

# **Synchronous Computer-Mediated Communication And Vocabulary Acquisition And Retention(\*)**

*Under the supervision of*  
**Amira Agameya**

**May Serag El Dine Soliman**  
*Assistant Lecturer, English Department*  
*The British University in Egypt*

## ***Abstract***

This quasi- experimental study aims to investigate the effect of synchronous computer-mediated communication (SCMC) on the development of learners' lexical skills in a way that increases their vocabulary repertoire and enables them to express themselves more effectively. Two intact groups of students, studying in an advanced module in a private university in Cairo, are assigned synchronous online chats and face-to-face discussions to negotiate the meaning of 12 new lexical items in context. A pre and posttest design is employed to investigate the effect of SCMC on the experimental group in comparison to the face-to-face group. A delayed posttest is administered to test for vocabulary retention. Results show that SCMC is more successful in promoting vocabulary acquisition and boosting retention of the acquired vocabulary items.

## ***Keywords***

Computer-mediated communication, synchronous computer-mediated communication, vocabulary acquisition, vocabulary retention

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(\*) Synchronous Computer-Mediated Communication And Vocabulary Acquisition And Retention, Vol. 8, Issue No.4, October 2019, pp.53-92.

## الملخص

تهدف هذه الدراسة شبه التجريبية إلى دراسة تأثير الاتصالات المتزامنة عبر الكمبيوتر على تطوير المهارات اللغوية للدارسين بطريقة تؤدي إلى زيادة مفرداتهم اللغوية وتمكنهم من التعبير عن أنفسهم بشكل أكثر فعالية. تم تعيين مجموعتين متشابهتين من الطلاب يدرسان مستوى متقدم من مادة اللغة الانجليزية في جامعة خاصة في القاهرة ، في مجموعتي البحث. تم اسناد المحادثات المتزامنة عبر الإنترنت كعلاج للمجموعة الاولى والمناقشات وجها لوجه للمجموعة الثانية (مجموعة التحكم) وذلك للتفاوض على معنى ١٢ كلمة معجمية جديدة في السياق. تم استخدام الاختبارات القبلية والبعديّة لدراسة تأثير الاتصالات المتزامنة عبر الكمبيوتر على المجموعة التجريبية مقارنة بمجموعة التحكم. كم تم اجراء اختبار بعدى لاحق لقياس تأثير الاتصالات المتزامنة عبر الكمبيوتر على القدرة على تذكر المفردات المكتسبة. وأظهرت النتائج أن الاتصالات المتزامنة عبر الكمبيوتر كانت أكثر نجاحا في تعزيز اكتساب المفردات وتعزيز القدرة على تذكرها.

## الكلمات الدالة

التواصل عبر الكمبيوتر، التواصل المتزامن عبر الكمبيوتر ، تعلم اللغة بمساعدة الحاسوب ، اكتساب المفردات ، القدرة على تذكر المفردات

## Introduction

The pervasiveness of the Internet and the ever-growing reliance on computers for business, research, education and entertainment purposes have encouraged many researchers to explore the Internet's potential as an aid to second language acquisition. Computer-assisted language learning (CALL) has recently become an important aspect of most second language acquisition (SLA) research. Many researchers have endeavored to investigate how technology can be best employed in developing foreign language learners' interlanguage in a way that enables them to interact in the target language more spontaneously and accurately. One of the tools provided by CALL, and the Internet in general, is computer-mediated communication (CMC). CMC has two major types: synchronous and asynchronous. Smith (2004) defines synchronous computer-mediated communication (SCMC) as instantaneous or real time interaction between learners over some kind of network. The interaction can be either in a text or a video or an audio form, as participants interact together during the same

session through typing their messages or recording audio files that they exchange or even through video conferencing. Many popular programs and mobile applications allow this type of communication. Examples include programs and applications such as Google Talk, Skype WhatsApp, Facebook Messenger and chat applications on learning platforms or course management systems such as Moodle and Blackboard. In fact, most SCMC programs and applications offer both text-based and oral communication either in the form of recording audio files and sending them, or in the form of voice calls and video conferences. This comes in contrast to asynchronous computer-mediated communication (ACMC), in which participants do not have to be online at the same time. There is usually a duration between the time when a message is received by one participant and the time when the participant actually replies. Discussion forums, Wimba Voice (WV) tool and e-mails are examples of this asynchronous type of communication. Almost all these ACMC platforms and applications are accessible from a computer connected to the internet or through a mobile device with an internet connection.

Research in the area of CMC in general has suggested that text-based CMC could increase the learners' attention to some linguistic aspects by giving the learners enough time to examine the target forms through modified input in authentic contexts. Text-based interactions, in authentic contexts, reflect the tenets of the Interaction Hypothesis (IH), one of the recent approaches to second language acquisition which was first proposed by Long in 1990. The IH posits that the second language acquisition process is fostered when learners negotiate meaning in communicative tasks because such negotiation leads learners to notice the gap in their knowledge through negative feedback and draws their attention to both meaning and form. According to Long (1996), the updated version of the Interaction Hypothesis suggests that interactive tasks encouraging negotiation of meaning among specific TL learners can make the process of the development of this TL easier since it creates links between input, learners' capabilities, such as "selective attention", and output in dynamic ways. When a breakdown in communication occurs, interaction happens, and negotiation of meaning is the result. Similarly, both Gass (1997) and Mackey (1999) argued that negotiation of meaning paves the way for

learning since the learners can pay attention to both form and meaning. Thus, negotiation can lead the learners to notice the gap in their interlanguage, eventually facilitating language acquisition.

According to the interaction hypothesis, interaction promotes syntactic processing and automaticity. It attempts to account for learning by creating a link between input that comes from exposure to L2, output which is in the form of production, and receiving feedback on output while interacting with other speakers. The three constituents of IH, input, output and interaction, give the learners an opportunity to negotiate meaning. Such negotiation leads learners to make modifications in their interaction, leading eventually to comprehension (Gass & Mackey, 2007).

This type of interaction is indeed facilitated by computer mediated communication (CMC). CMC is capable of providing a better means for L2 learners than face-to-face communication. Nowrozi (2011) debated that the integration of CMC into EFL learning can increase input through exposure and it can also increase output through the use of TL which is required for L2 learners to advance their linguistic and pragmatic abilities. CMC allows for more interaction in classroom and outside classroom. Moreover, the involvement in authentic interaction away from the classroom environment promotes motivation and autonomous learning. The teachers act more like facilitators, while learners take responsibility for their own learning.

CMC also gives L2 learners the opportunity to make use of many web tools such as online dictionaries and different types of corpus. Nowrozi (2011) maintained that CMC offers a better opportunity for collaborative learning and directs learners' attention to meaning rather than form. Consequently, learners may use the language they learned in class and test their output by means of different online tools before sending their messages. This process helps learning take place.

Vocabulary learning, in general, is not an easy process even in the presence of interaction. The first step in dealing with the aspect of vocabulary learning or acquisition in second language is to decide on what knowing a word actually involves. This is not an easy task in itself. Many researchers defined vocabulary knowledge in different ways. Nation (1990) acknowledged the idea that there is a receptive knowledge and a productive

knowledge of vocabulary. He argued that the receptive knowledge is demonstrated in recognizing a word and being able to recall its meaning when reading or listening to the target language, whereas the productive knowledge is manifested when using this word meaningfully in the productive skills of writing and speaking. Lehr, Osborn, & Hiebert (2004) also adopted the same categorization of vocabulary knowledge. Therefore, the two types of knowledge complement each other and form the learners' linguistic repertoire.

