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Vocabulary Learning Performance of Students in Online Classes

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บทคัดย่อ

การเรียนแบบออนไลน์มีความจำเป็นอย่างยิ่งในช่วงการแพร่ระบาดของโรคติดเชื้อไวรัสโคโรนา 2019 (COVID-19) อย่างไรก็ตามประสิทธิภาพของการเรียนออนไลน์ในการเป็นเครื่องมือส่งเสริมการเรียนรู้คำศัพท์ยังถูกตั้งคำถาม สาเหตุส่วนหนึ่งเป็นเพราะการขาดปฏิสัมพันธ์ระหว่างครูและนักเรียน และความกังวลเกี่ยวกับความซื่อสัตย์ งานวิจัยชิ้นนี้ได้นำวิธีการวิจัยแบบผสมผสานมาใช้เพื่อ 1) ศึกษาความแตกต่างของผลการเรียนรู้คำศัพท์ภาษาอังกฤษของนักศึกษาระหว่างการเรียนในชั้นเรียนปกติ และการเรียนแบบออนไลน์ และ 2) ศึกษากลวิธีในการเรียนคำศัพท์ภาษาอังกฤษของนักศึกษาระหว่างการเรียนแบบออนไลน์ กลุ่มตัวอย่างที่ใช้ในการศึกษาประกอบด้วยนักศึกษาชั้นปีที่ 1 ที่ลงทะเบียนเรียนในรายวิชาภาษาอังกฤษธุรกิจในมหาวิทยาลัยแห่งหนึ่งในประเทศไทยจำนวน 66 คน ผลการวิจัยพบว่าคะแนนเฉลี่ยในการเรียนรู้คำศัพท์ภาษาอังกฤษในชั้นเรียนแบบออนไลน์สูงกว่าในชั้นเรียนปกติ ซึ่งการเพิ่มขึ้นของคะแนนเฉลี่ยอาจเกิดจากการใช้กลวิธีที่ใช้การเสริมและการทดแทน (Compensation Strategies) และกลวิธีด้านความรู้ความคิด (Cognitive Strategies) ที่มีความถี่สูง เพื่อใช้ประโยชน์จากความสามารถในการค้นหาข้อมูลเพิ่มเติมทางช่องทางออนไลน์ และความสามารถในการหยุดบทเรียนวิดีโอชั่วคราวเมื่อไม่เข้าใจบทเรียน ทั้งนี้กระบวนการวัดผลที่มีประสิทธิภาพสำหรับการเรียนแบบออนไลน์ยังคงมีความจำเป็นในการศึกษาเพิ่มเติม เนื่องจากผู้เรียนมีแนวโน้มที่จะทุจริตในการสอบ

Keywords : การเรียนรู้คำศัพท์, ชั้นเรียนแบบออนไลน์, การเรียนในชั้นเรียนปกติ

Abstract

Online classes have been necessary during the COVID-19 outbreak. However, their effectiveness as a tool to promote vocabulary acquisition is still being questioned. This is partly because of the lack of teacher-student interaction and concerns about integrity. This research adopted a mixed methodology approach to 1) find out any differences in students' vocabulary performance between being taught in a traditional classroom setting and a wholly online classroom setting, and to 2) study vocabulary learning strategies used by students during online classes. The participants were 66 freshmen who enrolled in a Business English course at a public university in Thailand. The final findings showed higher mean score in the delayed post-test (online classes) than in the midterm examination (traditional classes). This improvement can possibly be attributed to reported use compensation strategies and cognitive strategies with high frequency to take advantage of ability to find additional information online and to pause the video lessons as much as they needed to. Practical online assessments are still needed to further investigate as learners are prone to cheating which rendered the original post-test invalid to assess learning and required the administration of a proctored delayed post-test.

Keywords : Vocabulary Learning, Online Classes, Traditional Classes

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Introduction

The widespread outbreak of COVID-19 demanded that educational institutions abruptly switch to wholly online classes. Although online classes have gained popularity around the world for their flexibility and cost effectiveness, when they were implemented during COVID, they were new to many lecturers and students, and its effectiveness was still doubtful when compared with traditional classes.

Despite the concerns, many language educators have been studying ways to incorporate online features into their classes e.g. online discussion (Zhang et al., 2007), electronic books (Shamir & Korat, 2015), and electronic flashcards (Dreyer, 2014; Al-Malki, 2020; Platzer, 2020; Dizon, 2016). Much of these studies focused on using online tools as a supplementary to traditional classes. Limited studies compared students' performance on vocabulary acquisition when being taught in traditional classes and online classes. The present study was controlled by having the same student group participating in both classroom settings.

