the students of today's world are quite familiar with technology. Thus, visuals might not have an impact on students' comprehension and the students in both groups comprehended the text well. Moreover, the question types of the text consist of MCQs and TFQs and these types of questions are said to be easier for students to find the correct answer. On this point, Brown & Hudson (1998) state that for TFQs, even if the students do not know the answer they have a 50% chance of answering the question correctly and multiple-choice questions have a 33%, 25%, or 20% guessing factor depending on the number of the options. Therefore, the students in the control group may have answered the questions as well as the experimental group because of the multiple options which help them to recall their schemata when compared with the open ended questions.

The table below demonstrates the students' preferences of visuals for the third reading text. According to the findings, the students chose the *Visual 2* (Given in Figure 4.5.) as most useful visual and the *Visual 3* (Given in Figure 4.6.) was selected as the least preferred visual while comprehending the reading text.

Table 4.7. The frequency of the students' choices of visuals for the third reading text

3 <sup>rd</sup> Reading Text	Number of the Visuals											
	1	2	3	4	5	6	7	8	9	10	11	12
Questions	Frequency of the Choices											
-Which visuals helped you more in comprehending what you have read?	9	9	3	4	5	7	5	4	4	4	6	3
-Which visuals helped you to comprehend the words more?	4	5	3	5	7	4	8	6	3	2	1	1
-Which visuals helped you to comprehend the sentences more?	3	5	3	2	3	4	4	3	5	8	3	2
-Which visuals showed the goals and experiences of the characters in the text?	4	6	2	2	5	7	7	6	4	4	4	4
-Which visuals had more social interactions with you?	4	4	2	2	1	4	1	1	7	1	7	6
-In which visuals do the locations of objects make it easier for you to comprehend the visual?	3	4	2	4	4	5	4	3	5	3	5	2
TOTAL	27	33	15	19	25	31	29	23	28	24	26	18
-Which visuals did you never use?	1	2	8	5	5	2	4	6	3	2	3	7

#### 4.2.3.1. The Most Preferred Visual



Figure 4.5. Visual 2

The power of multimodality can be observed again in this visual. The simultaneous presentation of the two modes (written text and image) strengthened the message of the image, and as a result, the students used this image more to

comprehend the text. Within the scope of ideational meaning, the man with a hammer is the *Actor* and the protestors are the *Goal* of the process. Since the *Actor* (*the man with a hammer*) directs his hand towards *the Goals* (*protestors*), the process is transitive. The circumstances of the process are wide open area in the daytime.

Interpersonal meaning of the visual is conveyed through the gaze, angle and modality. The gazes of the participants are not directed to the viewer, thus this visual is an offer image and offer information to its viewers. The visual has a vertical angle at eye-level which indicates that the participants and the viewers are equal in power. Even if the visual is a drawing, with the details and the colors used, visual becomes more realistic.

The placement of objects identifies the information value of the visuals. In this visual, the man with a hammer is placed on the left of the visual and presented as given information, i.e. the viewer is familiar with the advancement of technology. What is new for the viewers is that the protestors against the development of technology and this information is situated on the right of the visual presented as New information. *Visual 2* sufficiently represents the experiences and goals of its participants, social interaction between participants and viewers, and the placements of objects. As a consequence, it helps its viewers to comprehend the text by providing enough information with regards to ideational, interpersonal and textual meanings.

#### 4.2.3.2. The Least Preferred Visual

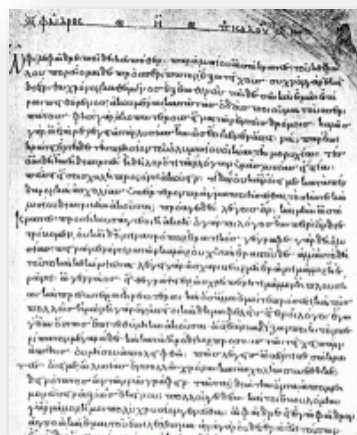


Figure 4.6. Visual 3

*Visual 3*, a piece of writing, does not give any clear information about the third text, which is about technophobia, and does not help its viewers at all. In terms of ideational meaning, unclear, blurred letters in succession as participants do not reflect any interaction with the viewers. Thus, no interpersonal meaning is observed. With regard to textual meaning, the text seems to consist of three paragraphs with so called capitalization. In the light of these facts above, the students may not have chosen this visual.

#### 4.2.4. Reading Text 4

In reading text 4 the students read about Fashion and the effects of slow fashion and fast fashion on the world. This reading task involved 17 comprehension questions, five matching questions, six open-ended questions and six TFQs.

Table 4.8. Cross table of the achievement scores of the students in the experimental and control groups for the fourth text

Group	Mean	SD	MED	Min	Max	t	p
Experimental	9,79	3,14	9	6	15	1,704 <sup>t</sup>	0,096
Control	8,07	3,3	9,25	3	14		

t: Independent samples t-test

Table 4.8. shows the mean comparison results for the correct answers between the experimental and control groups in text 4. According to these results, there is no statistically significant difference between the mean scores of the correct answers of the experimental and control groups in text 4 ( $p > 0.05$ ). This result may be due to the choice of visuals. Moreover, the highest score of the students in the experimental group was 15 out of 17 questions. The students were completely unable to answer the questions ‘*Why did the retailers start fast fashion?*’, ‘*Why is slow fashion better for environment?*’ and ‘*Why is this trend called slow fashion?*’, it is because the visuals directly related to these questions were not provided to the students. The students may not have found the visuals related to the questions and they may not have been able to make use of the visuals to answer these questions.

Table 4.9. The frequency of the students' choices of visuals for the fourth reading text

4 <sup>th</sup> Reading Text	Number of the Visuals														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Questions	Frequency of the Choices														
-Which visuals helped you more in comprehending what you have read?	6	9	8	6	5	4	7	1	3	5	4	4	1	3	5
-Which visuals helped you to comprehend the words more?	4	3	9	5	4	2	4	2	4	3	5	9	2	2	6
-Which visuals helped you to comprehend the sentences more?	4	3	8	7	3	2	3	2	2	4	4	4	2	4	4
-Which visuals showed the goals and experiences of the characters in the text?	5	6	3	2	4	6	10	5	7	4	2	2	1	2	4
-Which visuals had more social interactions with you?	4	3	3	2	4	1	4	6	4	3	2	2	2	2	5
-In which visuals do the locations of objects make it easier for you to comprehend the visual?	6	3	4	4	3	7	3	6	3	4	4	3	1	3	4
TOTAL	29	27	35	26	23	22	31	22	23	23	21	24	9	16	28
-Which visuals did you never use?	5	4	2	3	4	2	3	4	4	3	3	2	10	6	2

Table 4.9. shows that the most chosen visual is the third one. Most of the students expressed that they never used *Visual 13*.

#### 4.2.4.1. The Most Preferred Visual



Figure 4.7. Visual 3

This visual involves written and visual modes and their interaction may promote the recall of verbal information. Paivio (1971) states that the imagery system facilitates the verbal system. Thus, when verbal and visual systems are activated together, they may facilitate the interpretation and comprehension of reading text. The multimodality feature of this visual with both verbal and visual systems may cause students to use this visual more. This visual with centralized verbal message “Slow Fashion” is a good example of demand; it is because two hands, as second hand, supporting the slow fashion not only indicate offer to the clothes called Slow Fashion but also tempt viewers to buy used or second hand products.

The most salient figures of Visual 3 are the clothes and they are foregrounded; therefore they attract viewer’s attention more than other objects do. The written mode ‘Slow Fashion’ is situated at the center of the visual and offered as a core of information. As a result, the students tended to use this image more to comprehend the text which mentioned about the clothes and the fashion.

#### **4.2.4.2. The Least Preferred Visual**



Figure 4.8. Visual 13

This visual displays some clothes, however it does not give any specific information about the content of the text. There is no interaction between the visual and its viewers. Moreover, none of the comprehension questions of the text requires the use of this visual. Therefore, this visual may not help the students to comprehend the text.

#### 4.2.5. Reading Text 5

The fifth reading text was about gig work and its advantages and disadvantages. Students answered 15 questions including four cloze-test, four open-ended, and seven TFQs.

Table 4.10. Cross table of the achievement scores of the students in the experimental and control groups for the fifth text

Group	Mean	SD	MED	Min	Max	t	p
Experimental	9,84	2,07	10	5	13,5	2,776 <sup>t</sup>	0,008
Control	7,98	2,17	8,5	3	11		

t: Independent samples t-test

Table 4.10 gives the mean comparison results for the correct answers between the experimental and control groups in text 5. In the light of these results it can be said that there is a statistically significant difference between the mean correct responses of the experimental and control groups in text 5 ( $p < 0.05$ ). The average number of correct answers of the experimental group is significantly higher than that of the control group in text 5. This result suggests that the students utilized the visuals for the comprehension of the text and outperformed the achievement scores of control group. The highest score of the students in the experimental group was 13,5 out of 15 questions. The students could not precisely answer the questions '*How is work going to be different in the future?*' and '*What are the reasons people choose gig work?*' it is because the visuals support the overall content of the text, however, they do not give specific information related to these questions.



Table 4.11. The frequency of the students' choices of visuals for the fifth reading text (Part I)

5 <sup>th</sup> Reading Text					Number of the Visuals									
					1	2	3	4	5	6	7	8	9	10
Questions					Frequency of Choices									
-Which visuals helped you more in comprehending what you have read?					9	4	10	6	8	6	5	3	6	2
-Which visuals helped you to comprehend the words more?					1	2	4	3	3	1	2	6	4	4
-Which visuals helped you to comprehend the sentences more?					1	0	3	3	5	2	6	4	0	1
-Which visuals showed the goals and experiences of the characters in the text?					4	5	6	3	5	5	3	4	3	6
-Which visuals had more social interactions with you?					2	1	3	3	2	1	2	0	2	2
-In which visuals do the locations of objects make it easier for you to comprehend the visual?					4	3	5	2	3	3	3	3	3	4
TOTAL					21	15	31	20	26	18	21	20	18	19
-Which visuals did you never use?					4	7	2	2	1	3	3	3	3	4

Table 4.12. The frequency of the students' choices of visuals for the fifth reading text (Part II)

5 <sup>th</sup> Reading Text					Number of the Visuals									
					11	12	13	14	15	16	17	18	19	
Questions					Frequency of Choices									
-Which visuals helped you more in comprehending what you have read?					2	3	2	3	3	3	5	5	5	
-Which visuals helped you to comprehend the words more?					4	1	6	5	3	4	3	4	4	
-Which visuals helped you to comprehend the sentence more?					1	2	2	2	4	3	7	5	4	
-Which visuals showed the goals and experiences of the characters in the text?					5	5	5	6	6	2	5	2	4	
Which visuals had more social interactions with you?					2	2	1	4	1	1	0	1	2	
-In which visuals do the locations of objects make it easier for you to comprehend the visual?					4	2	3	3	3	2	3	2	2	
TOTAL					18	15	19	23	18	15	23	19	21	
-Which visuals did you never use?					2	4	4	4	3	3	1	2	2	

The two tables above show that most of the students chose *Visual 3* (shown in Figure 4.9.) as the most helpful visual for the comprehension of 5th text. On the other hand, most of them expressed that they never used *Visual 2* (shown in Figure 4.10.) to support their comprehension.