Another important factor to consider in the process of vocabulary acquisition is the amount of vocabulary that a learner can deal with at a time. Nation (2005) argued that the biggest difficulty of vocabulary acquisition is that learners can handle few words at a time. The more sophisticated the information is, the more likely confusion can take place. Therefore, successful vocabulary acquisition is that which takes place in the context of activities involving reading, listening, writing or speaking because in this case, the learners see the new words as being extremely important to fulfill their task. Therefore, learning a new word, to a great extent, depends on the way it was originally taught, and the amount of exposure learners had to the new lexical item. This agrees with Krashen's (1989) idea that a word is best acquired when the learner is more focused on the message rather than the form, a condition which is provided by exposure to authentic language and is best realized in the presence of interaction.

Therefore, modifying the learners' output to communicate a message through language is extremely important in the process of language acquisition. Swain (1985) argued that when learners adjust their language production, it gives them the opportunity to concentrate on and process "linguistic forms" rather than meaning. Without being urged to produce language, they get involved in the comprehension of input without any processing of the linguistic form which is essential for acquisition. Thus, negotiation of meaning can help in the "incidental acquisition" of some second language aspects if learners focus on both the forms and the meanings they express and, if above all, learners see the difference between the "gaps" and their "output" (as cited in De la Fuente, 2003). De la Fuente (2003) agreed with Long (1996) and Gass (1997) that attention and deep processing, as cognitive aspects, play a significant role in facilitating the

advancement of L2 vocabulary by means of computer-mediated communicative tasks. She suggested that computer-mediated interactions help in making learners take notice of the meaning and the form of specific lexical items in a better way. However, this has to be done through carefully planned tasks that urge learners to concentrate on specific L2 vocabulary.

Another aspect of vocabulary learning is retention, the ability to remember those words that have been previously acquired. The idea of retention is complex, as well. According to Laufer and Hulstijn (2001), retention of new lexical items depends on what they termed as “task induced involvement”. This model suggests that retention of new lexical items depends on the degree of involvement in a task, which leads to the processing of such items. Zandieh and Jafarigohar (2012) agreed with this as their study on the impact of hypertext gloss on the incidental and intentional learning of new vocabulary and the retention rates showed that incidental learning promotes retention more than deliberate leaning as in the latter, the provision of information urges the learners to exert less mental effort leading to the loss of what they have acquired in the process of learning. This is because it depended on memorization. In this, they agreed with Ahmad’s (2001) arguments against deliberate vocabulary learning. In his views, since deliberate learning is based on drilling and depends on memorization, it does not benefit the learners in recalling the words after a period of time. Therefore, it may be true that deliberate learning leads to learning more words. However, it does not lead to retaining them as incidental learning does.

Synchronous Computer-mediated Communication (SCMC) can in fact provide the conditions necessary for the process of vocabulary acquisition. Many researchers argued for the benefits of SCMC in second language acquisition. Blake (2000) argued that synchronous computer-mediated communication (SCMC) can promote L2 vocabulary acquisition by providing the necessary conditions for the development of the interlanguage vocabulary. These conditions are the presence of the ongoing negotiations of lexical meaning of L2 vocabulary and the immediate modified output which help learners achieve progress in their lexical interlanguage. Along the same line of argument, De la Fuente (2003) added that SCMC activates the same processes needed for the acquisition of L2 vocabulary which are

present in face-to-face interaction. However, SCMC is advantageous because being text-based makes it a mixture of written and spoken communication where there is no competition over turn taking or speech interruption. In addition, the absence of body language pushes learners to negotiate meaning. All this can foster “*noticing*”, “*reflection*”, and “*focus on the form*” of the new vocabulary item through the production of modified output. This is further supported by the results of Sahin’s (2009) study on the acquisition of vocabulary through SCMC. In his study, learners were able to acquire and use new lexical items after participating in online chats with more competent language users. In his opinion, this supports IH, which postulates that negotiation of meaning accelerates SLA as interlocutors adjust their speech when a breakdown in communication takes place, in an attempt to sustain the conversational flow. However, Sahin (2009) showed that the retention of the new vocabulary concerning production was not sustained over the period of two weeks. He explained that the short period of the study and the treatment is the reason for such weak retention. Smith (2004) also argued for the benefits of SCMC in vocabulary acquisition. The fact the learners are offered enough time to “*notice*” the new lexical items is a kind of advantage. This offers the learners more visual saliency and more processing time, which enables the learners to focus on form and meaning without breaking down the flow of communication (Smith, 2004; Perez, 2003). Eventually, this leads to better understanding and more accurate use of the TL lexical items. SCMC could also lead to better development of interlanguage than in the case of face-to-face communication. The reason for this is that SCMC allows for combining the advantages of learner-centered environment offered by CMC and those provided by communicative tasks developed to boost interaction and negotiation through a medium that guarantees the salience of linguistic features (Smith, 2004). Hines and Pearl (2004) added that the nature of SCMC in its being immediate may not allow enough time for the learners to think and plan their responses well. However, being immediate urges continuous interaction, which is an essential element in the process of acquisition. This agrees with Warschauer’s (1997) ideas about CMC in general as being cognitive enhancer. Being that fast and immediate urges the

learners to interact rapidly and at the same time allows them time to pause and reflect in some way.

The effectiveness of SCMC in the acquisition of different aspects of L2 has been supported by many studies. Alvarez-Torres (2001) argued that CMC, in general, emphasizes how far a certain language aspect is present or absent. When debating in synchronous computer-mediated environment, the language used by the learners tends to be more sophisticated than in face-to-face debates. Alvarez-Torres (2001) added that SCMC is less threatening as the teacher plays an equal role to that of the learners. The classroom is changed into a screen on which everyone has control. This increases the amount of language produced allowing less confident students to participate more. This was further supported by Fitze's (2006) research on comparing two types of conferencing, online and face-to-face, which showed that online conferencing leads to wider lexical range since it allows the learners to use a more varied set of vocabulary in the topics they discuss than in face-to-face discussions. Satar's and Özdener's (2008) study also showed how SCMC, whether text-based or voiced based, reduced the anxiety level of the learners in comparison to face-to-face interactions when proficiency is concerned. This is also supported by Krashen's ideas about the affective filter hypothesis which suggests that when learners feel more at ease, language acquisition is achievable. Khamis' (2010) research results on the topic of communication strategies employed in SCMC and ACMC was also in favor of SCMC since it showed that interactivity among participants was more in SCMC. However, she explained that this might have been due to several factors such as the type of medium used and students' preferences. The design of the task could have also been a factor. Along the same line, Chen and Eslami (2013), in their study on how text-based online synchronous chats can help in the development of L2 for Taiwanese students, found that learners, through negotiating meaning in language related episodes (LREs) with native speakers, have succeeded to acquire grammatical structures and lexical items and to retain them. The feedback these learners received helped in this process. Chen and Eslami (2013) explained that such online chats were effective in this context since they provided a positive scaffolding atmosphere away from the formal setting of

the class in Taiwan where asking questions and giving feedback tend to be stressful.

However, Perez (2003), though very supportive of SCMC through arguing that the kind of language produced is complex spontaneous and authentic, mentioned one drawback that SCMC may cause if left unattended; some learners may be just observers in online chats and may not participate in the whole process.