The overarching goal of this research is to identify potential teaching practices to enhance learners' vocabulary acquisition for online classroom setting based on experiences and data collected during the initial wave of the COVID-19 crisis. The purpose is not to discredit one but to discover possible differences as well as the benefits and drawbacks of each mode of delivery.

Objectives

1. To determine to which the extent the students' performance differ when learning vocabulary through a traditional classroom setting and a wholly online classroom setting.
2. To identify vocabulary learning strategies students utilized when taking online classes.

Literature Review

This section reviews previous literature related to this research.

1. Online Classes

Although various benefits of online classes are widely praised, the implementation of wholly online classes is still questioned by many people. One of the main concerns over online classes is about its effectiveness. Much research has been conducted to compare academic performance of students in online and traditional classes. The results have been mixed. Some suggested that students in traditional classes, despite their large class size, outperformed students in online classes (Debashis Bir, 2019). However, high-performing students were an exception to this situation. The explanation to this exception could be that they were able to grasp key concepts easily or they possessed higher self-discipline for learning. In contrast, some suggested that both online and traditional classes could be equally effective if the lessons were well-planned and able to engage students (Baker & Unni, 2018; Stack, 2015; Hoch & Doughe, 2011). Also, students were likely to perform better if they chose to enroll in online classes themselves rather than being left with one option (Racca & Robinson, 2016).

Another concern regarding online classes is about academic integrity. Much research has been conducted regarding this issue e.g. on perceptions (Harton, Aladia and Gordon, 2019; Watson and Scottile, 2010), on cheating frequency (Miller & Young-Jones, 2012; Grijalva, Nowell and Kerkvliet, 2006; Ladyshewsky, 2015), and on cheating prevention (Senkova, Otani, Skeel and Babcock, 2018). Many methods were explored to maintain high academic integrity of online classes. Online tests could be proctored with video monitoring. Another alternative was to use open-book tests rather than closed-book tests. It was argued that if the purpose of education is to retain knowledge for later usage, not a mere numeric score result, both open-book and closed-book could promote long-term retention. In one study, a one-week delayed

post-test was conducted after half of the participants took an open-book examination and another half took a closed-book examination (Senkova, Otani, Skeel and Babcock, 2018). The results show no significant difference in their performance, regardless of which test formats they took initially. In addition to allowing students to use all available resources, faculty may design tests that are more challenging and time intensive (Grijalva, Nowell and Kerkvliet, 2006).

2. Vocabulary Teaching Techniques

Many techniques were proposed to assist vocabulary learning. Much research demonstrated an effectiveness of using multimedia annotations to increase vocabulary acquisition. Çetinkaya and Sutcu (2019), for example, found that the combinations of "Text+Picture+Audio" and "Text+Picture" could contribute learner's success in acquiring new vocabulary. Han and Niu (2019), however, argued that the "Text+Picture+Audio" annotation worked better than the "Text+Picture" annotation when it came down to incidental vocabulary learning among high-level learners, but not among low-level learners as low-level learners might have difficulties grasping key words and concepts when listening to fast paced audio.

Wang (2019) implemented a similar concept that provided the combination of Text+Picture+Audio" annotation was to display captions during TV programs, regardless of whether the captions were in learners' native language (L1), target language (L2), or both. The study found that learners who watched the video with the captions were outperformed those without the captions in their vocabulary comprehension.

To promote vocabulary acquisition, Tahir, Albakri, Adnan, Shaq and Shah (2020) suggested that the pictures must have strong relation to target words. Instead of teacher-provided pictures, learners may draw picture and explanations of target words themselves (Tahir, Albakri, Adnan, Shaq and Shah, 2020). This drawing activity also encourages active learning.

Educators also tried to incorporate the online aspects of learning to language classes. For example, the study by Zhang, Gao, Gail and Zhang (2007) employed an online discussion forum to promote vocabulary learning of traditional classrooms. However, the result suggested that the forum could promote critical thinking during in-class discussions-- but not vocabulary learning.

Dreyer (2014) introduced a Quizlet website to high school students as a tool to study vocabulary. In the website, students can create flashcards online and study the flashcards as often as they would like to. The study showed that the more frequently students review their flashcards, the better their vocabulary performance would be. Students review their Quizlet cards at least 40 times per week (Dreyer, 2014). In addition, students who regularly studied throughout the semester outperformed those who studied overnight.