#### 4.2.5.1. The Most Preferred Visual



Figure 4.9. Visual 3

*Visual 3* gives lots of information about the content of the text. The text was about gig work which is a kind of flexible and independent work including freelancers and independent workers. This visual involves the most of the objects, such as computer and a person who works at home which are associated with the characteristics of gig work. The participants of this visual are *the woman (Actor)* and the *computer (Goal)*. The process is transitive, since the woman (Actor) is looking at the computer (Goal). The circumstances of this visual are *home (Locative Circumstances)*, and *the daytime (Time)*. The degree of social interaction between this visual and its viewer is transmitted through the gaze of the participants. Computer is centralized. It is used vertically facing the gig worker and it demands something from the worker. The worker facing the computer demands something from it, whereas the gig worker, with her back to the viewer offers from the view of interpersonal function. In terms of modality, it is a realistic and naturalistic visual. The woman and the computer are foregrounded which makes them more salient and attractive and the setting is realized by the backgrounding of home. This visual sufficiently reflects the components of ideational, interpersonal and textual meanings, and gives clues about the content of the text i.e. gig work.

#### 4.2.5.2. The Least Preferred Visual



Figure 4.10. Visual 2

*Visual 2* is the least preferred visual of the fifth text. In this visual, the girl, who is practising yoga, is foregrounded and becomes the most salient figure of the visual. There is no interaction between the viewer and the person with the eyes closed. The objects related to gig work are backgrounded in the photo. The content of the text was not about yoga and this visual might not have supported the comprehension of the text adequately. Therefore, the students tended to choose this visual as the never used visual.

#### 4.2.6. Reading Text 6

Students read a text titled 'Are we too clean?' for the sixth reading task. In this task, there were 13 comprehension questions including six open-ended questions and seven TFQs.

Table 4.13. Cross table of the achievement scores of the students in the experimental and control groups for the sixth Text

Group	Mean	SD	MED	Min	Max	t	p
Experimental	9,68	2,43	9,5	5	13	1,504 <sup>t</sup>	0,141
Control	8,63	1,84	9,5	5	11,5		

t: Independent samples t-test

For the sixth text, the mean comparison results of the correct answers between the experimental and control groups are presented in Table 4.13. As it is seen, there is no statistically significant difference between the mean correct responses of the experimental and control groups in text 6 ( $p > 0.05$ ). This result may be explained by the fact that the visuals accompanying the text do not support the text sufficiently. Furthermore, creating a mental representation of the text is the significant step of the

comprehension. Since mental models are manipulable, they may be promoted by the use of appropriate visuals and help readers to comprehend the text better. It seems possible that the visuals of this text do not assist students while creating a mental representation of the text.

Table 4.14. The frequency of the students' choices of visuals for the sixth reading text (Part I)

6 <sup>th</sup> Reading Text					Number of the Visuals									
					1	2	3	4	5	6	7	8	9	10
Questions					Frequency of Choices									
-Which visuals helped you more in comprehending what you have read?					6	7	6	3	5	6	7	6	2	1
-Which visuals helped you to comprehend the words more?					1	1	3	3	5	5	7	6	5	4
-Which visuals helped you to comprehend the sentences more?					3	2	3	2	5	3	7	6	4	2
-Which visuals showed the goals and experiences of the characters in the text?					5	3	2	3	5	6	4	5	2	2
-Which visuals had more social interactions with you?					5	2	2	2	5	4	1	2	1	1
-In which visuals do the locations of objects make it easier for you to comprehend the visual?					3	2	3	3	4	3	2	3	4	3
TOTAL					23	17	19	16	29	28	28	28	20	13
-Which visuals did you never use?					5	5	4	4	3	3	2	3	4	9

Table 4.15. The frequency of the students' choices of visuals for the sixth reading text (Part II)

6 <sup>th</sup> Reading Text					Number of the Visuals										
					11	12	13	14	15	16	17	18	19	20	21
Questions					Frequency of Choices										
-Which visuals helped you more in comprehending what you have read?					3	3	2	1	1	2	2	1	6	9	3
-Which visuals helped you to comprehend the words more?					5	2	3	4	3	1	1	2	4	5	4
-Which visuals helped you to comprehend the sentences more?					5	4	3	3	2	3	5	5	4	5	3
-Which visuals showed the goals and experiences of the characters in the text?					4	4	4	3	2	6	2	4	5	5	3
-Which visuals had more social interactions with you?					4	4	5	3	2	4	6	1	2	3	1
-In which visuals do the locations of objects make it easier for you to comprehend the visual?					6	3	1	3	3	5	5	6	6	6	4
TOTAL					27	20	18	17	13	21	21	19	27	33	21
-Which visuals did you never use?					5	5	3	5	4	4	5	4	4	4	4

The two tables above show the students' choices of visuals for the sixth reading text. According to the results, the students selected *Visual 20* (Given in Figure 4.11.) as the most useful visual and the *Visual 10* (Given in Figure 4.12.) is the least preferred visual while comprehending the reading text.

#### 4.2.6.1. The Most Preferred Visual



Figure 4.11. Visual 20

The title of the sixth text is 'Are we too clean?' and it discusses how excessive cleaning habits can have negative effects on human body. This visual directly reflects the content of the text by stating that the overuse of chemical cleaning products is not good for humans. The participants of this visual are a person (Actor) and the chemical cleaning products (Goals). The process (to hug) between the Actor and the Goals is transitive. Since the gaze of the participants could not be observed the visual does not demand anything, instead it offers cleaning products to its viewers as an issue to be considered. The colors of the photo are so vivid and realistic. The cleaning products are at the center of the visual and presented as the most attractive figures. The big red cross on the visual clearly indicates the negativity and states that 'Don't overuse cleaning products'. This visual involves the elements of three metafunctions of visual analysis, and convey its message to its viewers in a clear way. These reasons mentioned above may be effective in students' selection of this visual the most used one while comprehending the text.

#### 4.2.6.2. The Least Preferred Visual

The visual below is the least preferred visual of the sixth reading text. There are two hands in this image, one of them is clean while the other has so many bacterias on it. Although this visual does not convey detailed information about the whole content of the text, it gives information about a specific part of the text; 'Dirty

*hands spread diseases*'. If the students got this information from the text, they might not have needed this visual for their comprehension.



Figure 4.12. Visual 10

#### 4.2.7. Reading Text 7

The seventh text was about Feng Shui and it explained the principles of Feng Shui philosophy. The text involved 18 questions. There were six matching, six open ended and six TFQs.

Table 4.16. Cross table of the achievement scores of the students in the experimental and control groups for the seventh text

Group	Mean	SD	MED	Min	Max	Z	p
Experimental	11,5	2,87	11	7	15,5	3,867 <sup>MW</sup>	<0,001
Control	7,39	2,4	7	2	13		

MW: Mann-Whitney U test

Table 4.16. shows the mean comparison results for the correct answers between the experimental and control groups in text 7. These results indicate that there is a statistically significant difference between the mean correct responses of the experimental and control groups in text 7 ( $p < 0.05$ ). The average number of correct answers of the experimental group is significantly higher than the control group in text 7. Although, the achievement scores of the experimental group are higher than those of control group, the highest score of experimental group is 15,5 out of 18. Students were unable to answer the following questions 'What evidence is there that people outside Asia believe in Feng Shui?', 'What should you throw away to improve Feng Shui of your home?', and could not answer the TFQ 'Qi flows smoothly if the house is not messy'. It seems possible that these results are due to the selection of visuals. The visuals which show the office designs of IBM and British

Airways were used to give clue to the readers for the question ‘What evidence is there that people outside Asia believe in Feng Shui?’. If students do not have any knowledge about these big companies they may not interpret these visuals to reach the answers for these questions. This suggests that background knowledge of the students is significant to make inferences about the text and the visuals. For the other two unanswered questions, it can be said that no related visuals were provided to the students to answer these questions.

Table 4.17. The frequency of the students’ choices of visuals for the seventh reading text

7 <sup>th</sup> Reading Text	Number of the Visuals													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Questions	Frequency of Choices													
-Which visuals helped you more in comprehending what you have read?	3	3	5	2	1	1	6	4	6	4	5	5	4	1
-Which visuals helped you to comprehend the words more?	4	1	4	3	4	3	5	5	3	2	5	0	2	1
-Which visuals helped you to comprehend the sentences more?	3	2	1	0	2	3	5	5	5	5	1	0	4	1
-Which visuals showed the goals and experiences of the characters in the text?	3	6	3	3	3	2	4	2	2	2	3	2	4	5
-Which visuals had more social interactions with you?	3	2	0	4	1	3	5	3	2	2	3	1	1	3
-In which visuals do the locations of objects make it easier for you to comprehend the visual?	2	1	3	1	4	4	4	6	6	7	6	4	2	3
TOTAL	18	15	16	13	15	16	29	25	24	22	23	12	17	14
-Which visuals did you never use?	8	4	3	5	5	4	3	3	2	4	4	5	4	4

Table 4.17. shows that *Visual 7* is the most used visual and *Visual 1* is the least chosen visual of the seventh text.

#### 4.2.7.1. The Most Preferred Visual

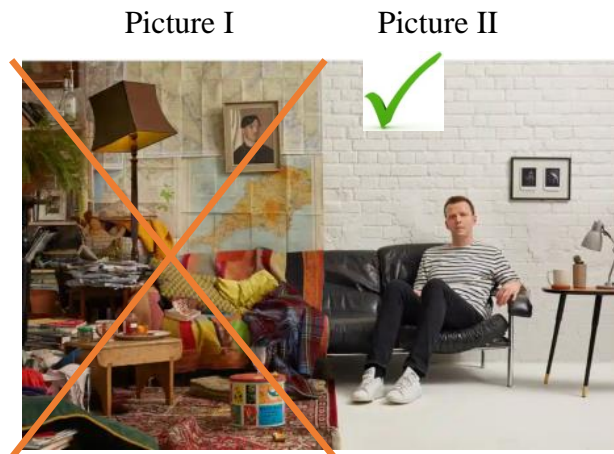


Figure 4.13. Visual 7

The visual above is a combination of two different pictures. The first picture shows a room which is in a mess. The scattered objects are the participants of the visual and the process is non-transactional, since there is not any Goal in the visual. The circumstance of this visual is the messy room (Locative Circumstance). Interpersonal meaning of this photograph is conveyed through the photograph hanging on the wall. The photograph involves a person who turned away from the viewers. This indicates that this photograph is an offer visual, and it does not demand anything from the viewer, but it offers the messy room to the viewers as an object to be considered. The color tones used in the picture give the feeling of a gloomy room. The picture I with a red cross on indicates negativity, and it signifies that the messy rooms are not accepted in Feng Shui philosophy and it warns its viewers to avoid mess.