Thus, the aim of this 12-week quasi-experimental study is to investigate if the use of computer-mediated communication, in the form of synchronous online chats can help learners develop their lexical skills, in a way that increases their vocabulary repertoire and enables them to express themselves more effectively than face to face classroom discussions. The study also aims at investigating the effect of synchronous online chats on the retention of the acquired vocabulary through a pretest-posttests design. This study attempts to answer the following questions:

1. How far is the use of synchronous computer-mediated communication, in the form of online chats, effective in acquiring authentic vocabulary in undergraduate EFL classes in comparison to face-to-face classroom discussions?
2. How far is the use of synchronous computer-mediated communication, in the form of online chats, effective in the retention of the acquired vocabulary in undergraduate EFL classes in comparison to face-to-face classroom discussions?

### **Experiment and Results**

Participants were not assigned randomly to the research groups since they had been previously assigned to different classes by the university. To overcome this restriction, two intact groups were randomly selected to form the research groups and they were randomly assigned to the experimental and the control groups.

The participants were two intact classes of a twelve-week advanced English course, offered at a private university in Cairo. The total number of the participants in the two classes was 44 students; 21 students in the control group, 23 in the SCMC. The participants' age ranged between 18 and 19. They were all nonnative speakers and Egyptian. They came from homogenous cultural and socioeconomic backgrounds. They were all in

their second year as they all progressed from lower proficiency level modules that they attended in their first year. Classes consisted of learners from different majors: political science, business, economics, engineering and nursing.

In this module, the participants studied critical reading skills, debating and argumentative writing. They read authentic argumentative articles and analyzed them critically. It was also expected that participants take part in class debates to argue for their opinions and refute counterarguments. They had to write two argumentative essays. Thus, it was necessary to expand their vocabulary knowledge to be able to perform well in this module. A vocabulary in context question (in which they were asked about the meaning of a word in the context of the article) was usually part of their reading practice, quizzes and final test. Increasing their vocabulary repertoire was integral part of their curriculum.

The present study tested the vocabulary knowledge of 12 vocabulary items: six adjectives, three nouns and three verbs (See appendix A). The tools used in collecting data the study were: reading texts, communicative tasks, a pretest and two posttests.

The reading material in this study consisted of four reading articles chosen from a pool of topics that was usually assigned to students in this module. The four articles chosen for this study discussed the topics of fashion, education, mobile phones and social media. The articles ranged from 537 words to 732 words with a Flesch reading ease score that ranged from 68.3 to 53.3 ( see Appendix B). This means that the articles' difficulty level ranged between standard to fairly difficult to read as presented in Table 1. The Flesch readability score uses an equation to calculate the reading ease of a certain text based on the length of the sentences and the number of words in each sentence, in addition to the number of syllables in each word (Flesch, 1948). Therefore, texts with high Flesch reading ease scores are easy to read, while those with lower score, are more difficult to read.

**Table 1**

***Word count and readability ease score for the reading articles***

| No | Reading Article  | Word Count | Flesch Reading Ease |
|----|--|------------|---------------------|
| 1  | Is Fashion really important?                                   | 600        | 68.3                |
| 2  | Is College Really Worth the Money?                             | 732        | 65.8                |
| 3  | Youngsters 'addicted to mobile phones'                         | 537        | 57.9                |
| 4  | Damaging effects of social media on our society outweighs good | 602        | 53.3                |

The participants in each of the groups in this study read the same articles with the same order. They all started with the easier texts. They were asked to do the same communicative task, following the same instructions. The only difference was the medium through which they carried out the tasks, whether it was through SCMC or the traditional face-to-face class discussions. The following is an example of the task prompt that participants in both the SCMC group and the control group were assigned in each treatment session.

In this session, we will discuss the following 4 questions.

**Question 1: Controversy and Opinion**

What is the controversy in the article " Is College Really Worth the Money? What is the author's opinion? Discuss your point of view towards the issue.

**Question 2: Language Focus 1**

"People, with a four-year college degree, make an average of \$1,137 per week, which is \$459 more per week than those with just a high school diploma. "As a result, a person with a bachelor's degree from a private school can recoup their cost of education, without considering other costs of living, in 5.4 years,"

What does the word recoup in the above sentence mean? Use it in a sentence of your own.

Remember, among your group members, you have to reach an agreement on the best word that explains the meaning and give each other feedback on the meaning and the sentences.

**Question 3:** Language Focus 2

Students can also shed thousands of dollars off their degrees by getting class credits by taking CLEP or AP exams, or dual enrolling in college while still in high school. Many post-secondary institutions such as Stanford and Harvard have programs that offer free tuition for students whose families make under a certain amount per year, Cohen says.

What does the word shed in the above sentence mean? Use it in a sentence of your own.

Remember, among your group members, you have to reach an agreement on the best word that explains the meaning and give each other feedback on the meaning and the sentences.

**Question 4:** Language Focus 3

Trades can be lucrative. Dental assistants average \$72,000 per year, according to trade-schools.net, and plumbers can make \$90,000 and more.

What does the word lucrative in the above sentence mean? Use it in a sentence of your own. Remember, among your group members, you have to reach an agreement on the best word that explains the meaning and give each other feedback on the meaning and the sentences.

In this study, the treatment was administered four times, from week four to week seven during the fall semester, of the academic year 2017/2018. It was administered in two steps. The first step was assigning a reading article on a controversial issue. On every treatment session, the teacher assigned the two experimental groups and the control group a reading article on a debatable issue. The articles discussed controversial topics of social media, mobile phones addiction, education and fashion. The two groups read the same articles and discussed the same questions.

The second step was holding a discussion to negotiate the answers to the questions in the task above. The SCMC group was assigned a chat session, which is a synchronous discussion that took place at a specific time and date agreed upon with the participants, while in the case of the control group, a face-to-face class discussion was held in class.

In the SCMC group, Moodle was employed for synchronous online chat sessions. It is the online learning management system that the university used in all its courses to offer a blended learning environment to all its students. Moodle allows instructors to create and manage online content,

activities and resources to promote student-centered learning and collaborative work by the students. Moodle Chat offers a variety of features as participants can send emoticons, beeps and links. They can address their comments to other specific participants and scroll up and down easily. Moodle also allows for accessing past chat sessions.

The chat rooms used by the participants and the researcher were launched through the Chat feature. Such feature enabled the participants to have synchronous online discussion by using their ID and password for Moodle. On the right side of the chat window, the names of the students were listed. During the chat sessions, students managed to have a discussion with one another by typing in the text area at the bottom of the chat window, and their messages were immediately visible on the interface.

Participants in the SCMC group were divided into three sub-groups. Each sub-group had its own chatroom for each treatment session. This was done to have more control over student participation and to facilitate the process for the students since an online chat session with too many participants could be overwhelming and confusing. According to research by Kern (1995) and Warschaur (1996), discourse that results from CMC tends to be less interactive and less coherent if compared to oral face-to-face communication, especially, if large groups are involved. This division into sub-groups helped the students to see all the posts made by their colleagues and could decide who needed feedback and interact effectively with one another. It also allowed me to respond to the students' contribution by raising questions, asking for clarification sometimes and giving feedback when necessary. Moreover, it made it easy for the students to reach a consensus concerning the convergent task of agreeing on the most appropriate meaning to the new vocabulary items they were assigned.

Each chat session took the duration of 45 to 60 minutes and was divided into 4 episodes to maintain order during the session and make sure that all the intended learning objectives were fulfilled. Each episode lasted for about 10 to 15 minutes and dealt with one question: the first episode was related to the critical reading skills and the three other episodes were on vocabulary, the subject of this study.

