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Research Article

Gloss Effect on Vocabulary Learning

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Abstract

This study examined the effectiveness of L1 and L2 glosses on incidental vocabulary learning through reading. It was conducted at a private university in Konya, Turkey and the participants of the study are 50 pre-intermediate level prep EFL learners. The students were divided into two as L1 and L2 gloss groups. The data analysis was carried out by using independent samples and paired samples T-tests. The students' scores of recognition and production tests were compared. The results revealed significant differences in favour of L1 gloss group. The findings suggest that using glosses for incidental vocabulary learning is beneficial for students.

Key Words

Glossing • L1 and L2 glosses • Incidental vocabulary learning • Turkish EFL learners

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In language teaching, teachers use glosses to make vocabulary learning easier. As some reading texts contain low frequency words, students face with problems to understand the whole context. In order to solve such kind of comprehension problems, glosses are used to provide better comprehension opportunities (Vela, 2015). Since therefore many researchers such as Nation and Coady (1988:97) conduct similar studies to provide appropriate situations to language learners and they state that vocabulary is the most important component of reading comprehension. For this reason, many studies focused on vocabulary teaching in foreign language teaching environment. It is claimed by many researchers that the highest frequency of vocabulary learning takes place in the early stages. As learners' language proficiency improves, they are challenged with larger amount of vocabulary size (Groot, 2000). Glosses are found to be one of the main aids to facilitate vocabulary learning and their effectiveness on vocabulary learning has been investigated by the researchers. Lomicka (1998) defines glosses as explanations of word meanings and they help readers in understanding a text (Davis and Lyman-Hager, 1997; Lomicka 1998) while facilitating incidental vocabulary learning (Chun and Plass, 1996; Hulstijn et al., 1996; Laufer and Hill, 2000) (as cited in Bayraktar 2008).

Literature Review

Many studies investigated the effects of glosses; some of them indicated no difference while the other found one type superior over the other type (Chen, 2002; Jacobs et al., 1994 (cited in Bayraktar, S. (2008)); Miyasako, 2002). In their studies Jacobs et al. (1994) (cited in Bayraktar, 2008) compared two gloss types: L1 gloss and L2 gloss with 85 participants. Their L1 was English and their L2 was Spanish. The students read a text in three conditions: L1 gloss, L2 gloss, and no gloss. The target words were boldfaced and students took immediate and delayed post-tests after reading the text. The results showed that gloss groups outperformed no gloss group. However, no significant difference was found between L1 and L2 gloss groups. In Chen (2002)'s study (cited in Bayraktar, 2008) L1 and L2 gloss groups were compared. 85 students participated in the study. Their L2 was English. The students were divided into three groups: L1 gloss, L2 gloss, and no gloss. They read a text with 20 boldfaced target words. The gloss groups achieved higher scores than no gloss group. There was not a significant difference between L1 and L2 gloss groups. Ahangari and Dogolsara (2015) compared monolingual and bilingual dictionary use with Iranian intermediate EFL learners. The students were provided 20 new vocabulary items and asked to use either monolingual or bilingual dictionaries in their groups. The results showed that different types of dictionaries were suitable for learners. Monolingual dictionary use was more effective than bilingual dictionary use on vocabulary learning.

On the contrary to above studies, Miyasako (2002) claimed one gloss' superiority over other gloss type. He compared multiple-choice glosses and single glosses and the effectiveness of L1 and L2 glosses. The participants consisted of six groups: L2 multiple- choice gloss, L1 multiple-choice gloss, L2 single gloss, L1 single gloss, no gloss, and control group. The students read a text with 20 target words. The students received immediate and delayed post-test. The results showed that L2 gloss groups outperformed L1 gloss groups. Davis and Lyman-Hager (1997)'s study revealed that students preferred annotations providing first language (L1) translations of words. Bayraktar (2008) investigated the effectiveness of L1 glosses and L2 glosses on vocabulary learning in a

multimedia environment. The participants were 79 high school EFL learners. The students were divided into four groups: L1 gloss, L2 gloss, L1+picture gloss, and L2 + picture gloss. The students were required to read a text with eleven target words. Then they were provided with three vocabulary recognition post-test immediately and two weeks later. The results revealed that L1 gloss performed significantly better on post-tests than L2 gloss group. In her study, Spahiu (2000) focused on that what type of vocabulary gloss is more beneficial for incidental vocabulary learning; monolingual or bilingual glosses. The participants were 90 Turkish intermediate EFL learners. They read a text in one of three conditions: L1 gloss, L2 gloss, and no gloss. Then they were tested with recall and recognition tests both immediately and after three weeks. The study revealed the positive effect of glossing on incidental vocabulary learning through reading. Furthermore, she reported that L1 gloss is superior to L2 gloss. Glossing studies in Turkish context are limited. Therefore, the purpose of the study here is to investigate L1 and L2 glosses' effects on incidental vocabulary learning.