The second picture in the visual shows a room which is simple, tidy and clean. The participant of this visual is *a man (Actor)* sitting on a sofa. The process is intransitive, it is because no vector is emanating from the Actor and there is no Goal in the picture. The tidy room is the circumstance. The participant of the visual looks directly at the viewer which signifies that the visual is demanding something from the viewer i.e. it demands viewers to keep their houses tidy for the flow of the good energy. The colors used in the picture give the sense of open space.

These two pictures of the *Visual 7* are separated from each other by a framing device. This indicates that these two visuals are disconnected and presented as ‘a



separate unit of information’. These arrangements of experiential, interpersonal and textual visual elements are associated with the content of the text. The man facing the viewers gets in interaction with them. Sitting in an upright position gives the idea of tidyness in terms of ideational meaning, and the suitable materials in living room gives the idea of textuality. In the light of these facts, *Visual 7* helps students to comprehend the text better.

#### 4.2.7.2. The Least Preferred Visual



Figure 4.14. Visual 1

The visual above shows a tidy and neat room in the daytime (Locative and Time Circumstances). The participants of the visual are the objects of the room, however, the process is intransitive, since the Actor and the Goal of the visual are not observed. All the objects foregrounded are for decoration and the social interaction between the viewer and the visual seems absent. Moreover, Feng Shui philosophy advises people not only to keep their houses tidy, but also to get rid of everything which can be unnecessary. Even though this room is clean and tidy, it involves so many incohesive objects in terms of textuality. Thus, the students may not have associated this visual with Feng Shui philosophy and with the content of the text. As a consequence, they may not have preferred this visual for their comprehension aid.

#### 4.2.8. Reading Text 8

The eighth text gave information about microhomes. There were 15 questions related to this text which were four matching, five open-ended questions, and six TFQs.

Table 4.18. Cross table of the achievement scores of the students in the experimental and control groups for the eighth text

Group	Mean	SD	MED	Min	Max	t	p
Experimental	11,4	2,36	12	7	15	4,374 <sup>t</sup>	<0,001
Control	7,5	2,85	7,25	2,5	11		

t: Independent samples t-test

The mean comparison results of the correct answers between the experimental and control groups for the eighth text clearly show that there is a statistically significant difference between the mean correct responses of the experimental and control groups in text 8 ( $p < 0.05$ ). The average number of correct answers of the experimental group is significantly higher than the control group for text 8. Highest score of the experimental group is 15 out of 15. These findings suggest that visuals accompanying the text support the content of the text sufficiently.

The following two tables demonstrate the choices of the students for the most used visual and the least preferred one. According to the findings, *Visual 7* was chosen as a most helpful visual for the comprehension of the text. On the other hand, most of the students stated that they never used *Visual 9* while comprehending the text.

Table 4.19. The frequency of the students' choices of visuals for the eighth reading text (Part I)

8 <sup>th</sup> Reading Text	Number of the Visuals							
	1	2	3	4	5	6	7	8
Questions	Frequency of Choices							
-Which visuals helped you more in comprehending what you have read?	7	7	10	8	3	2	8	5
-Which visuals helped you to comprehend the words more?	4	4	4	4	1	4	4	3
-Which visuals helped you to comprehend the sentences more?	4	4	5	5	1	5	4	3
-Which visuals showed the goals and experiences of the characters in the text?	5	1	1	0	1	7	7	2
-Which visuals had more social interactions with you?	1	1	0	0	2	0	1	1
-In which visuals do the locations of objects make it easier for you to comprehend the visual?	1	6	4	2	3	5	6	2
TOTAL	22	23	24	19	11	23	30	16
-Which visuals did you never use?	1	2	2	3	2	2	1	3

Table 4.20. The frequency of the students' choices of visuals for the eighth reading text (Part II)

8 <sup>th</sup> Reading Text	Number of the Visuals									
	9	10	11	12	13	14	15	16	17	
Questions	Frequency of Choices									
-Which visuals helped you more in comprehending what you have read?	3	1	1	2	3	3	3	2	1	
-Which visuals helped you to comprehend the words more?	1	2	2	2	5	6	3	4	2	
-Which visuals helped you to comprehend the sentences more?	3	4	1	2	4	3	4	3	2	
-Which visuals showed the goals and experiences of the characters in the text?	1	5	5	7	2	2	6	4	1	
-Which visuals had more social interactions with you?	2	6	7	7	1	0	2	2	1	
-In which visuals do the locations of objects make it easier for you to comprehend the visual?	1	4	3	3	4	4	3	2	1	
TOTAL	11	22	19	23	19	18	21	17	8	
-Which visuals did you never use?	6	3	2	3	1	1	3	3	4	

#### 4.2.8.1. The Most Preferred Visual



Figure 4.15. Visual 7

The participants of this visual are *the man (Actor)*, and *the bed (Goal)*. The process is transitive, since the man is lifting the bed towards the wall. The circumstances of this visual are the microflat (Locative) and the daytime (Time) because of the daylight coming inside the room. This is an offer visual, as the participant of the visual does not look directly at the viewer but instead he looks at the bed as a reflection of demand with objects he is in interaction. The high modality of colors and the details make the visual more realistic. The man and the bed are

centralised and presented as the core of the information, since this visual shows how a bed turns into a sofa and a table to maximize the small microflat. The components of ideational, interpersonal, and textual meanings can be observed in this visual and the visual reflects the microhomes successfully as compact living spaces. In the light of these facts, the students might have selected this visual as the most helpful one for their comprehension.

#### **4.2.8.2. The Least Preferred Visual**



Figure 4.16. Visual 9

As for the text “Microhomes” the participants of this visual are residential building and the cars parked. The process is intransitive, since the inhabitants are invisible. According to the ideational meaning, individually each efficiency symbolized by balcony gives an idea of residential flat. With regards to textual meaning, it resembles a stadium with inconsistent vectors in shape V. The social interaction between the visual and the viewer is absent. Therefore, as this visual does not give any detailed information about the text content, the students might not have used this visual to assist their comprehension.

#### **4.2.9. Reading Text 9**

The ninth text, the one of 12 questions of which was identifying main ideas, eight of which were open ended, and three of which were essay type questions, was about teenagers and their free time activities.

Table 4.21. Cross table of the achievement scores of the students in the experimental and control groups for the ninth Text

Group	Mean	SD	MED	Min	Max	t	p
Experimental	6,13	2,01	6,5	2,5	9	3,037 <sup>t</sup>	0,004
Control	4,13	2,05	4	0	8		

t: Independent samples t-test

As is seen in the table above, there is a statistically significant difference between the mean correct responses of the experimental and control groups ( $p < 0.05$ ). The average number of correct answers of the experimental group is significantly higher than the control group for text 9. Nevertheless, the highest score of the experimental group is 9 out of 12 questions. The students were unable to answer the questions; *'How can hobbies help shy people make friends?'*, *'Why does team work help prevent bullying?'*, and *'What do you think the situation in the first paragraph shows?'*. This result may be expressed by the fact that the visuals related to these questions may not help students to make inferences, and as a result, students may not be able to answer the inferential questions such as "why?", "how?" and "what do you think?".

The following two tables show the students' choices of most helpful and the least used visuals.

Table 4.22. The frequency of the students' choices of visuals for the ninth reading text (Part I)

9 <sup>th</sup> Reading Text					Number of the Visuals										
					1	2	3	4	5	6	7	8	9	10	11
Questions					Frequency of Choices										
-Which visuals helped you more in comprehending what you have read?					6	5	9	8	8	1	4	3	7	3	3
-Which visuals helped you to comprehend the words more?					3	5	4	3	3	2	6	5	2	3	3
-Which visuals helped you to comprehend the sentences more?					2	2	3	3	3	2	3	2	5	5	3
-Which visuals showed the goals and experiences of the characters in the text?					3	1	3	5	5	0	1	2	0	1	7
-Which visuals had more social interactions with you?					2	1	3	1	2	1	2	3	1	2	2
-In which visuals do the locations of objects make it easier for you to comprehend the visual?					3	0	2	4	4	3	2	3	2	2	2
TOTAL					19	14	22	25	25	9	18	18	17	16	20
-Which visuals did you never use?					4	7	0	1	1	2	4	3	2	1	1

Table 4.23. The frequency of the students' choices of visuals for the ninth reading text (Part II)

9 <sup>th</sup> Reading Text	Number of the Visuals											
	12	13	14	15	16	17	18	19	20	21	22	
Questions	Frequency of Choices											
-Which visuals helped you more in comprehending what you have read?	5	2	3	5	6	1	2	2	2	4	3	
-Which visuals helped you to comprehend the words more?	7	6	4	5	3	1	1	2	1	4	3	
-Which visuals helped you to comprehend the sentences more?	5	1	3	6	3	4	4	2	3	3	0	
-Which visuals showed the goals and experiences of the characters in the text?	5	4	3	6	6	2	1	0	2	3	6	
-Which visuals had more social interactions with you?	4	1	1	3	3	3	2	1	3	3	6	
-In which visuals do the locations of objects make it easier for you to comprehend the visual?	6	3	2	2	2	3	4	1	4	3	4	
TOTAL	32	17	16	27	23	14	14	8	15	20	22	
-Which visuals did you never use?	2	1	1	1	1	3	4	4	1	3	3	

#### 4.2.9.1. The Most Preferred Visual



Figure 4.17. Visual 12

The participants of this visual are *the teenagers(Actors)* and *the ball(Goal)*. The process (*to play volleyball*) is transitive, since *the teenagers (Actors)* stretch their arms towards *the ball (Goal)* and the vector emanates from the teenagers' arms to the ball. The sunlight shining behind the teenagers reflects the time of the visual, which is daytime in summer and the open area where they are playing volleyball as an outdoor activity reflects the place of the visual(*Circumstances*). The components of ideational meaning can be observed in this visual and this visual sufficiently reflects one of the teenagers' free time activities '*playing volleyball*'.

Two of the female participants look directly at the viewers of the visual, which signifies that this is a *demand visual* and the visual demands interaction from its viewers. The facial expressions of the participants also support this interaction, since the smiles of participants mean that the viewer is asked to enter into a relation of social affinity with the participants. The angle of the visual is horizontal and frontal which means that the viewers are involved with the represented participants. The high modality of the colors makes the visual more naturalistic. Within the scope of interpersonal meaning, the social interaction between the visual and its viewers is strong.