In the first episode, students responded to the first question. The following is an example: *"What is the controversy in this article and what is*

*your own opinion regarding the issue?"* Students were required to give feedback to at least one of their colleagues. This feedback had to explain why they differed or agreed. In the following three episodes, vocabulary items were discussed in their contexts and meaning was constructed. The following is an example: *"What does the word vindictive mean in the following sentence? It seems like people forget this fact and keep posting vindictive and hateful comments, images and articles on their social media pages."*

Students had to discuss the questions and type meaningful sentences illustrating the meaning of each vocabulary item. The purpose of having the students use the word in meaningful sentences was to provide more context and exposure for the students and initiate more interaction through the process of feedback. Students were able to see the words to which they had just constructed meaning in many sentences. They also negotiated meaning when giving feedback on whether the meaning was clear to them or on the correctness of the sentence. This helped measure the recall and productive knowledge of the students and how far they were able to use a word they had just learned (Nation, 1990) and aided them in integrating the word within their vocabulary repertoire.

Students had to give feedback to at least four of their colleagues according to the task assigned to them. The teacher intervened when there was no interaction, when students were reluctant to continue or to raise more questions. The teacher also intervened when the feedback was inaccurate or when the students were off topic. The students typed meaningful sentences using the new vocabulary items. They also gave feedback to their colleagues either agreeing or disagreeing on the meaning and explaining their point of view or correcting the sentence or asking for clarifications if the sentence was not clear enough or commenting on the use of the new vocabulary item. Finally, the students, as a group, had to agree on the most appropriate meaning for the new lexical item.

In the control group, assigned the face-to-face class discussion, students were divided into three sub-groups to make discussion easier and allow each student to express his/ her opinion and participate in the discussion. They were required to discuss the same questions as the experimental SCMC group. They were given the task based on the reading article printed out and

were asked to discuss the questions in their groups following the same guidelines for the two experimental groups in giving feedback and negotiating meaning.

The students discussed the answers to the four questions and constructed the meaning to new lexical items. The students, as a group, had to agree on what the best word that described the new lexical item was and wrote the new vocabulary items in sentences of their own. The teacher observed the sub-groups engaged in their discussions and gave feedback in the form of elicitation of information or recast or positive reinforcement as the students were working when needed. The teacher also moderated the discussion following the sequence of episodes followed by the second experimental group to achieve order within the sub-groups and to make sure that students managed their time well to finish the task. The teacher intervened when the feedback between students was inaccurate or when the students were off topic.

In this study, a pretest, immediate posttest and a delayed posttest were administered in the two groups to measure the knowledge, acquisition and retention of the new vocabulary items. All tests were administered in class using a computer, where students typed their answers and saved them.

The pretest and the two posttests in this study adapted Wesche and Paribakht's (1996) VKS which originally requires learner to respond to five questions. However, in the present study, the adapted scale consisted of three questions in response to a prompt about a vocabulary item in context as follows.

Telecommunication companies will **recoup** their losses by increasing phone call prices.

I don't know the meaning of the word in bold.

I know this word. It means ----- [synonym, definition or translation]

I can use this word in a sentence: -----  
-----

The third question in this scale was included for two reasons. First, it was a validation of students' knowledge of the vocabulary item, as it

showed if students could use the word or not by testing the recall knowledge component. The second reason was because, in multiple situations, when students were asked about the meaning, definition or a translation of a certain vocabulary item, they could not express themselves precisely and they provided a rather general meaning. However, when asked to use the word in a sentence, students were able to use the word in a sentence that illustrated their knowledge of the word. However, if the sentence written by a student was neutral, in the sense that it did not illustrate the meaning of the target item, the student's knowledge of the word would be considered incomplete.

To obtain information about the student's knowledge of vocabulary to decide on the target vocabulary, a pretest was administered (see Appendix C). The pretest was administered in week two of the Fall semester of the academic year 2017/2018. The pretest consisted of 20 vocabulary in-context questions. There were five vocabulary items related to each of the four reading texts that students had to discuss whether online or face-to-face. For each question, the students had to decide first whether they know the word. If they did, they had to provide a synonym, a definition or a translation. They were also required to form a sentence using the vocabulary item to show that they have sufficient knowledge of it (See appendix C). Students were given 60 minutes to complete the test.

In scoring the test, the students' answers to the adapted VKS were scored based on two types of vocabulary knowledge: the receptive knowledge and the productive knowledge. Santos's (2010) scoring scheme was adapted. All raters followed the same procedures to ensure reliability and consistency. Vocabulary recognition was measured through part 1 and part 2 in the pretest by the prompts: "*I do not know this word*" and "*I know what this word means*". If a student's answer to a word was "*I do not know this word*", he/ she received a zero. If a student's answer was "*I know what this word means*" and he/ she gave an accurate and precise definition, synonym or translation, then the answer received a 2. In case the answer was too general or imprecise, yet could still illustrate some knowledge of the word, a 1 was awarded. A zero was awarded in case of a completely wrong answer. The maximum score that a student received in part 1 and part 2 for each word is 2.

On the other hand, productive knowledge was measured through part 3 by the prompt “*I can use this word in a sentence*”. In this part, students had to give a proof of their knowledge by structuring a meaningful sentence that illustrated the meaning of the vocabulary item in question. Part 3 was given a score by the instructor only if part 2 received either 1 or 2 as a score or in case the sentence used to illustrate the meaning of the word was semantically clear and precise and the meaning of the word was illustrated clearly. In testing the knowledge of the word *fanatical*, for example, a sentence like “My father is fanatical about his opinions and he never accepts others’ opinions” would receive a 2 since the meaning was illustrated clearly. A zero was given in case the answer was missing or was completely misleading or wrong, even if it was grammatically correct. For example, a sentence like “*My father is fanatical because I took the car without his permission*” received a zero. A score of 2 was given if the word was used accurately both semantically and grammatically. The maximum score that a student received in part 3 for each word was 2.

The score for each word was the total score that the student received on both the receptive and productive knowledge components. The maximum score a student could get in each question was 4. A total score less than 2 meant that the student lacked the knowledge of a word. The maximum number of points that a student can get on the test is 48 points.

In analyzing the pretest results, the scores were tabulated to decide on the percentage of the students who did not know each vocabulary item (Table 2).

**Table 2**  
**Word knowledge representation in percentages**

| #  | Lexical item | Number of students who knew the word | Number of students who do not know the word | Percentage of students who knew the word | Percentage of students who do not know the word |
|----|--------------|--------------------------------------|---|--|---|
| 1  | Vindictive   | 0                                    | 44  | 0%                                       | 100%  |
| 2  | Recoup       | 0                                    | 44  | 0%                                       | 100%  |
| 3  | Lucrative    | 0                                    | 44  | 0%                                       | 100%  |
| 4  | Fanatical    | 0                                    | 44  | 0%                                       | 100%  |
| 5  | Detrimental  | 0                                    | 44  | 0%                                       | 100%  |
| 6  | Recreational | 0                                    | 44  | 0%                                       | 100%  |
| 7  | Shed         | 1                                    | 43  | 2%                                       | 98%   |
| 8  | Mitigate     | 1                                    | 43  | 2%                                       | 98%   |
| 9  | Counterpart  | 1                                    | 43  | 2%                                       | 98%   |
| 10 | Impulse      | 2                                    | 42  | 5%                                       | 95%   |
| 11 | Snap         | 2                                    | 42  | 5%                                       | 95%   |
| 12 | Frustration  | 2                                    | 42  | 5%                                       | 95%   |
| 13 | Endorse      | 3                                    | 41  | 7%                                       | 93%   |
| 14 | Slob         | 4                                    | 40  | 10%                                      | 90%   |
| 15 | Craze        | 4                                    | 40  | 10%                                      | 90%   |
| 16 | Overwhelming | 5                                    | 39  | 11%                                      | 89%   |
| 17 | Stalk        | 12                                   | 32  | 27%                                      | 73%   |
| 18 | Worth        | 22                                   | 22  | 50%                                      | 50%   |
| 19 | Launch       | 36                                   | 8   | 82%                                      | 18%   |
| 20 | Drive        | 39                                   | 5   | 88%                                      | 12%   |

Twelve words out of the twenty vocabulary items included in the pretest were selected to be targeted in the treatment; six adjectives, three nouns and three verbs so that each reading text included three vocabulary items. The chosen items were the items for which at least 95% of the students did not know the meaning of. The 12 target vocabulary items were: *vindictive*, *snap*, *lucrative* *detrimental*, *recreational*, *fanatical*, *impulse*, *frustration*, *counterpart*, *recoup*, *shed*, and *mitigate*. Eight vocabulary items were selected as distractors to be used in the posttests and these were: *craze*, *endorsed*, *launch*, *drive*, *overwhelming*, *slob*, *stalk* and *worth*. The results of each group were saved to be compared to the posttests at the end of the treatment.