Research questions

The following research questions guided the study:

1. Is there a difference between L1 and L2 gloss groups' immediate post-tests?
2. Is there a difference between L1 and L2 gloss groups' delayed post-tests?
3. Is there a difference between immediate post-test and delayed post-tests of L1 gloss group?
4. Is there a difference between immediate post-test and delayed post-tests of L2 gloss group?

Method

Participants and Design

The participants of the study are 50 pre-intermediate level preparatory EFL students. They have one year compulsory preparatory programme. The study was conducted during the 2015-2016 academic year, spring semester. Their English level was determined by the regular exams in the programme. They were divided into two groups: one group used L1 glosses while the other used L2 glosses along with the reading materials. T-test was used to analyse the data. The independent variable was the gloss type used for the reading materials and the dependent variable was students' scores measured by the immediate and delayed vocabulary tests. In each test, both word recognition and production took place.

Instruments

Pre-test. The participants took a pre-test one week prior to the study. The test contained 36 vocabulary items (see Appendix A). The participants were required to complete the test in 40 minutes. The test was used to determine the target words. After the test, a selection was made out of vocabulary items. The ones which were not answered correctly by the students were chosen as the target words. 18 target words and 9 distracters were determined. The participants were asked to put a check mark if they knew the words and to provide a short written definition in L1 or L2.

Reading Material and Target Words. The participants read three different texts in three weeks (one text for each week). The number of words ranged from 376 to 441. Each text included six target words (two nouns, two verbs, and two adjectives) and three distracters were boldfaced in the text (Appendix B). When the students encountered these boldfaced and unknown words, they checked their glosses provided below the text (see Appendix C). The reading texts were adapted from Reading Explorer 2 by Heinle Engage Learning (pre-intermediate level).

Post-Tests. The participants received two vocabulary post-tests: one immediately after the treatment and three weeks later as delayed post-tests. Each post-test contained two tests: a production and a recognition test.

In the production test, students were expected to complete the sentences in which only the first three letters of the target words and the distracters were provided in 13 minutes (see Appendix D). Students were asked to choose the definition of the words among a list of definitions and match them in the word-recognition test in 13 minutes (see Appendix E). The immediate post-tests were given after reading each text and completing reading comprehension questions. The immediate production test and immediate word-recognition test had 9 items. The participants received one point for each correct answer.

Both the immediate and delayed post-tests had exactly the same format except for item order in each test. Although the participants were administered one immediate post-test for each reading text, delayed post-tests consisted of all the target words from three texts (see Appendix F and G).

Procedure

The study took eight weeks and the implementation took place during regular class periods. The students took the pre-test one week prior to the study. They took the test along with the target words and other words from the same reading texts as distractors. The students were divided into two groups: L1 gloss (n=25) and L2 gloss (n=25). The following week, students read the first reading text and did the reading activities in the book. They worked on the activities individually. After completing reading the first text and doing activities, the students were administered the immediate post-tests which consisted of production and word-recognition tests. The treatment period continued with the same procedure during the following two weeks. Initially, the students completed the production test, supplying the missing letters to complete the words. Then, they received the recognition test, selecting the appropriate definition of the words from a set of definitions. The post-tests were administered three weeks later and the test formats were exactly the same except for the order of the items.

Data Analysis

In order to find out whether there is difference between the test results of the same group's paired samples t-test and the difference between the groups for the same tests; independent samples t-tests were conducted using Statistical Programs.

Results

After all the tests were implemented, the means of the groups for each test were compared with Independent Samples T-test. Also, the difference between immediate and delayed post-tests was compared with paired samples (dependent) t-test for L1 and L2 gloss groups. All the results are presented in the tables below.