The teenagers are situated at every part of the visual, which makes them more attractive and salient figures of the visuals. This visual represents the experiences and goals of its participants, have social interaction with its viewers, and attracts viewers attention to the teenagers and their need for free time activities. Therefore, the students may have chosen this visual as the most helpful one to comprehend the content of the text.

#### **4.2.9.2. The Least Preferred Visual**



Figure 4. 18 Visual 2

The participants of this visual are two people who are quarreling with each other. The participants seem older than teenagers, thus, this visual does not reflect the experiences and the goals of the teenagers. The process is *to quarrel* which is not related to the free time activities of the teenagers. No details are given concerning the time and place (*circumstances*) of the visual. The gazes of participants are depicted as turned away from the viewer, which signifies that this is an offer visual. The facial expressions with the anger of the participants represent the rejection of social relation with the viewers. The interaction between the visual and its viewer is absent and this

visual does not convey detailed information related to the content of the text. In the light of these facts, the students may not have chosen this visual for comprehension.

#### 4.2.10. Reading Text 10

The last reading text was about travelling and learning, and students answered 12 questions after reading the text. There were four open-ended and eight TFQs.

Table 4.24. Cross table of the achievement scores of the students in the experimental and control groups for the tenth text

Group	Mean	SD	MED	Min	Max	Z	p
Experimental	10	1,47	10	6,5	12	3,843 <sup>MW</sup>	0,000
Control	7,1	2,79	8	1	10,5		

MW: Mann-Whitney U test

Table 4.24. shows the mean comparison results for the correct answers between the experimental and control groups in text 10. According to these results, there is a statistically significant difference between the mean correct responses of the experimental and control groups in text 10 ( $p < 0.05$ ). The average number of correct answers of the experimental group is significantly higher than that of the control group in text 10. The highest score of the experimental group is 12 out of 12. From this finding it is apparent that visuals support the content of the text sufficiently and aid students to comprehend the text.

Table 4.25. The frequency of the students' choices of visuals for the tenth reading text (Part I)

10 <sup>th</sup> Reading Text		Number of the Visuals						
		1	2	3	4	5	6	7
Questions		Frequency of Choices						
-Which visuals helped you more in comprehending what you have read?		5	7	5	11	6	3	7
-Which visuals helped you to comprehend the words more?		3	2	4	5	6	3	7
-Which visuals helped you to comprehend the sentences more?		5	4	3	5	5	2	5
-Which visuals showed the goals and experiences of the characters in the text?		6	3	6	5	2	1	3
-Which visuals had more social interactions with you?		1	1	2	4	0	3	3
-In which visuals do the locations of objects make it easier for you to comprehend the visual?		3	2	3	4	2	9	2
TOTAL		23	19	23	34	21	21	27
-Which visuals did you never use?		7	3	2	2	2	2	3



Table 4.26. The frequency of the students' choices of visuals for the tenth reading text (Part II)

10 <sup>th</sup> Reading Text	Number of the Visuals							
	8	9	10	11	12	13	14	15
Questions	Frequency of Choices							
-Which visuals helped you more in comprehending what you have read?	2	2	1	7	4	4	6	2
-Which visuals helped you to comprehend the words more?	2	0	3	4	6	2	4	1
-Which visuals helped you to comprehend the sentences more?	4	3	4	4	5	6	2	1
-Which visuals showed the goals and experiences of the characters in the text?	3	8	5	5	2	5	6	2
-Which visuals had more social interactions with you?	1	3	1	5	4	4	5	1
-In which visuals do the locations of objects make it easier for you to comprehend the visual?	2	6	4	3	1	6	4	1
TOTAL	14	22	18	28	22	27	27	8
-Which visuals did you never use?	4	4	3	2	2	3	4	4

The two tables above shows that Visual 4 is the most preferred visual and most of the students stated that they never used Visual 1

#### 4.2.10.1. The Most Preferred Visual



Figure 4.19. Visual 4

This is a multimodal visual in that it presents two modes, visual mode and written mode, to the viewers at the same time. The multimodality reinforces the message of the visual and helps viewers to make sense of the message. The participants of this visual are money, a red circle with a diagonal line, and the written text 'NO MONEY'. The red circle with a diagonal line is placed on the money to signify the absence of money, and the same message is given through the written

mode 'NO MONEY'. This visual reflects that people need money to travel and one of the things preventing people from traveling is the lack of money. In terms of interpersonal meaning, it can be said that this is a demand visual, since the man on the money (Benjamin Franklin) looks at the viewer and demands social interaction. The angle of the visual is horizontal and frontal representing the involvement of the viewers to the world of the visual. Moreover, the placement of objects reflects that the most important information of this visual is the absence of money for travelling, as the statement 'No Money' is situated in the upper part and presented as the Ideal which means that it is the most salient part of the general information. These reasons may have led students to choose this visual through modality.

#### 4.2.10.2. The Least Preferred Visual



Figure 4.20. Visual 1

The participants of this visual are the world, the plane, and the figures of popular tourist destinations in the world. Although these participants symbolize travelling, the visual does not reflect the experiences and the goals of the participants. The components of interpersonal meaning are not observed in the visual, thus, the social interaction between the visual and the viewers is absent. Different shades of the same color are used in the visual and this decreases the modality of the visual and diminishes its reality. Popular touristic destinations are placed at every part of the visual and give general information about travelling. Moreover, the color tone of the plane makes it salient. Nevertheless, this visual does not reflect the concept of travelling, besides, it does not give any detailed and specific information about the content of the text and may not help readers to comprehend the text better. As a result, the students may not have selected this visual to enhance their comprehension.

Tablo 4.27. Differences between the achievement scores of the students in the experimental and control groups

Text	Mean Difference
1	1,39
2	1,47
3	0,63
4	1,72
5	1,87
6	1,05
7	4,14
8	3,88
9	2,00
10	2,89

According to the table above, the average number of correct answers of the experimental group is higher than that of control group in all texts. Especially in the 7th and 8th texts, this increase is seen more clearly. While the mean differences of correct answers are relatively lower in the first 6 texts, it is observed that the mean differences increase in favor of the experimental group starting from the 6th text. Although the students' disposition towards visuals seems positive, they may not have paid attention more because of their less developed visual literacy skills at the beginning of the experiment.

From the short review above, key findings emerge: the achievement scores of the students in the experimental group outperformed the those of the control group students particularly in the last four reading texts. This suggests that the students of the experimental group make progress in terms of their reading comprehension skills.

The Students' Disposition Scale also provides the data about students' disposition towards all the visuals used in the text. The students chose between 'Yes', 'No', and 'Undecided' options for each statements i.e. 'Visuals helped me to comprehend what I have read', 'Visuals helped me to comprehend the sentences' and 'Visual helped me to comprehend the words'.

The following table shows the students' responses for the first statement in the scale.

Table 4.28. The frequency of the students' responses for the first statement in the scale

Visuals helped me to comprehend what I have read						
Reading	Yes		No		Undecided	
Texts	f	%	f	%	f	%
1	16	72,72	4	18,18	2	9,10
2	17	77,28	4	18,18	1	4,54
3	16	80	2	10	2	10
4	16	84,22	2	10,52	1	5,26
5	17	89,48	2	10,52	0	0
6	16	84,22	2	10,52	1	5,26
7	14	82,35	3	17,65	0	0
8	14	82,35	1	5,89	2	11,76
9	17	89,48	1	5,26	1	5,26
10	17	89,48	2	10,52	0	0

From these findings shown in the Table 4.28., it is clear that visuals helped students to comprehend the texts. The findings corroborate the ideas of Wright (1989), who states that the things we read and hear have an effect on us while we make a prediction, deduction and inference. Moreover, the things we see have significant impact on us.

Table 4.29. The frequency of the students' responses for the second statement in the scale

Visuals helped me to comprehend the words						
Reading	Yes		No		Undecided	
Texts	f	%	f	%	f	%
1	18	81,80	2	9,10	2	9,10
2	17	77,28	4	18,18	1	4,54
3	16	80	2	10	2	10
4	15	78,96	2	10,52	2	10,52
5	15	78,96	3	15,78	1	5,26
6	16	84,22	2	10,52	1	5,26
7	14	82,35	3	17,65	0	0
8	14	82,35	1	5,89	2	11,76
9	17	89,48	1	5,26	1	5,26
10	17	89,48	2	10,52	0	0

The table above shows the students' responses for the second statement in the scale. As mentioned in the literature review, recognizing words is the first step of the lower-level processes, which is referred to as bottom-up processes and vocabulary knowledge is important for reading comprehension. From the data in Table 4.29, it is apparent that the visuals helped the students to comprehend the words. These findings are consistent with those of Bazeli & Olle (1995) who suggest visuals as practical tools to enhance vocabulary and reading comprehension skills of the students.

Table 4.30. The frequency of the students' responses for the third statement in the scale

Reading Texts	Visuals helped me to comprehend the sentences					
	Yes		No		Undecided	
	f	%	f	%	f	%
1	13	59,10	5	22,72	4	18,18
2	16	72,72	3	13,64	3	13,64
3	14	70	3	15	3	15
4	12	63,16	3	15,78	4	21,06
5	15	78,96	3	15,78	1	5,26
6	14	73,79	2	10,52	3	15,78
7	15	88,24	2	11,76	0	0
8	14	82,35	2	11,76	1	5,89
9	17	89,48	1	5,26	1	5,26
10	17	89,48	2	10,52	0	0

The table above shows students' responses for the third statement in the scale. As can be seen from the table, most of the students stated that the visuals helped them to understand the sentences. The effect of visuals on students' sentence comprehension is important, it is because, the syntactic skill contributes to reading comprehension, although it is not counted among the main predictors (Oakhill & Cain, 2012).

Although not all of the results were significant, the overall direction of results showed the development of reading comprehension skills through visual discourse. At this point, it can be said that visual literacy is among the most significant skills that students should have in today's world, since visuals are inseparable part of our education, communication and life. However, most students were said to lack of

visual literacy skill. In this research, the findings on the students' achievement scores show that at the beginning of the experiment students were unable to interpret and comprehend the visuals since they lacked the visual literacy skills. During the experiment, the students discussed, interpreted and analyzed visuals for each reading text. Consequently, as the experiment progressed, the students started to gain the skills of seeing, interpreting and comprehending the visuals. Comprehending visual discourse assisted students to comprehend the text well, and they had higher correct answers towards the end of the experiment. The views of Debes (1968) are in line with these ideas, as he states that visual communication involves seeing, learning, communication, interpretation and comprehension steps.