The immediate and the delayed posttest were administered to measure the acquisition and retention of the new vocabulary items that students discussed during the SCMC sessions and the face-to-face classroom discussions based on the reading texts.

The immediate posttest was administered in week eight, right after the treatment had been finished. The pretest was reused as an immediate posttest. However, the order of the items was shuffled so that students would not remember the test (See appendix C). In scoring the immediate posttest, the same procedures were followed as in scoring the pretest.

For the delayed posttest, a different version of the pretest was used at the end of week 12. The new version was revised to ensure that it has the same difficulty level as the pretest and the immediate posttest. (See appendix C). The same procedures of administering and scoring the pretest and the immediate posttest were followed in administering and scoring the delayed posttest.

The data collected from the three tests: the pretest, the immediate posttest and the delayed posttest, for the two groups were coded and analyzed using SPSS V-20 for Windows generating descriptive statistics to calculate the means and the standard deviation. Independent t test was run to decide whether the difference between the results of the experimental group and the control group was statistically significant.

To rule out any difference that might affect the result, the research sample was tested for homogeneity. The demographic characteristic of gender in the two groups was compared and it revealed that there was no significant difference between the two groups. Table 3 shows gender frequency distribution in the two groups. Male students in the control group and the SCMC group constituted (57,1%) and (70,9%), respectively while female students constituted (42,9%) and (29,1%), respectively.

**Table 3**

***Gender Frequency distribution***

| Ser   | Gender | Control Group<br>n=21 |         | SCMC<br>n=23 |         |
|-------|--------|-----------------------|---------|--------------|---------|
|       |        | Frequency             | percent | Frequency    | percent |
| 1     | Male   | 12                    | 57.1    | 14           | 60.9    |
| 2     | Female | 9                     | 42.9    | 9            | 39.1    |
| Total |        | 21                    | 100     | 23           | 100     |

The mean and the standard deviation values of the pretest, the immediate and the delayed posttests scores for the control group and the SCMC group were calculated as shown in the group statistics in Table 4 to find whether differences in performance were significant (Table 4).

**Table 4**

***Mean values and standard deviation values of the pre and posttests in the two groups***

| Group              |               | N  | Mean  | Std. Deviation |
|--------------------|---------------|----|-------|----------------|
| Pretest            | Control Group | 21 | .86   | .493           |
|                    | SCMC Group    | 23 | 1.26  | .356           |
| Immediate posttest | Control Group | 21 | 23.62 | 8.447          |
|                    | SCMC Group    | 23 | 36.87 | 8.849          |
| Delayed posttest   | Control Group | 21 | 10.95 | 4.873          |
|                    | SCMC Group    | 23 | 24.87 | 9.460          |

An independent-samples t-test was conducted to compare vocabulary acquisition and retention in the control group and the SCMC group. In the pretest, there was not a significant difference in the scores for control group (M=.86, SD=.493) and the SCMC group (M=1.26, SD=.356) conditions;  $t(42) = 0.94$ ,  $p = 0.352$ . On the other hand, when comparing the immediate posttest scores that tested for vocabulary acquisition, there was a significant difference in the scores for control group (M= 23.62, SD=8.447) and the SCMC group (M=36.87, SD= 8.849) conditions;  $t(42) = 5.070$ ,  $p = 0.000$ . Another significant difference was evident in comparing the delayed

posttest scores for the control group (M= 10.95, SD=4.873) and the SCMC group (M=24.87, SD=.9.460) conditions;  $t(42) = -6.045, p = 0.000$  (Table 5)

**Table 5**  
*Independent-samples t-test*

|                    |                             | t-test for Equality of Means |        |                |
|--------------------|-----------------------------|------------------------------|--------|----------------|
|                    |                             | t                            | df     | Sig.(2-tailed) |
| Pretest            | Equal Variances assumed     | .940                         | 42     | .352           |
|                    | Equal Variances not assumed | .936                         | 40.555 | .355           |
| Immediate posttest | Equal Variances assumed     | 5.070                        | 42     | 0.000          |
|                    | Equal Variances not assumed | 5.081                        | 41.909 | 0.000          |
| Delayed posttest   | Equal Variances assumed     | 6.045                        | 42     | 0.000          |
|                    | Equal Variances not assumed | 6.211                        | 33.532 | 0.000          |

To determine whether the differences between the two groups were statistically significant, an independent t test was used. First, the independent t test was run to compare the results of the pretest for the two groups, the control group and the SCMC group, to rule out any differences between the two groups in the knowledge of the target vocabulary, at the beginning of the experiment, as shown in Table 6.

**Table 6**  
*Comparing the mean values of the pretest for the control group and SCMC group using Independent t test*

| Variable | Sample        | N  | Mean | Std. | t-value | P-value | Result |
|----------|---------------|----|------|------|---------|---------|--------|
| Pretest  | Control Group | 21 | .086 | 0.89 | .940    | .35     | n.sig. |
|          | SCMC Group    | 23 | 1.26 | 0.35 |         |         |        |

The results of the t test showed that there was no statistically significant difference between the control group and the SCMC group in the results of the pretest as the value (t test) was (0.940) and the P-value was more than (0.05).

The independent t test was used again to compare the results of the two posttests, the immediate and the delayed posttest, for the two groups to test for any significant differences between the two groups (Table 7)

**Table 7**

***Comparing the mean values of the pretest and the posttest for the control group and SCMC group using Independent t test***

| Variable           | Sample        | N  | Mean  | Std. | t-value | P-value | Result |
|--------------------|---------------|----|-------|------|---------|---------|--------|
| Pretest            | Control Group | 21 | .086  | 0.49 | .940    | .35     | n.sig. |
|                    | SCMC Group    | 23 | 1.26  | 0.35 |         |         |        |
| Immediate posttest | Control Group | 21 | 23.62 | 8.44 | 5.070   | .01**   | H.sig. |
|                    | SCMC Group    | 23 | 36.87 | 8.84 |         |         |        |
| Delayed posttest   | Control Group | 21 | 10.95 | 4.87 | 6.045   | .01**   | H.sig. |
|                    | SCMC Group    | 23 | 24.87 | 9.46 |         |         |        |

\*\*Significant at the (.01) level

\*Significant at the (.05) level

Unlike the pretest, a statistically significant difference between the two groups existed when comparing the results of the immediate posttest as the of value (t test) was (5.070) and the P-value was (0.01). Similarly, there was a statistically significant difference between the results of the control and the SCMC group in the results of the delayed posttest as the value (t test) was (6.045) and the P-value was (0.01).