Pre-Test Results

In the pre-test students were asked to put a check mark if they were familiar with the word and give a short definition in L1 or L2. The words that students didn't put a check mark and couldn't provide definitions were chosen as the target words. The words that students only put a check mark and did not supply any definition were also considered as unknown words. 18 words out of total 36 words were determined as the target words.

Post-Test Results

Independent-samples T-test was conducted to compare L1 and L2 gloss groups' immediate test scores. In both immediate production test and immediate recognition test, the mean scores of L1 gloss group were higher than L2 gloss group's scores (Table1). According to the results of independent samples t-test for immediate production test, there is a significant difference between L1 and L2 gloss groups ($p = .036$; $p < 0.05$). The results showed that L1 gloss group performed better in immediate recognition test. There is a significant difference between L1 and L2 gloss groups ($p = .032$; $p < 0.05$).

Table 1

Immediate Post-Tests Results of Independent-Samples T-test (Mean and Standard Deviation)

Tests	Groups	Mean	SD	<i>p</i>	Mean
Immediate post-test production test	L1 gloss	21.4	2.43	0.036*	1.68
	L2 gloss	19.72	3.04		
Immediate post-test recognition test	L1 gloss	22.08	2.23	0.032*	2.04
	L2 gloss	20.04	3.08		

* $p < 0.05$

Table 2 shows delayed post-test results of Independent-Samples T-test. In both delayed production post-test and delayed recognition post-test, L1 gloss' mean scores were higher than of L2 gloss group's. There is a significant difference between L1 and L2 gloss groups in delayed production test ($p = .033$; $p < 0.05$). The t-test results revealed that there is a significant difference between L1 and L2 gloss groups in delayed word-recognition post-test ($p = .030$; $p < 0.05$). So the L1 gloss group remembered better than L2 gloss group three weeks later in delayed post-tests.

Table 2

Delayed Post-Tests Results of Independent-Samples T-test (Mean and Standard Deviation)

Tests	Groups	Mean	SD	<i>p</i>	Mean
Delayed post-test production test	L1 gloss	19.36	2.64	0.033*	1.68
	L2 gloss	17.68	2.79		
Delayed post-test recognition test	L1 gloss	20.08	2.75	0.030*	1.76
	L2 gloss	18.32	2.82		

**p*<0.05

When L1 gloss group scores were compared for immediate and delayed production tests, they had higher scores in immediate production and immediate recognition tests (Table 3). There is a significant difference between L1 gloss group’s immediate and delayed production tests (*p*= .006) and between immediate and delayed word- recognition tests (*p*= .006). Although there is slightly little difference between mean scores of production and recognition tests, it can be concluded that students performed better in production tests.

Table 3

L1 Gloss Group's Post-Tests Results of Dependent (Paired) Samples T-test

Group	Tests	Mean	SD	<i>p</i>	Mean Differences
L1 Gloss	Immediate Post-Test Production Test	21.4	2.43	0.006*	2.04
	Delayed Post-Test Production Test	19.36	2.64		
L1 Gloss	Immediate Post-Test Recognition Test	22.08	2.34	0.006*	2
	Delayed Post-Test Recognition Test	20.08	2.75		

**p*<0.05

Table 4 depicts the L2 gloss group’s post-test results of paired samples t-test. The students got higher scores in immediate tests when compared to delayed post-tests. In the immediate tests, their word-recognition test scores were higher than production test scores. There is a significant difference between immediate production test and delayed production test (*p*= .017; *p*<0.05). The results revealed a significant difference between immediate recognition and delayed recognition tests (*p*= .016; *p*<0.05). Three weeks’ time interval affected students’ scores negatively in both delayed production and recognition tests.

Table 4

L2 Gloss Group's Post-Tests Results of Dependent (Paired) Samples T-test

Group	Tests	Mean	SD	<i>p</i>	Mean Differences
L2 Gloss	Immediate Post-Test Production Test	19.72	3.04	0.017*	2.04
	Delayed Post-Test Production Test	17.68	2.79		
L2 Gloss	Immediate Post-Test Recognition Test	20.04	3.08	0.016*	1.72
	Delayed Post-Test Recognition Test	18.32	2.82		

* $p < 0.05$ **Discussion**

The first research question compared L1 and L2 gloss groups' immediate post-test results. Both immediate production and immediate recognition test results revealed significant difference between two gloss groups. The result corresponded with those of previous studies (Davis and Lyman-Hager, 1997; Bayraktar, 2008; Spahiu, 2000) showing L1 gloss superiority over L2 gloss. Students might have found using L1 gloss more pragmatic than L2 gloss. It continued in recognition tests as students were supposed to answer more or less the same items correctly in recognition test after production test.