These results tie well with the dual coding theory of Paivio (1971) in which he states that when verbal imagery system operates with nonverbal imagery system, the imagery system supports the recall of verbal information. The results of this study lead to similar conclusion that visual discourse supports the comprehension of the text. Overall these findings are in accordance with findings reported by other studies that reading comprehension of students improves when visuals are used with the text (Pan & Pan, 2009; Erfani, 2012; Merç, 2013). This research has also verified the ideas of Albers (2007) that viewers of visuals are not passive and they read the visual texts with a critical eye.

Some of the findings have revealed that although the students in experimental group have outperformed their counterparts, statistically significance difference has not been detected in the texts one, three, four and six. A possible explanation for this might be the selection of appropriate visuals for the text. Visuals which support the understanding of word meanings and text context should be selected to improve the reading comprehension. These kinds of visuals are called utility-based visuals (Seburn, 2017).

## **5. CONCLUSION**

### **5.1. Concluding Remarks**

Reading is among the fundamental skills in language, and comprehension is the core of reading activity. Thus, it is significant to improve reading comprehension skills of the readers. There are many ways to promote the reading comprehension skills, and using visuals is one of these ways. Although there are some studies that have been carried out to reveal the effects of visuals on the development of reading comprehension skills of the readers, the visuals have not been considered as a type of discourse, and the communicative and interactive sides of the visuals have been neglected in these studies. Recently, together with the written and oral texts, visuals are accepted as a kind of discourse, and the analysis of visual discourse helps to realize that besides reading written texts, it is necessary to read visual texts to understand and interpret them. Visual texts comprise ideational, interpersonal, and textual meanings, and these meanings can be analyzed to see what is said by the visual and how it is said. Ideational meaning in visual discourse expresses the experiences and goals of the participants. Interpersonal meaning concerns with the social interaction between the viewer and the visual discourse, and textual meaning concerns with the placement of objects in the visual discourse. When visuals involve the components of these meanings, they may convey their messages as language does. Thus, the recognition of the role of visual discourse analysis may help teachers to choose appropriate visuals for their classroom activities and may support students to interpret and understand visual texts. Therefore, the purpose of this study was to investigate the enhancement of EFL prep-class students' reading comprehension skills through visual discourse at Ondokuz Mayıs University. To conduct the study, ten reading texts with the accompanying visuals and comprehension questions were designed for the students of experimental group, and the students in the control group were given the same texts and the same questions without any visuals. For reliability, the answers of the students were scored by two independent assessors. Student's Disposition Scale was used for the experimental group to reveal the disposition of students towards the visuals. To analyze whether the visuals of the reading texts were qualified or not according to the visual discourse, a rubric was developed by Prof. Dr. Nalan KIZILTAN on the basis of Halliday's Systemic Functional Grammar and Kress and van Leeuwen's Grammar of Visual Design. The rubric involved the

ideational, interpersonal, and textual meanings with their components, and the visuals of the texts were analyzed with regard to the developed rubric.

The results of this study indicate that the use of visual discourse enhances the reading comprehension skills of the students. Therefore, it can be concluded that presenting reading texts with the accompanying visuals to the students is an effective way of improving reading comprehension skills.

Another significant finding to emerge from this study is that using visual discourse in reading texts may help students not only to enhance their reading comprehension skills but also to gain visual literacy skills.

The responses of the students given to the Students' Disposition Scale indicate that visuals may help students to comprehend the text, sentences and words. It can be concluded that visuals accompanying the text support both the lower-level (bottom-up) and higher-level (top-down) processes during reading comprehension. Since effective reading comprehension develops out of the combination of top-down and bottom-up processes, visual discourse plays a crucial role for the effectiveness of reading comprehension. The responses of the students given to the Students' Disposition Scale also show that multimodal visuals presenting verbal and visual systems at the same time have been more helpful for the students' comprehension of the reading text. It is because spatial intelligence is significant in reading, and when the message of the visual is conveyed through both the verbal and visual modes, the readers can reach the information in a short time, and visualize the events of the text in an easier way. Besides, the findings of this study also prove that the visual discourse may be more helpful when they are presented not only for the text but also for the comprehension questions. Another conclusion that can be drawn from these findings is that when viewers / readers are familiar with the topic of the text, the visuals may not be used by the viewers / readers. Since we are surrounded by technology, any text about technology may not require any supplementary visuals.

Last but not least, as literacy starts with decoding letters, visual discourse may corroborate the readers'/viewers' comprehension skills.

## **5.2. Suggestions for Teachers**

Since this study supports the idea that the readers/viewers may comprehend the written texts with visuals better, the visuals can be used by both the pre-service



teachers and the teachers in classrooms. Besides, the importance of the visuals cannot be denied as they bring authenticity in the language classrooms and they corroborate readers'/viewers' interpretation and comprehension of the texts.

The evidence from this study also suggests:

- Teachers, readers and viewers should raise their awareness to visuals for better comprehension,
- Visuals should be selected and designed meticulously by the English language teachers to allow students to analyze the visual discourse, and in this way, they can improve their visual literacy skills and reading comprehension skills,
- The power of multimodal visuals should be exploited by the teachers in the language classrooms. Multimodal visuals present verbal and visual systems at the same time, and if the visuals are accompanied by verbal information, readers comprehend and interpret the reading text easily with the help of imagery system,
- It is important that the visuals accompanying the text should be chosen both for the text and for the comprehension questions,
- Teachers may refer to the chart (shown in Figure 5.1.) which was developed on the basis of Prof. Dr. Nalan KIZILTAN's rubric in order to choose the appropriate visuals for reading comprehension,
- Within the scope of ideational, interpersonal and textual meanings, teachers should choose visuals which express the experiences and the goals of the participants. Teachers should select the visuals which have social interaction with the viewers to attract their attention. The placement of the objects in a selected visuals should strengthen the message conveyed by the visuals.

### **5.3. Limitation of the Study and Suggestions for Further Studies**

This study has provided insights to EFL Turkish teachers concerning the facilitation of EFL learners' reading comprehension through the use of visual discourse, however, it has some limitations. The major limitation of this study is the small sample size, and a further study with more and diverse participants may better assess the effects of using visual discourse in enhancing reading comprehension skills of EFL students. Moreover, this study may be extended to the other language skills to see the effects of using visual discourse on listening, writing and speaking skills, as well.






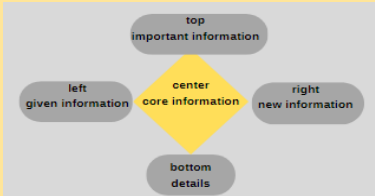


Ideational Meaning	Participants		Actor(s)		
			Goal(s)		
			Recipient(s) (What/Who is affected)		
	Processes	Verbs	Transitive		
			Intransitive		
	Circumstances		Place		
			Manner		
			Time		
Interpersonal Meaning			Mood	Demand (Gaze)	
				Offer (No Gaze)	
			Angle of Interaction		
					
			Modality / Multimodality		Modals Status Power Reality
Textual Meaning	Information Value				
	Cohesion	Salience		Size, Color Tones, Foregrounded, Backgrounded	
		Framing		<div><div> Framed</div><div> Unframed</div></div> <div>Disconnected (Framed)</div> <div>Connected (Unframed)</div>	

Figure 5.1. A rubric for teachers to choose appropriate visuals

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# APPENDICES

## Appendix 1. Reading Text 1


### THE BIG QUESTION:




**1**

**NATURE** *VERSUS* **NURTURE**


Coral and Astrid, 17, are Chinese and they are twin sisters but they don't live with the same family. They don't even live in the same country! Coral lives in California with her adopted family. She's got a busy life in a big city. Astrid lives in Sweden with her adopted family. She has a quiet life in the country. Coral and Astrid look like sisters but they don't speak the same language and their lives are completely different. The two families meet for a holiday every two years. These twins are unusual. They don't live together but they have similar habits. Coral is like Astrid in many ways: they often wear similar clothes, they always enjoy the same music and films and they hardly ever eat ice cream - incredibly they both don't like it.




**2**




**3**




**4**



**5**

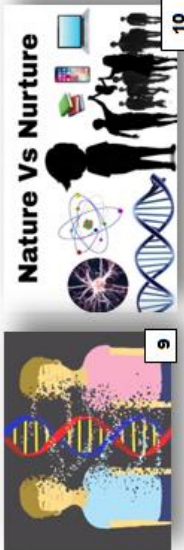


**7**



**8**

### Nature Vs Nurture



**9**


**10**

Scientists are very interested in twins like Coral and Astrid. They can help them find the answer to an important question: are we the product of our genes (nature) or our life experiences (nurture)?

Coral and Astrid have the same genes and are similar in many ways but their lives and experiences are very different. Some scientists think that human behaviour is 49% nature and 51% nurture but they now want to know how nature and nurture work together to make us individuals.


Hair and skin colour depend on our genes, but it isn't always so simple. Height and weight depend on our genes, but a good diet and exercise can influence them a lot. It's the same with personality. Children can be extrovert like their parents, but the influence of friends can change this. So, twins like Coral and Astrid are fascinating for scientists. They don't look like their adoptive parents because they haven't got their genes but they can take after their adoptive mums and dads because they learn their behaviour from them. At the same time, they have got the same likes and dislikes as each other when they don't live together. How is this possible?

### Nature Nurture



**12**

### NATURE + NURTURE



**11**



## Appendix 2. Reading Text 2



2



3



4



1

**SCHOOL**  
**But not as you know it!**

Imagine a school with no timetable, no traditional lessons, no marks, no reports. Students can choose their subjects and they can also decide when to do their tests. Is there really a school like this? Yes, there is. It's a secondary school in Berlin, Germany.



5



6



20



21

The school's mission is: acquire knowledge, live together, do and be. The headteacher says, 'the world is changing and the internet is transforming the way young people access and use information. We are reinventing school and we are preparing young people for the challenges of the future.'

This isn't just a school, it's a community. Students, teachers and school workers all eat together and meet regularly for assemblies. Groupwork and collaborative learning and living are central to this school. There is respect for all members of the community and they all receive praise for good work.

The school is popular, the students are happy and they get good results. Can other schools learn from its methods?



22



23



9



10



11



12



13



16



15



14



17



18



19



7



8

Students here study traditional subjects such as German, English, maths and social studies but they can also do other courses such as: 'responsibility' and 'challenge'. There are workshops in art, music and dance, too. On the 'challenge' course, each student has €150 for an adventure. This week one student is working on a farm, another is kayaking and a girl is trekking in the mountains. The teaching methods are often unusual but they're effective.

Maths teachers encourage students to write code for computer games rather than take exams. Students travel to foreign countries to learn languages and people with interesting experiences often visit the school to speak to students. Do the students have a lot of free time? No, they don't. They are busy all the time.