This means that at the start of the experiment, before the treatment was administered in the SCMC group, the two groups, the control group and the SCMC group, showed the same level of performance and there was no difference between them in the knowledge of the target vocabulary. However, after the treatment, there was a significant difference between the two groups in the knowledge of the target vocabulary that was in favor of the SCMC group. Though, the mean value of the SCMC in the immediate posttest was more than in the delayed posttest, 36.87 and 24.87, respectively, the SCMC outperformed the control group whose mean value was calculated at 10.95, in the delayed posttest suggesting a statistically significant difference in retaining the acquired vocabulary over the period of 12 weeks.

## **Conclusion**

The results of this study suggested that the use of SCMC in promoting vocabulary acquisition and retention was more effective than the regular face-to-face class discussion, where many students may be reluctant to participate. SCMC effectively helped in the acquisition and retention of the twelve target words, in this study. Participants in the experimental group outperformed those in the control group in the immediate posttest. Retention was also higher with use of SCMC than with the regular face-to-face class discussion. Participants were able to remember the twelve words better in the experimental group after the treatment period. This was illustrated by the results of the delayed posttest.

However, it is extremely important to be careful when designing tasks since task design in computer mediated communication context in general can be very challenging as the learners may not be very clear about what they are required to do. Though computer-mediated interactions generally help in making learners take notice of the meaning and the form of specific lexical items in a better way, De la Fuente (2003) contended that this must be done through carefully planned tasks that urge learners to concentrate on specific L2 vocabulary. This also agrees with Kitade's (2000) research arguing that carefully planned computer-mediated communicative tasks help in increasing the learner's production since they allow more room for contribution as those tasks give the learners the time to review and think about language aspects at their own pace and they can correct their own mistakes too.

Another important element is the role of the teacher. The teacher has a crucial role to play in this process. The teacher should assume the role of the facilitator not the controller. The teacher must provide proper guidance. According to Meskill and Anthony (2005), the teacher should provide implicit modeling of what the learners should do. The teacher should also provide meaningful feedback and should tactfully "tarp" learners to use the target language. This is not an easy task in itself.

Finally, though face-to-face class discussions are generally more feasible and more practical in language classes, SCMC can definitely be more beneficial for learners and can help them at many levels to develop their linguistic repertoire and their interlanguage.

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## Appendix A

### List of Target Vocabulary and Distractors

| #  | Target vocabulary | # | Distractors  |
|----|-------------------|---|--------------|
| 1  | Vindictive        | 1 | Craze        |
| 2  | Snap              | 2 | Endorsed     |
| 3  | Lucrative         | 3 | Launch       |
| 4  | Detrimental       | 4 | Drive        |
| 5  | Recreational      | 5 | Overwhelming |
| 6  | Fanatical         | 6 | Slob         |
| 7  | Impulse           | 7 | Stalk        |
| 8  | Frustration       | 8 | Worth        |
| 9  | Counterpart       |   |              |
| 10 | Recoup            |   |              |
| 11 | Shed              |   |              |
| 12 | Mitigate          |   |              |

## **Appendix B**

### **Reading texts**

#### **Reading Text 1**

##### **Is Fashion Really Important?**

Many people do not think that looks matter. They believe that what is important is personality. What you wear is unimportant. To them, clothes and fashion are superficial matters that waste time, money and effort. They invest in their skills and refuse to accept that in many situations the book is judged by its cover.

On the other hand, millions of people spend an immense amount of money every day on fashion and clothes. They see it as extremely important to their success. They believe that First impressions matter. In fact, studies show that job interviewers will often decide whether they approve or disapprove of a candidate within the first thirty seconds of the interview; all before the interview questions. The importance of first impressions goes beyond the workplace, they matter for school and social events as well. Therefore, it is extremely important to be on top of your game whenever possible.

We are not saying that you need to be some sort of a fashion expert or enthusiast. We are simply raising the point that one's choice of style is arguably the most important component of a first impression. You need to promote a style that portrays your mindset and future career goals. This can be difficult, as the world of fashion can be overwhelming. Nonetheless, you should promote a style of your own. "Fashion is the buffet, but style is what you put on your plate". Crafting a unique style is a process. It doesn't come overnight. And it may also change as you go through life. That is why there are many reasons for considering fashion an important issue.

Assumptions is the first reason. Again, if we know that people make snap judgments, why not mitigate your risks by dressing the way you want to be perceived? For better or worse, people often assume our capabilities based off of our dress. If you look like a slob, most people are going to

assume you are one. And if you look decent, then people will take you more seriously. Obviously, your attire will only take you so far. But why not spend a little more time on your wardrobe if it increases your chance of getting off on the right foot?

Increased Confidence is the second reason. When you are well dressed, you are ready to go. You feel comfortable, confident, and good about yourself. And if you are extremely presentable and are giving off a positive vibe, you'll increase your chances of success wherever you may be (school, workplace, social gathering, etc.). "If you look good, you feel good. If you feel good, you play good. If you play good, they pay good." – Deion Sanders

The third reason is Attention to Detail. When you begin paying close attention to what you are wearing, you will begin to notice details in other areas of your life. This includes the quality of others' work and, most importantly, the quality of your own work. This newfound focus can also be applied to your social life such as bettering your ability to recall certain details about someone you recently met. Dressing well is an activity that will eventually result in you becoming more responsible due to gaining a finer perception.

Finally, the number one reason why fashion is important is because it is an opportunity to really own your life. By controlling how the world sees you daily, society will soon take notice and you will be climbing the social ladder faster than your counterparts who do not give a second thought as to what they are wearing.

## **Reading Text 2**

### **Is College Really Worth the Money?**

A degree means more money in most fields, but there are successful people without the college diploma.

People, with a four-year college degree, make an average of \$1,137 per week, which is \$459 more per week than those with just a high school diploma.

With student debt reaching a record \$1.3 trillion, colleges are reporting the pain as students back away from taking on the expense of a college degree. According to government data, enrollment has dropped by about

800,000 from 2010 to 2014. This begs the question, is investing in a college degree worth the money?

For those without financial aid, the average cost of a four-year education in 2016, based on today's prices, is \$129,640 for private schools and \$37,600 for public in-state schools, according to the College Board. People with a four-year college degree make an average of \$1,137 per week, which is \$459 more per week than those with just a high school diploma, according to the Bureau of Labor Statistics' 2015 data.

"As a result, a person with a bachelor's degree from a private school can recoup their cost of education, without considering other costs of living, in 5.4 years," says Michael Blattman, senior vice president of Collegiate Consolidation Services, a loan consolidation company. "Those with master's degrees can recover the cost of education in just 3.8 years, and those with a professional degree, in only 2.3 years." The unemployment rate also drops with each degree obtained, from 5.4 % for high school diplomas to 2.8 % for a bachelor's, to 1.7 % for a doctorate, according to the bureau.

Science, technology, engineering and math degrees account for the highest starting salaries, according to a recent survey by the National Association of Colleges and Employees, with engineering topping the list at an average starting salary of \$65,000 for a bachelor's and \$74,000 for a master's degree. Computer science was a close second.

Students can also shed thousands of dollars off their degrees by getting class credits by taking CLEP or AP exams, or dual enrolling in college while still in high school. Many post-secondary institutions such as Stanford and Harvard have programs that offer free tuition for students whose families make under a certain amount per year, Cohen says.