The second research question compared delayed post-tests of L1 and L2 gloss groups. Both delayed production and delayed recognition tests revealed significant difference for groups. The same groups performed better on recognition tests which may imply that the students were more successful with matching exercises. The rationale behind their success in matching exercises may be due to their frequent exposure to recognition tests in the Turkish context. They are less likely to take production tests due to national examination system in their context.

For the third research question, L1 gloss group's post-test results were compared. In the production tests, there is a significant difference between immediate and delayed tests. The difference between immediate and delayed post-test scores was not indicate that students could remember the words three weeks later. During their prep year, they are required to memorize and recall a large amount of vocabulary items. Therefore, they may be used to studying long lists of target vocabulary. In the recognition tests, immediate and delayed post-test scores were similar. However, in both production and recognition tests students achieved higher scores than in immediate ones.

For the fourth research question, L2 gloss group's post-test results were compared. In both production and recognition tests, a significant difference was found between L2 gloss group's immediate and delayed post-tests. Students' recognition test scores were higher than production test scores. A significant difference was found between both production tests and recognition tests. These findings were not consistent with several studies (Jacobs et. al.; 1994; Chen, 2002, as cited in Bayraktar, 2008) which did not yield a significant difference

between L1 and L2 gloss groups. Miyasako (2002) found a significant difference between L1 and L2 gloss groups. However, he located this difference in favour of L2 gloss group.

Conclusion

The research examined the effectiveness of different types of glosses on incidental vocabulary learning with particular focus on comparison of L1 and L2 types. Significant differences between two types were found through conducting different kinds of tests. L1 gloss group performed better on all of the tests. It demonstrates that L1 gloss is more helpful in incidental vocabulary learning.

The results of the study have implications for vocabulary teaching and learning. First, glosses are beneficial in facilitating learners' incidental vocabulary learning. So, it can be concluded that glosses should be utilized in reading materials. The previous study of Öztürk and Yorgancı (2017) has similar results on the contribution of glosses in language teaching and learning. In this study, L1 glosses were found to more useful than L2 glosses. It is of crucial importance while teaching and conducting research. Longer-term effects should be examined as this study was conducted during eight weeks.

Future studies need to examine the effect of L1 and L2 glosses, taking the learners' proficiency level into consideration. This study compared pre-intermediate students' results. Future studies may take different levels into consideration in Turkish context. This study dealt with nouns, verbs and adjectives. Future studies may investigate different parts of speech or only focus on a part of speech alone.

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Appendix

Appendix A – Vocabulary Pre-Test

Please put a tick if you know that word and give a short definition in L1 (Turkish) or L2 (English).

- [] death (n.) _____
- [] cruelly (adv.) _____
- [] translate (v.) _____
- [] prior (adj.) _____
- [] teenager (n.) _____
- [] imply (v.) _____
- [] luxurious (adj.) _____
- [] laborer (n.) _____
- [] murder (n.) _____
- [] attached (adj.) _____
- [] debatable (adj.) _____
- [] conduct (v.) _____
- [] consent (v.) _____
- [] finance (v.) _____
- [] scientific (adj.) _____
- [] misfortune (n.) _____
- [] deduce (v.) _____
- [] analyze (v.) _____
- [] unknown (adj.) _____
- [] hometown (n.) _____
- [] unpredictable (adj.) _____
- [] wealth (n.) _____
- [] theory (n.) _____
- [] frozen (adj.) _____
- [] remote (adj.) _____

[] injury (n.) _____

[] shoulder (n.) _____

[] judge (v.) _____

[] guess (v.) _____

[] tiny (adj.) _____

[] cause (v.) _____

[] enable (v.) _____

[] wisdom (n.) _____

[] infection (n.) _____

[] carry (v.) _____

[] profitable (adj.) _____

Appendix B – Target Words and Distracters

Text A

Target words: teenager (n.), infection (n.), conduct (v.), analyse (v.), luxurious (adj.), attached (adj.)