3. Vocabulary Learning Strategies

Vocabulary is essential for language learners to communicate effectively. In other words, a large vocabulary enhances learners' ways to express their feelings through words and convey their messages. Learners may utilize different vocabulary learning strategies when learning new words.

Several attempts have been made to classify language learning strategies and vocabulary learning strategies. Oxford (1990) classified language learning strategies into six categories: memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies. Schmitt (2000) classified vocabulary learning strategies into two categories: ones for meaning discovery when learners encounter the words for the first time and ones for consolidating the meaning when learners encounter the words again. Discovery strategies are divided into two subcategories: determination strategies and social strategies. Consolidation strategies are divided into four subcategories: meta-cognitive strategies, cognitive strategies, social strategies, and memories strategies.

It is suggested that learners often use varieties of strategies to learn new words rather than a few core strategies (Laffey, 2020; Yang, 2014). They may also prefer to use certain sequential strategies to learn the meaning of new words. Korean English learners use technological assisted strategies (e.g. online dictionary, mobile dictionary application) for meaning discovery more often than for meaning consolidation (Laffey, 2020).

The study by Al-Khresheh and Al-Ruwaili (2020) and Göçen (2020) found that the two popular strategies among language learners were memory strategies and affective/social strategies. Memory strategies refer to the situation when learners use a new word in a sentence, say a new word aloud, or study the spelling of a new word. Affective strategies refer to the stage in learning when learners develop positive emotion and attitude towards learning. Another two frequently used strategies after memory strategies are cognitive (when learners use repetition to enhance their vocabulary acquisition e.g. taking notes and highlighting) and compensation (e.g. using other clues and getting help) strategies (Marefat & Shirazi, 2003).

Learners may exercise different learning strategies to understand a meaning of new and learned words when they are in different context. During online learning, learners reported to use more of self-learning strategies than asking teachers, classmates, or friends strategies (Ahmad Shamsan, Mohammed Ali and Hezam, 2021). When learners complete a reading task, they often use look-up strategies and cognitive-mediated strategies (Yang, 2014). When learners complete a writing task, on the other hand, they often use interpretive resource-driven strategies.

In summary, vocabulary learning is an important element of language learning. With limited vocabulary knowledge, ability to convey messages in target language is also limited. Much research has been conducted on strategies to acquire new words and compared an effectiveness of online and traditional classes using controlled and experimental groups. With a sudden switch from traditional to online classes due to the Covid-19 outbreak, this research compared students' performance on vocabulary learning where all students participated in both traditional and online classes during one semester.

Methodology

This section outlines the research methodology adopted in this study.

1. Participants

The participants of this research were entire population of 66 freshmen who are majoring in business logistics and registered in a business English course in an international college at a public university in Thailand. The participants were all Thai nationals. Their English level is approximately equivalent to B1 – B2 level in CEFR. Of these, thirty-nine were female (59%) and twenty-seven were male (41%). The majority of the participants had not had any previous experiences in online classes (62%). The rest had had minimal experiences in online classes (38%).

2. Research Tool

The researcher created three fill-in-the-blank tests to evaluate students' performance in learning vocabulary when studying in different platforms. The three tests were midterm examination, final examination, and delayed post-test examination. The questions were all adapted from Market Leader: Business English course book, which is the book used in this course. This was done to ensure that the test questions were of the same type and the same level of difficulties. All three tests were designed using the same method of assessment and following the same teaching steps. The goal was to ensure that the only difference between the first test and the second test was the online or offline channel. This is explained in the procedure

in more detail. The only other difference between questions in midterm exam and final exam was the words tested. In the delayed post-test, the words tested were the same as those in the final examination, with two additional questions to find out (1) whether students had committed any forms of cheating during the final examination, and if so, how they cheated, and (2) which vocabulary learning strategies they had used during online classes. The words tested in final examination and delayed post-test examination were the same, but different questions of the identical type.

3. Procedure

The study was carried out during the spring semester of the 2019 academic year. The classes were conducted in a traditional classroom setting prior to the midterm examination. Then, they were abruptly switched to a wholly online classroom setting after the midterm examination due to the Covid-19 outbreak.

Regardless of teaching platforms, the researcher implemented the combinations of "Text+Picture+Audio" teaching techniques when teaching both traditional and online classes since the participants were B1 - B2 level students and the research suggested that these combinations would work well with high English level learners. The researcher had followed the three teaching steps: introduce students to new words, textbook exercise, and explore context and usage of the words. However, the tasks students required to perform in each step were slightly different depending on teaching platforms as shown in the table below.