## Appendix 3. Reading Text 3



1



2

### TECHNOPHOBIA

The shock of the new

When there's new technology, there are technophobes. In 3500 BCE, when a prehistoric man first found a round stone and said, 'Look! A wheel, his friend probably said, 'That's dangerous. It goes too fast.'

In Greece in about 400 BCE, Socrates, a famous philosopher, was worried about the fashion for writing. 'Don't write,' he said, 'it's bad for your memory.' He was wrong, but over 2,000 years later technophobes say the same thing about computers – they are bad for your memory. Students reply that because there are computers, they don't need to remember information!

The invention of the printing press in the 1440s and the introduction of books were great moments in history – or perhaps not! A lot of people had a problem with books. A Swiss scientist, Conrad Gessner, spoke about information overload. When was this? Last year? No, in 1565! After books, came newspapers. A prominent French minister in the 1770s was against newspapers. 'Don't read newspapers at home! Go out and talk to your friends.' He was worried about the end of face-to-face conversation. Today it isn't newspapers but social media that's killing conversation, according to technophobes.



3



4



5



6



5



11



12



7



8



9



10



10



9



10



10



10



10



## Appendix 4. Reading Text 4

**A**



**1**



**2**

**FASHION IS A PASSION!**

**A** For many of us, looking fashionable is really important. We want to show that we know how to dress well, but few of us know about the effects that our 'fashion' choices have on the world. Do you choose 'fast fashion' or 'slow fashion'? It's a difficult decision to make. And what's the difference between them?



**3**

**Slow Fashion**

**B**



**4**

**5**



**6**



**7**

**I Don't Want to DIE for FASHION**

**C**



**9**



**8**

**C** It was easy to blame the fashion companies, but the consumers were also responsible. With so many cheap clothes in shops, people became shopping addicts. They bought more than they needed, wearing some items just a few times. This started a vicious circle which continues today: people keep buying clothes, so the big brands keep producing them. Also, the more people buy, the more they waste. When people don't want their clothes any more, they get rid of them. Many of these clothes end up in landfill sites with the rest of our rubbish, where they cause environmental damage. Why? Because most of the materials used to make modern clothing are synthetic and don't biodegrade.

**10**



**11**



**D**



**12**



**13**



**14**

**D** So how can we break the cycle? The answer is 'slow fashion'! Slow fashion (also known as 'sustainable fashion') is a movement led by companies who focus on making high-quality clothing from natural fibres. They also pay their workers a fair wage. The clothes usually cost more than the ones that the big brands sell, but they last much longer. This means that people don't need to buy clothing as often or throw away so much. However, slow fashion doesn't have to be expensive. It includes buying "pre-loved" or used clothes and repairing old clothes, like our grandparents did. In this way we can reduce the demand for new items, and slow down the speed of production.

**E** Now you know the difference between fast and slow fashion. The next time you go shopping and try on a new outfit, ask yourself if you're making the right choices, and we don't just mean about the colour or size of the clothes you choose!

**15**



## Appendix 5. Reading Text 5

### Are you going to be a GIG WORKER?

**A**



1

**2**



2

Your grandparents probably had one job in their working lives. Your parents are probably going to have four or five but you're going to do about six jobs - all at the same time! This is one of the many predictions for the future of work and it's called the gig economy. Traditional jobs aren't going to disappear but the gig economy is new and it's growing fast.

**B**



3



4



5

Gig workers are freelance and they work on short contracts or single projects - gigs. They use websites and mobile apps to find gigs. Flexibility is the key to gig work and it attracts all types of people.<sup>1</sup>..... Gig work can top up your salary, give you work experience and, for some, it's a career choice.

**C**



6



7



8

Amy is 26. She works part-time in a nursery school. She also babysits and helps in a restaurant. 'This isn't my choice but I need the money.'<sup>2</sup>....., then I can give up all the other jobs. I can't wait to work regular hours and have a monthly salary.'

**D**



10



11



12

**9**

**ECONOMICS**



9

Jin-Ho, 28, is an economics graduate. He's a digital marketer, blogger and taxi driver for a mobile app. 'I started gig work after I lost my job at a bank and it suits me for the moment.'<sup>3</sup>..... and I can take time off when I want a break. I'm using my qualifications but I'm also developing new skills like writing.'

**E**



13



14



15

Talia, 30, is a filmmaker. Between jobs, she's a supply teacher for drama and music and makes deliveries for a large online company. 'It's exciting.'<sup>4</sup>.....'

**F**



16



17

**Financial Stability**



18





19

However, there is a downside too: there isn't any job security. When you finish one job you don't always know when you're going to get the next, so there's no financial stability. There's no sick pay or paid holidays either. The one certainty about gig work is that it's here to stay. It's already changing the way we work and it's going to continue to expand.



## Appendix 6. Reading Text 6



**A**

**1** **2**



**ARE WE TOO CLEAN?**

Will you have a shower and wash your hair today? Will you put on clean clothes tomorrow? I'm sure you will because we are all super clean - clean as never before. We wash with antibacterial soap and kill all the germs in our homes with powerful cleaning products. It's a battle against bacterial. But if this trend continues, will we become too clean for our own good?

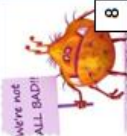
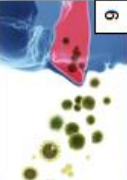
**3** **4**

**B**



**5** **6**

Some scientists think we are already too clean. They think there's a connection between the increase in the number of people with allergies and our constant attack on bacteria. There are over 1,000 different microbes on our bodies, but not all of them are bad. In fact, some of them are positively good. Our bodies are so clean now, they don't know how to live with bacteria. So, if we come into contact with unknown bacteria, we'll probably have an allergic reaction to it.



**7** **8** **9**

**C**

**10** **11**



When do we come into contact with bacteria? When we touch it, because, believe it or not, that is the main way we spread disease. So, here's the contradiction: we are super clean but our hands are still dirty and spread disease. We think that these diseases are minor ones, like coughs or colds. In fact, they can be really serious illnesses: food poisoning and hepatitis A. Both of these can kill. There's more. MRSA and Clostridium difficile are two super bacteria. They are common in hospitals but are very difficult to treat and are also often fatal. Prevention is simple: washing your hands properly.

**12** **13** **14** **15**



**HEPATITIS A**

**FOOD POISONING**

**16** **17** **18**

**D**

**19** **20** **21**

What does this mean for the future? We will need to find a balance: kill the bad bacteria but encourage the good bacteria. To do this, we don't need to be excessive when we clean our homes, but we need to remember to wash our hands!

## Appendix 7. Reading Text 7

### FENG SHUI FOR BEGINNERS

**A**



1



2

**B**



4



**Qi Energy**

3

2 The most important idea in Feng Shui is that there is an energy in the world called *qi* or *chi* (it sounds like *cheap* without the final 'p'). Qi travels around in the air, and there are places with good qi and places with bad qi. If you organise a room so that the qi flows smoothly, you will feel healthier and happier because you will receive more of this powerful energy. Big companies believe in it. Both British Airways and IBM used Feng Shui when designing their office buildings.



5



6

**C**



7

3 One way to improve the Feng Shui of your home is simply to clean up. A tidier home is better for everyone. When you have a lot of objects in your house, the qi energy hits them and can't move freely. Feng Shui experts say you should get rid of everything that you don't particularly love or use regularly.

**D**



8



9



10

4 In Feng Shui, mirrors are especially important because they change the direction of the qi energy. You mustn't put a mirror opposite your front door because it will reflect the qi and send it out of your home. The bedroom is one of the worst places to have a mirror, because the qi hits it and moves around the room. This means you have less peaceful sleep.



11

**E**



12

**F**



14

5 Choosing colours carefully is another big part of Feng Shui. All colours have a positive effect of some kind if you use them in the correct way. This may simply be by adding a single object to a room. For example, purple relates to wealth so a vase in that colour can perhaps improve your finances. Green is as important as purple, but for different reasons. It brings new life and creates stronger relationships between the people who live in the home. Red is a more active colour that creates warmth and excitement.



13

6 These are just some of the many powerful effects of Feng Shui, according to believers - but there is no scientific proof that qi actually exists. However, it is certainly true that people often do feel less stressed and more confident after they use Feng Shui to design their home. Perhaps just making these changes gives people control over their lives and, as a result, they feel calmer and more relaxed at home.



## Appendix 8. Reading Text 8



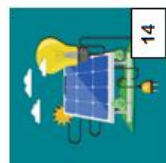
# MICROHOMES

**A** The sofa disappears behind a wall, there are secret panels in the floor and a bed comes down from the ceiling. This fits in 39 square metres and the inspiration comes from theatre sets. This is an architect's answer to the housing crisis in big cities like London and New York.

Property prices are sky-high and there aren't enough affordable homes, especially for young people just starting work. The problem's going to get worse: by 2050, 65% of the world's population will live in towns and cities, compared to 54% today.



**E**ach microflat is a unit. The units fit together like toy building blocks. Each residential block has about 25 microflats as well as some community areas, such as a gym, a terrace and a café. Residents can meet and socialise there. Microflats are environmentally friendly. They have big windows and high ceilings to use natural light and solar panels provide the electricity. All the domestic appliances and systems are internet-connected and you can control them from your smartphone.



**D** You don't have to be a minimalist to live in a microflat, but it helps! They are tiny and space is very limited. Architects designed microflats with young people in mind, especially students and young workers just starting their careers. New technology and the minimalist trend mean they don't have many physical possessions. They download music, films and books so they don't need bookcases, for example. They also tend to be out most of the time working and socialising. A microflat in a city centre location at



## Appendix 9. Reading Text 9

**A**



1



2



3



4



5

**TEENS NEED MORE TIME**

What a day! You've just had a maths test. There's been some tension between your friends. Your science teacher asked you to work harder and the PE teacher has increased team training from two to three times a week – and you've got lots of homework. You collapse on the sofa and switch on the TV. Then your mum comes home and asks, 'Why aren't you doing your homework?'

**B**



6



7



8



9



10

Schooldays are the best days of your life, so they say, but for today's teenagers life can be hard: school, homework, friendships and social media. Parents' and teachers' expectations aren't necessarily negative but they can make too many demands on their time. Teens need time to relax and unwind as well as work.

**C**



11



12



13

Having time off is essential for your mental and physical well-being. Adolescents with hobbies tend to feel less depressed and happier and they sleep better as well. Outdoor activities are particularly important for building up your immune system and a break from study gives your eyes a rest!

**D**



14



15



16



17



18

Free time gives you the chance to do something you feel like doing and to recharge your batteries. If you're sitting at a desk all day, it's good to get outside and do some exercise. When you are studying hard and getting tired, practical activities like cooking or art and crafts give a complete break. Best of all, while you're having fun doing your hobby, you can forget about your problems. As a result, you feel relaxed and more positive. People get a lot of personal satisfaction from their hobbies: when you've scored a goal, made a cake or painted a picture, you feel proud and this increases your self-esteem and self-confidence. Your teachers and parents will be pleased to know that a hobby can teach you to concentrate and memorise information, too!