Distracters: murder (n.), theory (n.), injury (n.)

Text B

Target words: labourer (n.), wealth (n.), imply (v.), deduce (v.), frozen (adj.), tiny (adj.)

Distracters: enable (v.), cruelly (adv.), debatable (adj.)

Text C

Target words: misfortune (n.), wisdom (n.), finance (v.), translate (v.), remote (adj.), profitable (adj.)

Distracters: unpredictable (adj.), prior (adj.), consent (v.)

Appendix C – Reading Materials

Reading Text A

Was King Tut Murdered?

King Tutankhamun was just a **teenager** when he died. He was the last king of a powerful family that had ruled Egypt for centuries. When he died in 1322 B.C., Tut (as Tutankhamun is often known today) was placed in a **luxurious**, gold-filled tomb. There he lay forgotten until the tomb's eventual discovery in 1922. Although we now know a lot about his life, the reason for Tutankhamun's death at such a young age has remained a mystery, with murder the most extreme possibility. Now, improved X-ray technology is offering new clues into King Tut's death.

Discovered and Damaged

The British archaeologist Howard Carter opened Tut's tomb in 1922. Although it had been robbed in ancient times, it was still full of gold and other amazing items. Carter spent months carefully recording the treasures. When he and his team then attempted to remove King Tut's mummy, they found that it had become **attached** to its solid gold coffin. Unfortunately, they did a great deal of damage to the mummy while removing it.

Theories About Tut's Death

In 1968, archeologists **conducted** an examination of the mummy using simple x-ray technology. Three important discoveries led to various **theories** about his death.

The X-rays showed that bones in King Tut's chest were missing. Carter hadn't done that damage. Tut was a trained fighter and hunter, so some people have guessed that it was caused by a war **injury** or a hunting accident.

There appeared to be pieces of bone inside the skull, causing many to believe that King Tut was killed by a blow from behind to the head. Was he murdered by people wanting to take control of Egypt? A serious fracture discovered above Tut's left knee could have been the result of an accident or attack. **Infection** might have started there and killed the boy king.

A Closer Look at the Mummy

In recent years, scientists, under the direction of Zahi Hawass, head of Egypt's Supreme Council of Antiquities, have applied a new and more effective X-ray technology to mummies throughout Egypt. In the images, each bone appears in perfect detail.

So, was King Tut's death murder or accident, infection or war injury? Doctors who **analyzed** the X-ray images say that the skull was mainly undamaged, **excluding** the possibility of a blow to the head. However, while modern technology has been able to rule out one theory, the actual cause of death remains unknown. It seems there are secrets that even the latest technology cannot yet find the answers to.

423 words

L1 Gloss (This version is for L1 gloss group)

teenager (n.) on üç ile on dokuz yaşlar arasındaki kimse

luxurious (adj.) lüks

murder (n.) öldürme, cinayet

attached (adj.) ilişik

conduct (v.) yürütmek, yönetmek

theory (n.) teori

injury (n.) yara, bere

infection (n.) enfeksiyon

analyze (v.) analiz etmek

L2 Gloss (This version is for L2 gloss group)

teenager (n.) a person who is between 13 and 19 years old

luxurious (adj.) very comfortable; containing expensive and enjoyable things

murder (n.) the crime of killing somebody deliberately

attached (adj.) joined to something

conduct (v.) to organize and/or do a particular activity

theory (n.) a formal set of ideas that is intended to explain why something happens or exists

injury (n.) harm done to a person's or an animal's body, for example in an accident

infection (n.) the act or process of causing or getting a disease

analyze (v.) to examine the nature or structure of something, especially by separating it into its parts, in order to understand or explain it

Reading Text B

Who Killed the Iceman?

In 1991, high in the mountains of Europe, hikers made a gruesome discovery: a dead man partly **frozen** in the ice. However, the police investigation soon became a scientific one. Carbon dating indicated that the man died over 5,300 years ago. Today he is known as the Iceman and has been nicknamed “Ötzi” for the Ötztal Alps where he was found. Kept in perfect condition by the ice, he is the oldest complete human body on earth.

Who Was the Iceman?