Table 1 Comparison of Teaching Steps when Teaching in a Traditional Classroom and an Online Classroom

Teaching Steps	Traditional Classroom	Online Classroom
Introduce students to new words	In class discussion (verbal)	Class discussion forum (written)
Textbook exercise	Textbook	Google Forms
Explore context and usage of the words	Class lecture using slides	Supplementary video using slides (prepared by the researcher)

After being taught in each classroom setting for seven weeks, the student's performance was evaluated through a fill-in-the-blank examinations. The exercises and evaluation were designed in the same way during the traditional in-person section and the online section, with the only significant differences being the words tested.

To reduce the chance for cheating during the unproctored online final examination and to encourage students to study for the online examination, the researcher (1) reduced the percentage that the final examination was counted towards the students' final grades, (2) required students to turn on their camera during the examination, and (3) added exam questions that were challenging and time intensive. These practices were in line with suggestions of Alessio et al. (2017) and Grijalva, Nowell and Kerkvliet (2006).

However, the video monitoring was not practical during the actual examination as many students experienced Internet connection issues. Also, the online proctors could not see the screens of the students, nor other devices outside the range of the webcam video. This raises a real possibility

of cheating despite the measures that had been taken to prevent it. To investigate this possibility, a delayed post- test was conducted to retest the same vocabulary learned during the online section of the course. If there was cheating during the final online test, it would be expected that the students did not actually learn the vocabulary and would have much lower retention, and as a results would not be able to answer as many questions correctly. This test used the same methods as the final examination above but was conducted in a computer lab with in-person proctoring to prevent any possibility of cheating. This test also included the two extra questions about if the student had cheated on the previous test and how, and which learning strategies the students used when learning online.

4. Data Collection

Originally, the researcher planned to collect the data twice: during the midterm examination (which was conducted in person), and during the final examination (which was conducted online via Google Forms without proctoring). However, the results from the final examination showed a significant improvement in participants' scores, which suggested a high possibility of cheating during the online final examination due to the lack of proctoring. To ameliorate the potential effects of this possibility on this study, the researcher decided to organize another test in a proctored setting when the participants returned from the semester break (eight weeks after the online final examination). This third data collection was also conducted using Google Form but was proctored in the classroom. The results of this delayed post-test confirmed that cheating had occurred during the online final, both through examination of the data compared to the original online final exam, and by admission of the students, who were responding anonymously. The online final is therefore ignored in the subsequent analysis and the delayed post-test is substituted for comparison with the in-class midterm.

5. Data Analysis

This research used a mixed-method research design. For the quantitative data, descriptive statistics were calculated and used to compare the average scores of participants taught in a traditional classroom setting (midterm) compared to a wholly online classroom setting (delayed post-test).

For the qualitative data, the answers were collected with open-ended questions to avoid limiting the answers through researcher bias. The results were then coded thematically. Emergent themes within the dataset were identified, and individual responses were grouped into those themes. This allowed for a classification of the open-end results into categories useful for analysis.

Results

The students' performance on vocabulary learning taught by traditional classroom setting and online classroom setting was analyzed through two research questions as follows:

1. To what extent does the student's performance differ when learning vocabulary in a traditional classroom setting and in a wholly online classroom setting?

To establish a baseline for evaluation, students were asked to complete a fill-in-the-blank vocabulary examination (midterm) after their seven weeks of studying in traditional classes. The exams were marked and the results were calculated into percentage and plotted into a bar graph.

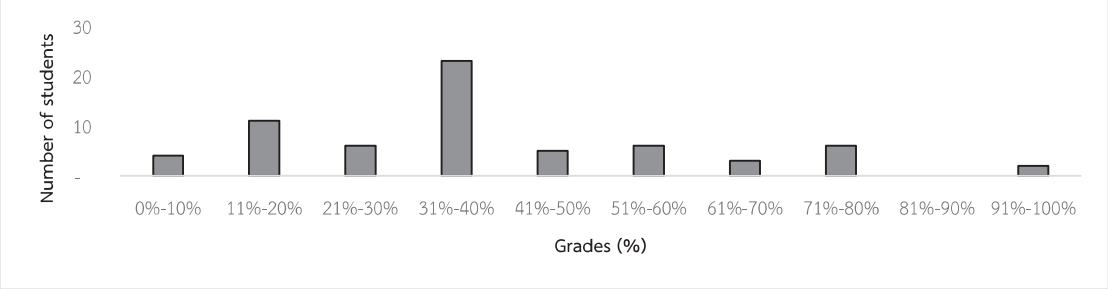


Figure 1 Frequency Distribution of Vocabulary Scores of Participants from Traditional Classes and in-person proctored testing

Figure 1 shows that the majority of students received scores between 31% to 40% (23 students), 11 students received scores between 11% to 20% and very few students received scores above 80% (2 students) on the Midterm (traditional classes).