If students think they're not yet ready for college, they should consider learning a skill that cannot be outsourced, says Kara Carrero, a parenting author, consultant and podcaster. "Even if it's not what they want for their lives, they have to think outside of the box to see how to be innovative in this high-tech world as to not have a job that can be done by a computer, outsourced, or rack up debt they can't pay off," she says. Trades can be lucrative. Dental assistants average \$72,000 per year, according to trade-schools.net, and plumbers can make \$90,000 and more. The American

Dream is built on success stories that show with enough drive, people can get ahead in this country by sheer will and hard work, even without a degree.

Charles J. Bonfiglio, president and CEO of the multimillion-dollar international franchise Tint World, spent his teen and young adult years in business, not in a university. At age 21, he used his savings of about \$25,000 and got a bank loan for about \$60,000 to launch his franchise. Bonfiglio says working for a franchise is the fastest way to understand proven business systems and owning one can be lucrative without a college degree. "Bottom line: All the formal education in the world can never prepare you for the constant reinvention it takes to stay ahead in the business world," he says.

Josiah Nelson sold a company for eight figures and started several other successful companies, all without a college degree. "Without a college degree, most companies will immediately reject you for a position even though you may have the skills for the job," he says. "I got where I am today by just making connections and putting my name out there. It takes time but it takes a lot less time than in college and I'm definitely better for it – both experience and finances wise."

So, is college worth it? Generally speaking: yes, it still is. But that doesn't mean you can't be successful if it's not for you.

### **Reading Text 3**

#### **New Addiction for Youngsters**

Many people boast about the fact their children are technology savvy and that they can use any device easily. Parents give their children mobile devices too early because they find it an easy way to check on them while they are away. They feel that this way they can know what their children are doing by contacting them at any time.

However, for teenagers mobile phones are not just a means to keep in touch with their parents. Teenagers have become fanatical about being always available online and are extremely uneasy if unable to contact their friends countless times each day. A study by a leading sociologist concludes that if the trend continues, young people will soon be incapable of forming and maintaining relationships without the help of a mobile.

One British child in four between the ages of five and 16 now has a mobile phone. As well as making calls, youngsters are using their handsets to send millions of text messages to friends each day. The study's author, Dr. Hisao Ishii, said: 'Teenagers can be seen taking advantage of every spare minute to contact their friends. 'It is not the content of the communication but the act of staying in touch that matters.' And he warned: 'Genuine conversation will be driven out by superficial communication, in which the act of contacting one another is all that matters, leading to a deterioration in the quality of relationships.'

Although Dr. Ishii's research was based on children in Japan, British experts confirmed that the same trends apply in the UK. Child psychologist Dr. David Lewis said: 'The mobile phone, like the Furby or the Rubik's Cube before it, has developed into a playground "fashion" in this country. 'Children hate to feel as if they are not in the "in group", and think that without a phone they will be left out. 'It is like an electronic tribal drum. Children use it to keep up to date with a wide group of acquaintances, so that when they meet up they know the latest news and gossip.'

Dr. Lewis supported the warning that, together with home computers and video games, the mobile is having a detrimental effect on children's social skills. It puts their skills at a serious risk. 'The mobile now often substitutes for physical play,' he explained. 'To develop proper friendships you have to invest time with people, doing things together. 'Speaking on the phone and sending lots of text messages will give children many more acquaintances, but fewer friends. They are replacing quality with quantity.'

Sociologists have also warned that the popularity of e-mailing, text messaging and playing games on mobile phones is affecting other important activities such as recreational reading of interesting novels and short stories, sports, family gatherings and even studying.

Youngsters, on the other hand, do not see mobile phones that destructive. Jane, a 16 year old student, said "My phone is very important for me. It connects me to my friends. I even made new friendships. I can call my parents anytime when I am not with them." A survey conducted by Dr. James Stewart, a sociologist, revealed that 76% of youngsters between the age 16 and 19 consider their mobile phone the most useful item they

possess. According to another survey conducted last year by Mori for Vodafone, a third of those aged between 16 and 20 prefer text messaging to all other means of written communication.

However, handset manufacturers argue that they are not out to market to the under-16s. A Government report last year highlighted the increased risk to children under 16 using mobile handsets and a circular sent to schools suggested that children below this age should be allowed to make calls only in emergencies. Mobile phones have to be dealt with cautiously when it comes to the younger generation.

#### **Reading Text 4**

##### **Social Media and Its Effects on the Society**

Social media has become an integral part of people's life nowadays. Many can't detach themselves from their laptops or mobile devices because they feel disconnected from the whole world if they do so. Some people are just fanatical about social media. They see it as a way of expressing their views and sharing experience with others. They believe that social media make their relation to the world stronger and help them become more sociable. Social media has even become their primary source of information and news.

Graduating with a mass communications degree in a time where fake news writers make more money and get more traffic on their websites than real journalist has made me scared and disappointed in the world we are living in today. In the fast-paced lives we live, we want information quickly and easy to read. Keeping up with this pace, we often do not get the whole story or even get false information from unreliable sources. Uninformed opinions are only one effect of social media these days. While it can be positive sometimes, more often than not, these effects are negative.

Everything we do on social media is public and can be seen, read and judged by all our contacts. Posts sometimes even go viral and are shared by people not on our contact lists. Yet, it seems like people forget this fact and keep posting vindictive and hateful comments, images and articles on their social media pages.

The lack of privacy is one of the most worrying issues social media has caused, according to Brian Jung's Chron article, "The negative effect of

social media on society and individuals. “People tend to post everything that is going on in their lives, like photos of when they went out or articles about political views. What they often forget, is that these posts and photos once shared, stay online and are available for the public eye. One of the first things I learned when I got a job in the U.S. is employers often will stalk potential employees’ social media in order to get an idea of whether or not someone is worth hiring. Those public posts then become a problem when you are in the hunt for a job, and sometimes become the reason why you don’t get hired, or get fired.

Cyberbullying is another issue that has gotten worse with time. Body shaming, racism, all types of discrimination are often expressed through social media, relying on the fact no one may know who said it when it is said behind a screen. “The fact that people can hide their identities online can bring out dark impulses that might otherwise be kept under control,” Jung wrote in his article. “Cyberbullying has spread widely among youth, with 42 percent reporting that they have been victims, according to a 2010 CBS News report.” The fact that people can hide their identities online can trick some people into doing something online that would be unacceptable in real life. Then, they act surprised when there are real-life consequences to their “jokes.”

Besides filtering potential jobs and cyberbullying, social media has other negative effects on our lives such as messing with the ability to develop our own opinions and thoughts. A German study showed Facebook users tend to compare themselves with their ‘friends,’ which causes a great deal of frustration and feelings of isolation, especially when they have less feedback, such as comments and likes, than their friends, according to Damon Beres’ article “5 weird negative effects of social media on your brain.”

Is this really the world you want to live in, one that finds cyberbullying harmless and deprives us from privacy and reasoning? I would encourage everyone to think about this before posting on social media again.

## Appendix C

### Pretest and Posttests

#### Pretest

**Read the following sentences and fill in the following table.**

**Instructions:** If you don't know the meaning of the word in bold, put **X** in **Part 1**. If you know the meaning of the word, a synonym, a definition or a translation, type it in **Part 2** and use the word in a meaningful sentence by typing it in **Part 3**.