**E**



19



20



21

Leisure activities are also a good way of meeting new people and making friends. When you have a similar interest, it is easier to break the ice and start a conversation. Team and group activities encourage positive interaction and help to build a strong network of friends and this can prevent bullying.

**F**



22

Teenagers don't have much time during school time but free time is an absolutely essential part of your daily routine – so make sure you get a hobby!



## Appendix 10. Reading Text 10

<p><b>TRAVEL AND LEARN</b></p> <p>Have you ever dreamed about travelling around the world? Perhaps you have. Perhaps you have even thought about taking a gap year to travel or going abroad to study. Have you ever wanted to travel without your family? Have your parents ever refused permission to travel alone?</p> <p>1 </p> <p>2 </p>	<p>Most of us have dreams of foreign travel, though obstacles like a lack of time and money mean only the lucky few enjoy this experience. These fortunate travellers return home with stories about that amazing beach in Thailand, those funny Australian students or how they got lost in Machu Picchu.</p> <p>3 </p> <p>4 </p> <p>5 </p> <p>6 </p>	<p>Latest studies have now revealed that they are fortunate in other ways too. Researchers have found strong evidence that travel is good for you and it increases your brain power! University teachers can often recognise the travellers among their students because they are more creative.</p> <p>7 </p> <p>8 </p>	<p>They have learnt to see the world from a new point of view because they have experienced life in different countries. They also tend to be more tolerant and understanding because they have mixed with people from other cultures. Travel or studying in a different country makes students more independent and responsible. They have to do things like find a room and manage their money without the help of their family.</p> <p>9 </p> <p>10 </p> <p>11 </p> <p>12 </p> <p><b>D</b></p>	<p>Does travel make you more intelligent too? It seems the answer is yes! Apparently, things like asking for information in a language you don't speak very well or navigating a new metro system is good for your brain! These tasks stimulate the brain and keep it active. If you are lucky and get the opportunity to travel or study abroad, don't think twice. Pack your bags and go!</p> <p>13 </p> <p>14 </p> <p>15 </p> <p><b>E</b></p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Appendix 11. Comprehension Questions of Text 1

**A. Read the text above and choose the main idea.**

1. The differences between twins.
2. How people become individuals.
3. Families with adopted children

**B. Read the text again and answer the questions.**

1. Who are Coral and Astrid?
2. What are the differences in their lives?
3. In which ways they are similar?
4. What is *nurture*?
5. How much of human behaviour comes from our genes?
6. What do nature and nurture influence?

**C. Read the text again and decide if the statements are true (T) or false (F). Correct the false ones.**

1. Coral and Astrid are twin sisters living in the same house. **T / F**
2. Twins have completely different characters because they don't live together. **T / F**
3. Coral and Astrid like the same things. **T / F**
4. Nature is a person's genes. **T / F**
5. Scientists believe that human behaviour doesn't depend on our genes. **T / F**
6. Height, weight and personality depend on both nature and nurture. **T / F**



## **Appendix 12. Comprehension Questions of Text 2**

### **A. Read the text above and answer the questions.**

1. Where do you think they are?
2. In what ways do you think it is different from the other schools?
3. Which subjects and courses are studied at this school?
4. How can you describe the relationship among students, teachers and school workers?
5. What is the importance of cooperation at this school?
6. How do the students feel at this school?

### **B. Read the text again and decide if the statements are true (T) or false (F). Correct the false ones.**

1. Students can study any subjects they like. **T / F**
2. The students stick to school timetable. **T / F**
3. Marks are important both for the teachers and the students. **T / F**
4. The school only uses traditional teaching methods. **T / F**
5. Students have adventure courses, such as walking in the mountains, kayaking, and working on a farm. **T / F**
6. Students take traditional exams for traditional subjects such as Math. **T / F**
7. Students have lots of spare time. **T / F**
8. The methods used by the school don't prepare students for the challenges of future world. **T / F**
9. Cooperative learning is of capital importance in this school. **T / F**

## Appendix 13. Comprehension Questions of Text 3

### A. Read the text and choose the best option.

1. Technophobes:
  - a) love new technology.
  - b) create new inventions.
  - c) don't like new inventions
  - d) like history.
2. Socrates thought writing was:
  - a) bad for the memory.
  - b) good for the memory.
  - c) difficult.
  - d) easy.
3. The problem with books was:
  - a) not many people could read.
  - b) there was a lot of information in them.
  - c) they weren't simple.
  - d) they cost a lot of money.
4. Who were Luddites?
  - a) They were inventors.
  - b) They were the first factory workers.
  - c) They started the Industrial Revolution.
  - d) They broke new machines in the factories.
5. Why were parents worried about radio and television?
  - a) Teenagers had them in their bedrooms.
  - b) They were a distraction from reading and studying.
  - c) They changed people's lives.
  - d) They were responsible for the end of face-to-face communication.

### B. Read the text again and decide if the statements are true (T) or false (F).

1. Technophobes are against new technology. T / F
2. Technophobes think that computers are good for memory. T / F
3. When books were invented a lot of people were happy because there was a lot of information in them. T / F
4. The invention of newspapers made technophobes worry about the end of face to face communication. T / F
5. Luddites were not pleased to use new machines in their factories. T / F
6. Technophobes thought that telephone was the reason for the end of conversation among people. T / F
7. Radio and television assisted students to do their homework and read books. T / F
8. Parents think that internet distracts children and teenagers from studying and reading. T / F
9. Technophobes have a fear of change. T / F

## Appendix 14. Comprehension Questions of Text 4

**A. Read the text above. Then match the questions to the paragraphs.**

- 1 ☐ Why did fast fashion enter the market?
- 2 ☐ How can knowing about fashion affect the way we shop for clothes?
- 3 ☐ Why is fashion important?
- 4 ☐ What were the consequences of fast fashion?
- 5 ☐ What did slow fashion try to do?

**B. Read the text again and answer the questions.**

**Your Answers:**

- 1 Why did retailers start fast fashion?
- 2 Why did clothing prices go down?
- 3 What were the negative effects of fast fashion?
- 4 Why is slow fashion better for the environment?
- 5 What is a disadvantage of slow fashion?
- 6 Why is this trend called slow fashion?

1.

2.

3.

4.

5.

6.

**C. Read the text again and decide if the statements are true (T) or false (F).**

1. Fast fashion brands produce high-quality and expensive clothing. T / F
2. Long working hours, low pay and unsafe working conditions of employees are among the negative sides of the fast fashion industry. T / F
3. Not only fashion industry but also consumers are responsible for the negative effects of the fast fashion. T / F
4. Slow fashion companies produce affordable clothing from synthetic materials. T / F
5. The employees of slow fashion companies are paid fair wage. T / F
6. Slow fashion clothing is environmentally friendly. T / F

## Appendix 15. Comprehension Questions of Text 5

**A. Read the text and put the phrases in the correct the spaces.**

- a Gig workers love the variety of jobs they do,
- b I can work when I need money
- c from students with free time but no money  
to professionals
- d because I never know what work I'm going  
to do next
- e I hope to get a full-time job at the nursery school  
soon

**B. Read the text again and answer the questions.**

1. How is work going to be different in the future?
2. What are the reasons people choose gig work?
3. What are the advantages of gig work?
4. What are the disadvantages of gig work?

**C. Read the text again and decide if the statements are true (T) or false (F).**

1. Gig economy is going to disappear in the future. T / F
2. Gig works can be found via websites and apps. T / F
3. Flexible working is one of the advantages of gig work. T / F
4. Gig workers have monthly salary. T / F
5. Gig workers can do several jobs at the same time. T / F
6. Gig workers are paid for sick leaves and holidays. T / F
7. Financial stability is the key for gig work. T / F

## Appendix 16. Comprehension Questions of Text 6

### A. Read the text above and answer the questions.

- 1 Why do we use strong cleaning products?
- 2 What do scientists think about our cleaning habits?
- 3 How many germs live on human bodies?
- 4 Why do we have allergic reactions?
- 5 What is the contradiction?
- 6 How can we prevent the spread of super bacteria?

### Your Answers:

1.

2.

3.

4.

5.

6.

### B. Read the text again and decide if the statements are true (T) or false (F).

1. Killing all the bacterias in our houses is good for us.    **T / F**
2. Scientists think that killing all the bacterias may cause allergies.    **T / F**
3. There are good and bad microbes on our bodies.    **T / F**
4. Minor and serious illnesses can be spread by dirty hands.    **T / F**
5. There is no way to prevent the spread of super bacteria.    **T / F**
6. All kinds of bacterias should be killed in order to prevent illnesses.    **T / F**
7. We should clean our homes with strong products.    **T / F**

## Appendix 17. Comprehension Questions of Text 7

### 1. Read the text and match the headings (A-F) to the paragraphs (1-6).

- |                                          |                          |
|------------------------------------------|--------------------------|
| A. Avoid mess!                           | <input type="checkbox"/> |
| B. An object with powerful effects       | <input type="checkbox"/> |
| C. Why does Feng Shui work?              | <input type="checkbox"/> |
| D. An ancient belief                     | <input type="checkbox"/> |
| E. An invisible force that is everywhere | <input type="checkbox"/> |
| F. How colours change our lives          | <input type="checkbox"/> |

### 2. Read the text again and answer the questions.

- 1 What evidence is there that people outside Asia believe in Feng Shui?  
.....  
.....
- 2 According to Feng Shui, why shouldn't a room have lots of objects in it?  
.....  
.....
- 3 What should you throw away to improve the Feng Shui of your home?  
.....  
.....
- 4 How can you make sure that the entrance of a building follows the rules of Feng Shui?  
.....  
.....
- 5 Which colour should you choose to help you become richer?  
.....  
.....
- 6 Why might some people not believe in Feng Shui?  
.....  
.....

### 3. Read the text again and decide if the statements are True (T) or False (F).

1. According to Feng Shui philosophy, our feelings are affected by school or work. T / F
2. Receiving Qi energy makes you feel better. T / F
3. Qi flows smoothly if the house is not messy. T / F
4. If you have a mirror in your bedroom, you can have better sleep. T / F
5. Using green objects in your house improves family harmony. T / F
6. After you design your home by using Feng Shui, you feel more anxious. T / F

## Appendix 18. Comprehension Questions of Text 8

### A. Read the text above and match the heading to the paragraphs.

- 1 ☐ Ideal owners
  - 2 ☐ Home or theatre?
  - 3 ☐ Community and technology
  - 4 ☐ Creating rooms
- 

### B. Read the text again and answer the question.

1. What was the inspiration behind microhome?
2. Why is there a housing crisis in some big cities?
3. How does a microhome use living space in an innovative way?
4. What technology do microflats use?
5. What sort of people choose microflat? Why?