Scientists think he was an important person in his society. An examination of his teeth and skull tells us that he was not a young man. His arms were not the arms of a **laborer**. His dagger was made of stone, but he carried a copper ax. This **implies wealth**, and he was probably from the upper classes. We know he could make fire, as a fire-starting kit was discovered with him. Even the food he had eaten **enabled** scientists to **deduce** exactly where in Italy he lived.

Clues to an Ancient Murder

But why did the Iceman die in such a high and icy place? There have been many theories. Some said he was a lost shepherd. Others thought he was killed in a religious ceremony. Over the years since he was found, **tiny** scientific discoveries have led to great changes in our understanding of the story of the Iceman. The newest scientific information indicates that he was **cruelly** murdered. “Even five years ago, the story was that he fled up there and walked around in the snow and probably died of exposure,” said Klaus Oeggl, a scientist at the University of Innsbruck in Austria. “Now it’s all changed. It’s more like a ... crime scene.”

A Bloody Discovery

In June 2001, an X-ray examination of the body showed a small dark shape **beneath** the Iceman’s left shoulder. It was the stone head of an arrow. It had caused a deadly injury that probably killed him very quickly. In 2003, an Australian scientist discovered the blood of four different people on the clothes of the Iceman. Did a bloody fight take place before his murder? Injuries on his hand and head indicate that this may be true. One theory, put forward by archeologist Walter Leitner, says that the Iceman’s murder was the end of a fight for power among his people. However, this idea is certainly **debatable**.

Today, the research continues proving some theories false while opening the door to others. Though scientific research, this oldest member of our human family continues to tell us about his life and the time in which he lived.

441 words

L1 Gloss (This version is for L1 gloss group)

frozen (adj.) donmuş

laborer (n.) işçi, emekçi

imply (v.) ima etmek

wealth (n.) varlık, zenginlik

enable (v.) olanak vermek

deduce (v.) çıkarım yapmak

tiny (adj.) küçük, minicik

cruelly (adv.) acımasızca

debatable (adj.) tartışılabilir

L2 Gloss (This version is for L2 gloss group)

frozen (adj.) kept at a very low temperature in order to preserve it

laborer (n.) a person whose job involves hard physical work that is not skilled, especially work that is done outdoors

imply (v.) to suggest that something is true or that you feel or think something, without saying so directly

wealth (n.) a large amount of money, property, etc. that a person or country owns

enable (v.) to make it possible for somebody to do something

deduce (v.) to form an opinion about something based on the information or evidence that is available

tiny (adj.) very small in size or amount

cruelly (adv.) in a way that shows a desire to cause pain or suffering

debatable (adj.) not certain because people can have different ideas and opinions about the thing being discussed

Reading Text C

The Travels of Ibn Battuta

“I left Tangier, my birthplace, the 13th of June 1325 with the intention of making pilgrimage [to Mecca] ... to leave all my friends both female and male, to abandon my home as birds abandon their nests.” So begins an old manuscript in a library in Paris – the travel journal of Ibn Battuta.

Almost two centuries before Columbus, this young Moroccan set off for Mecca, returning home three decades later as one of the history’s great travellers. Driven by curiosity, he journeyed to **remote** corners of the Islamic world, traveling through 44 modern countries, three times as far as Marco Polo. Little celebrated in the West, his name is well known among Arabs. In his hometown of Tangier, a square, a hotel, a café, a ferry boat, and even a hamburger are named after him.

Ibn Battuta stayed in Mecca as a student for several years, but the urge to travel soon took over. In one adventure, he travelled to India seeking **profitable** employment with the Sultan of Delhi. On the way, he described his group being attacked in the open country by 80 men on foot, and two horsemen: “we fought ... killing one of their horsemen and about twelve of the foot soldiers ... I was hit by an arrow and my horse by another, but God in his grace preserved me... We carried the heads of the slain to the castle of Abu Bak’har.... And suspended them from the wall.”

In Delhi, the sultan gave him the position of judge, based on his **prior** study at Mecca. But the sultan had an **unpredictable** character, and Ibn Battuta looked for an opportunity to leave. When the sultan offered to **finance** a trip to China, he agreed. Ibn Battuta set off in three ships, but **misfortune** struck while he was still on the shore. A sudden storm grounded and broke up two ships, scattering treasure and drowning many people and horses.