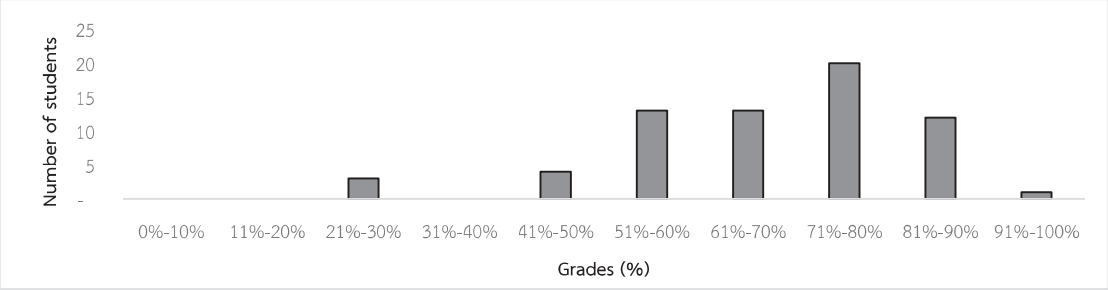


Figure 2 Frequency Distribution of Vocabulary Scores of Participants from Online Classes evaluated through the online final examination

Figure 2 shows the unproctored final scores. The majority of students received scores between 51% and 90% (58 students). None of the students received a score below 20%.

The frequency distribution as shown in Figure 2 is much higher than expected. The distribution also shows a single peak instead of multiple peaks as seen in Figure 2. The single peak is not characteristic of the performance of this group of students. Hence, this result suggests that cheating has occurred.

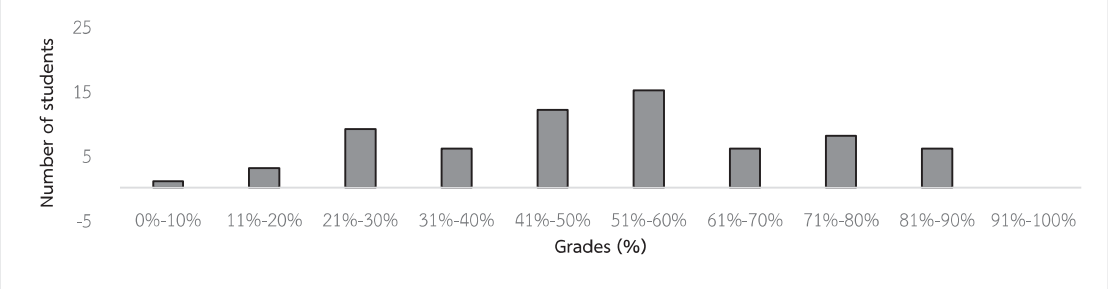


Figure 3 Frequency Distribution of Vocabulary Scores of Participants from online classes with Delayed in-person proctored Post-Test

Figure 3 shows the delayed post-test scores. The majority of students received scores between 41% and 60% (27 students). Only one student received a score below 10% and none had above 90%. This distribution is much different than the one shown in Figure 2, confirming that cheating did in fact happen during the online final examination. This frequency distribution also shows three peaks instead of a single peak, which is characteristic of the performance of this group of students. The original online test (the final examination) is therefore excluded from the rest of the analysis.

The use of a delayed post-test introduces the possibility of loss of retention of vocabulary since there was a delay of eight weeks between the online test and the delayed test. Nevertheless, the results in Figure 3 clearly show that there was improvement between the two modalities of teaching, and it can be argued that compensating for loss of retention would only increase the improvement seen. It can therefore be assumed that this test shows the improvement of the students from the traditional classes to the online classes for the purposes of this research.

Table 2 Comparison of Vocabulary Scores of Participants taught using traditional methods and taught using online classes with supplementary videos

	Mean	S.D.
Traditional Classes (Midterm)	39.29	22.13
Online Classes (Delayed)	50.45	19.77

Table 2 shows a significant increase in the average performance from the midterm examination (39.29%) to the delayed post-test (50.45%). The higher mean score in the delayed post-test suggests the possibility that online classes could be more effectiveness but needs more rooms for further study.