### C. Read the text again and decide if the statements are True (T) or False (F).

1. People can not find houses in big cities because houses are expensive and cities are crowded. **T / F**
2. People living in the microflats don't have a place to socialise and meet with other people. **T / F**
3. Home connect technology is used at microflats. **T / F**
4. Microflats cause environmental damage. **T / F**
5. Microflats are designed for old people. **T / F**
6. Thanks to technology people do not need many objects in their microflats. **T / F**

## Appendix 19. Comprehension Questions of Text 9

### A. Read the text above. Then choose the main idea.

1. Outdoor hobbies are better for teenagers.
2. Teenagers today have a lot of free time for interesting hobbies but they need to spend more time on schoolwork.
3. Free time is part of a balanced routine and it's important for teens to spend time on things they like doing.

### B. Read the text again and answer the questions.

1. What can cause stress for teenagers?
2. Why is free time important?
3. What are the psychological benefits of free-time activities?
4. What are the benefits of free-time activities to your physical health?
5. What sort of hobbies are good for you when you spend a lot of time studying?
6. Why should teachers encourage free-time activities?
7. How can hobbies help shy people make friends?
8. Why does team work help prevent bullying?

### C. Read the questions and write your ideas.

1. What do you think the situation in the first paragraph shows?
2. 'School days are the happiest days of your life.' Why do people say this? Do you agree? Why?
3. Do you think that today's teens have more stress in their lives than previous generations?



## Appendix 20. Comprehension Questions of Text 10

### A. Read the text above and answer the questions.

1. What is stopping people from going abroad?
2. What kind of experiences do the travellers talk about when they return home?
3. According to research, what is the benefits of travel ?
4. What are the characteristics of travellers?

### B. Read the text and decide if the statements are True (T) or False (F).

1. People need money and time to travel abroad. **T / F**
2. Not some many people have a chance to see different cultures. **T / F**
3. Young travellers don't like talking about their experiences. **T / F**
4. Researchers say there aren't any positive benefits of travel . **T / F**
5. When students live and study abroad they become more mature. **T / F**
6. New experiences don't make any difference to your brain. **T / F**
7. Travelling foreign countries make students see the world from a new perspective.  
**T / F**
8. When travellers speak foreign languages, their brain is activated. **T / F**

## Appendix 21. Rubric for Visual Analysis (Turkish Version)

### GÖRSEL ANALİZ YÖNERGESİ

<b>DÜŞÜNSEL ANLAM</b>	Görseller katılımcıların deneyimlerini ve hedeflerini yansıtmalıdır.		<b>KATILIMCILAR</b>	<b>EYLEYEN</b> (İsimler, Zamirler)	
				<b>HEDEF</b>	
				<b>ALICI</b>	
<b>KİŞİLERARASI ANLAM (İLİŞKİSEL ANLAM)</b>	Görsel ve izleyici arasındaki sosyal etkileşim ile ilgilenir.	<b>SOSYAL ROLLER</b>	<b>KİP</b>	<b>SUNMAK</b> (Bakış yok)	
				<b>TALEP ETMEK</b> (Bakış)	
				<b>ETKİLEŞİM AÇISI</b>	
				<b>YATAY</b> (Ön, Yan, Arka, Yanık Açılar)	
<b>METİNSEL ANLAM</b>	Görseldeki nesnelerin yerleştirmeleri ile ilgilenir. (Görsellerin yerleşimi)		<b>BİLGİ DEĞERİ</b>	<b>DIKEY</b> (Üstten, Göz Hızasından, Altıtan)	
				<b>KİPLİK</b>	
				<b>KİPLİKLER</b>	
				<b>İNCELİK, GERÇEKLİK</b> (Konum, Güç, Seslenmelikler)	
<b>METİNSEL ANLAM</b>	Görseldeki nesnelerin yerleştirmeleri ile ilgilenir. (Görsellerin yerleşimi)		<b>BİLGİ DEĞERİ</b>	<b>BİLİNEN / VERİLEN BİLGİ</b>	
				<b>YENİ BİLGİ</b>	
				<b>BİLGİ</b>	
				<b>BAĞLAŞIKLIK</b>	
<b>METİNSEL ANLAM</b>	Görseldeki nesnelerin yerleştirmeleri ile ilgilenir. (Görsellerin yerleşimi)		<b>BİLGİ DEĞERİ</b>	<b>SOL</b> (Verilen Bilgi)	
				<b>SAG</b> (Yeni Bilgi)	
				<b>ÜST</b> (Önemli Bilgi)	
				<b>ALT</b> (İlave Bilgi)	
<b>METİNSEL ANLAM</b>	Görseldeki nesnelerin yerleştirmeleri ile ilgilenir. (Görsellerin yerleşimi)		<b>BİLGİ DEĞERİ</b>	<b>MERKEZ</b> (Kapsayıcı Terim)	
				<b>KENAR</b> (Destekleyici Bilgi)	
				<b>Belirginlik</b> (Boyut, Renk, Ön Plan, Arka Plan)	
				<b>Çerçeveleme</b> (Bağlantılı, Bağlantısız)	

Bu yönerge Halliday'ın Dizgeci İşlevsel Dilbilgisi Modeli'ne ve Kress ve Leeuwen'ın Görsel Tasarım'ın Dilbilgisi Modeli'ne dayanılarak geliştirilmiştir.

## Appendix 22. Student's Disposition Scale

Visuals helped me to comprehend what I have read	YES	NO	UNDECIDED
Visuals helped me to comprehend the words.	YES	NO	UNDECIDED
Visuals helped me to comprehend the sentences .	YES	NO	UNDECIDED

Which visuals helped you more in comprehending what you have read?(Write the number of the visuals)

---

Which visuals helped you to comprehend the words more? (Write the number of the visuals)

---

Which visuals helped you to comprehend the sentences more? (Write the number of the visuals)

---

Which visuals did you never use? (Write the number of the visuals)

---

Which visuals showed the goals and the experiences of the characters in the text? (Write the number of the visuals)

---

Which visuals had more social interactions with you? (Write the number of the visuals)

---

In which visuals do the locations of objects make it easier for you to comprehend the visual? (Write the number of the visuals)

---

## Appendix 23. Student's Disposition Scale in Turkish

Görseller okuduğumu kavramama yardımcı oldu.	EVET	HAYIR	KARARSIZIM
Görseller sözcükleri kavramama yardımcı oldu.	EVET	HAYIR	KARARSIZIM
Görseller cümleleri kavramama yardımcı oldu.	EVET	HAYIR	KARARSIZIM

Hangi görsel(ler) okuduğunu kavramana daha çok yardımcı oldu? (Görsel numaralarını yazınız.)

---

Hangi görsel(ler) sözcükleri kavramana daha çok yardımcı oldu? (Görsel numaralarını yazınız.)

---

Hangi görsel(ler) cümleleri kavramana daha çok yardımcı oldu? (Görsel numaralarını yazınız.)

---

Hangi görsel(ler)i hiç kullanmadın? (Görsel numaralarını yazınız.)

---

Hangi görsel(ler) metindeki karakterlerin hedeflerini ve deneyimlerini gösterdi? (Görsel numaralarını yazınız.)

---

Hangi görsel(ler)in seninle arasındaki sosyal etkileşim daha yüksektir? (Görsel numaralarını yazınız.)

---

Hangi görsel(ler)de nesnelerin bulunduğu yerler görseli kavramayı kolaylaştırmaktadır? (Görsel numaralarını yazınız.)

---

## Appendix 24. An example for analyzing the visuals in Reading Text 2.

Ideational Meaning	Participants		Actors: teachers, students Goals: experiment, computer, books, musical instruments, painting, puzzle, dishes Recipient: listeners, viewers, observers
	Processes		Verbs Transitive: play, eat, listen, discuss, paint, dance Intransitive: look, smile, walk
	Circumstances		Place: school, classroom, lab, open area, sports hall, studio
Interpersonal Meaning	Social Roles Teachers Students	Mood	Teachers: No Gaze Students: Gaze / No Gaze
		Angle of Interaction	Horizontal / Vertical Teacher: frontal Students: frontal / profile Painter: Profile Lecturer: frontal
		Modality / Multimodality	Modality: Teachers and students reflect reality with multimodality
Textual Meaning	Information Value	Teacher: Core information Students: Given and New information	
	Cohesion	Salience	Teachers and Students: Foregrounded
		Framing	No regular schedule No traditional lessons No grading No reports

Disconnected

Figure: An example for analyzing the visuals in Reading Text 2.

## Appendix 25. Ethics Committee Approval



**ONDOKUZ MAYIS ÜNİVERSİTESİ**  
**SOSYAL VE BEŞERİ BİLİMLER ARAŞTIRMALARI ETİK KURUL KARARLARI**

KARAR TARİHİ	TOPLANTI SAYISI	KARAR SAYISI
22.10.2021	10	2021-814

**KARAR NO:** 2021-814  
Üniversitemiz Lisansüstü Eğitim Enstitüsü öğrencisi Selda ALTUNIŞIK' ın Prof. Dr. Nalan KIZILTAN danışmanlığında "Ondokuz Mayıs Üniversitesi İngilizce Hazırlık Sınıfı Öğrencilerinin Okuduğunu Anlama Becerilerini Görsel Söylem Yoluyla Geliştirme" isimli yüksek lisans tezine ilişkin mülakat ve gözlem çalışmalarını içeren 33287 sayılı dilekçesi okunarak görüşüldü.

Üniversitemiz Lisansüstü Eğitim Enstitüsü öğrencisi Selda ALTUNIŞIK' ın Prof. Dr. Nalan KIZILTAN danışmanlığında "Ondokuz Mayıs Üniversitesi İngilizce Hazırlık Sınıfı Öğrencilerinin Okuduğunu Anlama Becerilerini Görsel Söylem Yoluyla Geliştirme" isimli yüksek lisans tezine ilişkin mülakat ve gözlem çalışmalarının kabulüne oy birliği ile karar verildi.

## CURRICULUM VITAE

Selda ALTUNIŞIK graduated from Eryaman Foreign Language Intensive High School in 2008. After graduating from high school, she studied English Linguistics at Hacettepe University. She received her bachelor's degree in 2013. She started studying for her master degree in English Language Teaching at Ondokuz Mayıs University in 2020. She has been working as an English Language Teacher at the Ministry of National Education since 2013.

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### Publications :

1. Altunışık, S. & Kızıltan, N. (2021). A Comparative Stylistic Analysis of the Book Covers of Two Different Editions of Harry Potter and the Philosopher's Stone by J.K. Rowling in Terms of Visual Discourse. *The 20th International Stylistics Symposium, December 23&24, 2021*