After a lifetime of incredible adventures, Ibn Battuta was finally ordered by the Sultan of Morocco to return home to share his **wisdom** with the world. Fortunately, he consented and wrote a book that has been **translated** into numerous languages, allowing people everywhere to read about his **unparalleled** journeys.

376 words

L1 Gloss (This version is for L1 gloss group)

remote (adj.) uzak

profitable (adj.) kazançlı

prior (adj.) önceki

unpredictable (adj.) tahmin

edilemez

finance (v.) paraca

desteklemek

misfortune (n.) talihsizlik

wisdom (n.) akıl, ilim

consent (v.) izin vermek

translate (v.) tercüme etmek

L2 Gloss (This version is for L2 gloss group)

remote (adj.) far away from places where
other people live

profitable (adj.) that makes or is likely to
make money

prior (adj.) happening or existing before
something else or before a particular time

unpredictable (adj.) that cannot be predicted
because it changes a lot or depends on too
many different things

finance (v.) to provide money for a project

misfortune (n.) bad luck

wisdom (n.) the ability to make sensible decisions
and give good advice because of the experience and
knowledge that you have

consent (v.) to agree to something or give your
permission for something

translate (v.) to express the meaning of speech or
writing in a different language

Appendix D – Immediate Post-Tests

Production Test 1 – Treatment Week 1

Complete the letters to make meaningful words.

Sue is still as beautiful as she was when she was a tee _____.

If it's an inf _____, you might need antibiotics.

The scientist is con _____ medical research.

We're still ana _____ the data.

They stayed at a lux _____ hotel on holiday.

The house has an att _____ garage.

Traffic is mur _____ this time of day.

There are a number of different the _____ about the cause of the disease.

The team has been weakened by illness and inj _____.

Production Test 2 – Treatment Week 2

Complete the letters to make meaningful words.

He has been working as a lab _____ on a construction project.

Her personal wea _____ is estimated to be around \$10 billion.

War imp _____ fighting and death.

I can ded _____ from the simple observation of your behavior that you're trying to hide something from me.

The most important internal industries are in wool and fro _____ meat.

Some are very tin _____ and some are very large.

The system ena _____ students to access class materials online.

The dog had been cru _____ treated.

It's always deb _____ which football team in Turkey is really number one.

Production Test 3 – Treatment Week 3

Complete the letters to make meaningful words.

It was my mis _____ to be chosen for this job.

I question the wis _____ of giving a child so much money.

The government fin _____ lots of young people on their projects.

We need someone who can tra _____ Japanese into English.

The mission is to transport medical supplies to rem _____ areas of the world.

It is usually more pro _____ to sell direct to the public.

The skies were cloudy and weather was unp _____.

I saw his reaction the pri _____ night.

He didn't want at first but finally con _____.

Appendix E – Immediate Post-Tests

Word Recognition Test 1 – Treatment Week 1

Match the words with their meanings. Write the number of the words next to the letters of the meanings.

- | | |
|--------------|--|
| 1. Luxurious | a. [] the crime of deliberately killing a person |
| 2. Injury | b. [] connected or joined to something |
| 3. Teenager | c. [] an idea or set of ideas that is intended to explain facts or events |
| 4. Theory | d. [] to plan and do (something, such as an activity) |
| 5. Infection | e. [] very comfortable and expensive |
| 6. Analyse | f. [] to study (something) closely and carefully |
| 7. Attached | g. [] someone who is between 13 and 19 years old |
| 8. Conduct | h. [] harm or damage |
| 9. Murder | i. [] a disease caused by germs that enter the body |

Word Recognition Test 2 – Treatment Week 2

Match the words with their meanings. Write the number of the words next to the letters of the meanings.

- | | |
|--------------|---|
| 1. wealth | a. [] it is used to say that something may or may not be true or real |
| 2. debatable | b. [] to make (someone or something) able to do or to be something |
| 3. labourer | c. [] a person who does hard physical work for money |
| 4. frozen | d. [] to express (something) in an indirect way |
| 5. tiny | e. [] a large amount of money and possessions |
| 6. imply | f. [] to use logic or reason to form (a conclusion or opinion about something) |
| 7. cruelly | g. [] something which is subjected to long and severe cold |
| 8. enable | h. [] it is used to describe people who hurt others and do not feel sorry about it |
| 9. deduce | i. [] very small |

Word Recognition Test 3 – Treatment Week 3

Match the words with their meanings. Write the number of the words next to the letters of the meanings.