You have **60 minutes** to finish the test.

|   | Word  | Part 1: I do not know this word. | Part 2: I know what this word means. Write a synonym, a definition or a translation. | Part 3: I can use this word in a sentence. Write a sentence. |
|---|---|----------------------------------|--|--|
| 1 | He became almost as <b>fanatical</b> as his father about the team.                |                                  |  |  |
| 2 | Snapchat is the latest social media <b>craze</b> among teenagers.                 |                                  |  |  |
| 3 | The coach enthusiastically <b>endorsed</b> the team's opinion about the new plan. |                                  |  |  |
| 4 | Lying to your partner has a <b>detrimental</b> effect on the relation.            |                                  |  |  |
| 5 | The resort has many amusement parks and other <b>recreational</b> services.       |                                  |  |  |
| 6 | Companies will <b>recoup</b> their losses by raising prices.                      |                                  |  |  |
| 7 | If she wants to win the competition, she has to <b>shed</b> some weight.          |                                  |  |  |

|    |   |  |  |  |
|----|---|--|--|--|
| 8  | The manager signed a <b>lucrative</b> deal last summer.   |  |  |  |
| 9  | They plan to <b>launch</b> this campaign as early as tomorrow.  |  |  |  |
| 10 | You should have the <b>drive</b> and determination which help you to achieve your plans.                          |  |  |  |
| 11 | I think this issue is too important to finalize by a <b>snap</b> decision.  |  |  |  |
| 12 | Having a job, being a mother for the first time and attending classes were extremely <b>overwhelming</b> for her. |  |  |  |
| 13 | My boyfriend used to call me a fat <b>slob</b> .  |  |  |  |
| 14 | There are several ways to <b>mitigate</b> the effects of a strong shock   |  |  |  |
| 15 | The President telephoned his Italian <b>counterpart</b> to discuss the agreement.                                 |  |  |  |
| 16 | The killer used to <b>stalk</b> his victims for days, waiting for the perfect moment to attack them.              |  |  |  |
| 17 | Don't cheat on the test; it's not <b>worth</b> it if you get caught.  |  |  |  |
| 18 | I was asked not pay attention to the <b>vindictive</b> comments she made about my work.                           |  |  |  |
| 19 | Unable to resist his strong <b>impulse</b> , he looked at the photo again and cried.                              |  |  |  |
| 20 | Many of the victims' stories were full of pain and <b>frustration</b> because the criminal was not punished.      |  |  |  |

### Immediate Posttest

**Read the following sentences and fill in the following table.**

**Instructions:** If you don't know the meaning of the word in bold, put **X** in **Part 1**. If you know the meaning of the word, a synonym, a definition or a translation, type it in **Part 2** and use the word in a meaningful sentence by typing it in **Part 3**.

You have **60 minutes** to finish the test.

|   | Word   | Part 1: I do not know this word. | Part 2: I know what this word means. Write a synonym, a definition or a translation. | Part 3: I can use this word in a sentence. Write a sentence. |
|---|--|----------------------------------|--|--|
| 1 | I was asked not to pay attention to the <b>vindictive</b> comments she made about my work.                   |                                  |  |  |
| 2 | The killer used to <b>stalk</b> his victims for days, waiting for the perfect moment to attack them.         |                                  |  |  |
| 3 | Unable to resist his strong <b>impulse</b> , he looked at the photo again and cried.                         |                                  |  |  |
| 4 | Don't cheat on the test; it's not <b>worth</b> it if you get caught.   |                                  |  |  |
| 5 | Many of the victims' stories were full of pain and <b>frustration</b> because the criminal was not punished. |                                  |  |  |
| 6 | Companies will <b>recoup</b> their losses by raising prices.   |                                  |  |  |
| 7 | They plan to <b>launch</b> this campaign as early as tomorrow.   |                                  |  |  |
| 8 | If she wants to win the competition, she has to  |                                  |  |  |

*Synchronous Computer-Mediated Communication And Vocabulary Acquisition  
And Retention*

|    |   |  |  |  |
|----|---|--|--|--|
|    | <b>shed</b> some weight.  |  |  |  |
| 9  | The manager signed a <b>lucrative</b> deal last summer.   |  |  |  |
| 10 | You should have the <b>drive</b> and determination which help you to achieve your plans.                          |  |  |  |
| 11 | I think this issue is too important to finalize by a <b>snap</b> decision.  |  |  |  |
| 12 | Having a job, being a mother for the first time and attending classes were extremely <b>overwhelming</b> for her. |  |  |  |
| 13 | There are several ways to <b>mitigate</b> the effects of a strong shock.  |  |  |  |
| 14 | My boyfriend used to call me a fat <b>slob</b> .  |  |  |  |
| 15 | The President telephoned his Italian <b>counterpart</b> to discuss the agreement.                                 |  |  |  |
| 16 | Snapchat is the latest social media <b>craze</b> among teenagers.   |  |  |  |
| 17 | He became almost as <b>fanatical</b> as his father about the team.  |  |  |  |
| 18 | The coach enthusiastically <b>endorsed</b> the team's opinion about the new plan.                                 |  |  |  |
| 19 | Lying to your partner has a <b>detrimental</b> effect on the relation.  |  |  |  |
| 20 | The resort has many amusement parks and other <b>recreational</b> services.                                       |  |  |  |

### Delayed Posttest

**Read the following sentences and fill in the following table.**

**Instructions:** If you don't know the meaning of the word in bold, put **X** in **Part 1**. If you know the meaning of the word, a synonym, a definition or a translation, type it in **Part 2** and use the word in a meaningful sentence by typing it in **Part 3**.

You have **60 minutes** to finish the test.

|   | Word   | Part 1: I do not know this word. | Part 2: I know what this word means. Write a synonym, a definition or a translation. | Part 3: I can use this word in a sentence. Write a sentence. |
|---|--|----------------------------------|--|--|
| 1 | Telecommunication companies will <b>recoup</b> their losses by increasing phone call prices.   |                                  |  |  |
| 2 | She made many <b>vindictive</b> comments about my work that everyone was upset.                |                                  |  |  |
| 3 | I was able to resist my strong <b>impulse</b> , and avoided talking to him.                    |                                  |  |  |
| 4 | Don't lie to your parents; it's not <b>worth</b> it.   |                                  |  |  |
| 5 | If you want to <b>shed</b> some expenses, you will have to buy cheaper material.               |                                  |  |  |
| 6 | Many children felt a mix of sadness and <b>frustration</b> because they did not win.           |                                  |  |  |
| 7 | The criminal used to <b>stalk</b> the children, waiting for the perfect moment to kidnap them. |                                  |  |  |
| 8 | The factory <b>launched</b> a new product last week.   |                                  |  |  |
| 9 | <b>Snap</b> judgments are not always right.  |                                  |  |  |

*Synchronous Computer-Mediated Communication And Vocabulary Acquisition  
And Retention*

|    |  |  |  |  |
|----|--|--|--|--|
| 10 | The minister signed a <b>lucrative</b> trade agreement in the meeting last month.            |  |  |  |
| 11 | He has the <b>drive</b> to succeed and achieve his goals.                                    |  |  |  |
| 12 | The students met with younger <b>counterparts</b> to work on the role play.                  |  |  |  |
| 13 | You have to find a way to <b>mitigate</b> the effects of the medicine.                       |  |  |  |
| 14 | Doing a lot of things at the same time was extremely <b>overwhelming</b> for me.             |  |  |  |
| 15 | My mother used to call me a <b>slob</b> when I acted in messy way.                           |  |  |  |
| 16 | There are many <b>recreational</b> activities for children in the nursery.                   |  |  |  |
| 17 | Instagram has become a <b>craze</b> among photography lovers                                 |  |  |  |
| 18 | He has become very <b>fanatical</b> about the team that you can't discuss anything with him. |  |  |  |
| 19 | Cheating on tests has a <b>detrimental</b> effect your future.                               |  |  |  |
| 20 | <b>The committee happily endorsed the students' suggestion about the new regulations.</b>    |  |  |  |