- | | |
|------------------|---|
| 1. profitable | a. [] making money |
| 2. prior | b. [] knowledge that is gained by having many experiences in life |
| 3. misfortune | c. [] bad luck |
| 4. finance | d. [] to provide money for (something or someone) |
| 5. consent | e. [] not predictable: such as not capable of being known before happening or being done |
| 6. wisdom | f. [] existing earlier in time, previous |
| 7. remote | g. [] to agree to do or allow something |
| 8. translate | h. [] to change words from one language into another language |
| 9. unpredictable | i. [] far away |

Appendix F – Delayed Post-Test – Vocabulary Production Test

Complete the letters to make meaningful words.

It is usually more pro_____ to sell direct to the public.

War imp_____ fighting and death.

The government fin_____ lots of young people on their projects.

The dog had been cru_____ treated.

He has been working as a lab_____ on a construction project.

The scientist is con_____ medical research.

Traffic is mur_____ this time of day.

It was my mis_____ to be chosen for this job.

Sue is still as beautiful as she was when she was a tee_____.

He didn't want at first but finally con_____.

I saw his reaction the pri_____ night.

The system ena_____ students to access class materials online.

The house has an att_____ garage.

If it's an inf_____, you might need antibiotics.

We need someone who can tra_____ Japanese into English.

I can ded_____ from the simple observation of your behavior that you're trying to hide something from me.

We're still ana_____ the data.

There are a number of different the_____ about the cause of the disease. The team has been weakened by illness and inj_____.

The skies were cloudy and weather was unp_____.

It's always deb_____ which football team in Turkey is really number one.

They stayed at a lux_____ hotel on holiday.

I question the wis_____ of giving a child so much money.

Her personal wea_____ is estimated to be around \$10 billion.

Some are very tin_____ and some are very large.

The mission is to transport medical supplies to rem_____ areas of the world.

The most important internal industries are in wool and fro_____ meat.

Appendix G – Delayed Post-Test – Vocabulary Recognition Test

Part I

Match the words with their meanings. Write the number of the words next to the letters of the meanings.

- | | |
|------------------|---|
| 1. Consent | a. [] far away |
| 2. Remote | b. [] bad luck |
| 3. Profitable | c. [] making money |
| 4. Unpredictable | d. [] not predictable: such as not capable of being known before happening or being done |
| 5. Translate | e. [] to change words from one language into another language |
| 6. Misfortune | f. [] knowledge that is gained by having many experiences in life |
| 7. Wisdom | g. [] to provide money for (something or someone) |
| 8. Prior | h. [] to agree to do or allow something |
| 9. Finance | i. [] existing earlier in time, previous |

Part II

Match the words with their meanings. Write the number of the words next to the letters of the meanings.

- | | |
|--------------|---|
| 1. frozen | a. [] to express (something) in an indirect way |
| 2. cruelly | b. [] it is used to say that something may or may not be true or real |
| 3. debatable | c. [] it is used to describe people who hurt others and do not feel sorry about it |
| 4. deduce | d. [] a large amount of money and possessions |
| 5. imply | e. [] very small |
| 6. wealth | f. [] a person who does hard physical work for money |
| 7. enable | g. [] to use logic or reason to form (a conclusion or opinion about something) |
| 8. labourer | h. [] to make (someone or something) able to do or to be something |
| 9. tiny | i. [] something which is subjected to long and severe cold |

Part III

Match the words with their meanings. Write the number of the words next to the letters of the meanings.

- | | |
|--------------|--|
| 1. Teenager | a. [] harm or damage |
| 2. Attached | b. [] connected or joined to something |
| 3. Luxurious | c. [] someone who is between 13 and 19 years old |
| 4. Analyse | d. [] an idea or set of ideas that is intended to explain facts or events |
| 5. Conduct | e. [] a disease caused by germs that enter the body |
| 6. Injury | f. [] the crime of deliberately killing a person |
| 7. Infection | g. [] very comfortable and expensive |
| 8. Theory | h. [] to plan and do (something, such as an activity) |
| 9. Murderer. | i. [] to study (something) closely and carefully |