While the online learning strategies were more effective, it is not possible to identify from the quantitative data which of those strategies contributed most to the effectiveness. However, some of the answers might be obtained from the qualitative data. This leads to the second research question and the analysis of the students' responses.

2. Which vocabulary learning strategies do students utilize when taking online classes?

Students were asked to describe how they study new vocabulary when taking online classes. Their answers were decoded using emergent themes and were grouped as follows:

Table 3 Vocabulary Learning Strategies Utilized by Participants during Online Classes

Strategies	Number of Students	Percentage
Watch supplementary video- compensation	62	94%
Write notes- cognition	41	62%
Search for definitions- determination	27	41%
Memorize words- memory	18	29%
Use textbook- cognition	14	21%
Watch movies- meta-cognition	2	3%
Ask friends- social/affective	2	3%

Table 3 shows that the majority of students watched the supplementary video lessons during online classes (62 students, 94%) and many students took notes from the video lessons (41 students, 62%). 18 students tried to memorize words and definitions after watching the video (29%). 14 students (21%) used the textbook to study with 10 of them (15%) using it along with watching the video and four students (6%) who did not watch the video using it exclusively. The least popular strategies were watching movies and asking friends for help (2 students, 3% each). In the comment section, many students reported that they wished they had more interactions with the teacher and their classmates during online classes. Almost all students reported using more than two strategies in vocabulary learning with one being watching the supplementary video lessons.

Discussion

This section interprets the results in relation to learning vocabulary online.

1. Online classes can be effective as long as the lessons are well-planned and able to engage students.

The results of this research are consistent with many previous studies which suggested that the effectiveness of online classes could be achieved under the condition that the lesson plans are adapted to increase engagement (Baker & Unni, 2018; Stack, 2015; Hoch & Doughe, 2011). In this study, students were required to participate in a written discussion forum prior to watching a video lesson. Also, in a video lesson, each word was explained in context and accompanied by photos. This combination of "Text+Picture+Audio" annotations might also contribute to the 28% improvement in students' scores as the technique was also found to be effective in promoting learner's vocabulary acquisition in the study of Çetinkaya and Sutcu (2019).

In addition, with the video lesson being uploaded online, students could access the lesson and review it as many times as needed. This feature is similar to what Deyer's Quizlet offers to students. The more students review the materials, the better their performance is likely to be.

2. Vocabulary learning strategies utilized by students during online classes could be different depending on study context and teaching methods.

The findings regarding highly-used strategies were not consistent with that of Al-Khresheh and Al-Ruwaili (2020) and Göçen (2020). While their studies suggested learners utilized memory strategies and affective strategies with high frequency, this study found that learners often watched video and wrote notes, which are compensation strategies and cognitive strategies. The inconsistent findings could be explained in terms of the participant background context. In Göçen's (2020) study, the participants were those who study Turkish as a second language in Turkey. Hence, the rewards the participants received for knowing definitions of their target language were higher than those of the participants in this research, as it would allow them to participate in daily transactions with the locals in Turkey. In contrast, students in this research were studying English in Thailand where English is not required to complete daily transactions.

Differences across studies may also occur because of the teaching methods. In this study, students reported their strategies employed during online classes. The compensation strategies include the use of technology or additional resources available to compensate for their limitations. As they were already online during the class hours to complete their study, it became easier for them to quickly search definitions of unknown words online and look for short video lessons on YouTube. When these techniques are applied during a closed-book examination however, they violate academic integrity and become cheating.

Another strategy type that students in the current study reported utilizing with high frequency was cognitive strategies. Such strategies were reported to be the least preferable strategies by Saudi EFL learners (Al-Khresheh & Al-Ruwaili, 2020). Learners may write down words and definitions on paper for constant reminders of new words.

Also, based on the researcher's observations during the traditional classes, students usually did not take notes in classes as the contents were already printed in the textbook. However, when they watched the video lessons, students actively listened to the video and took notes during the lessons. In fact, 62% of participants reported to write notes during their online lesson. This practice could be an explanation for a higher score from vocabulary learning during online classes than during traditional classes.

3. Students have limited interactions with their classmates and teachers during online classes.

Although students can interact with their teachers and fellow classmates online, students do not ask as many questions during online class as during traditional class period. Students rely heavily on their critical think skills and independence. They would replay the videos many times and search for answers from the Internet rather than posting questions on the discussion forum (as shown in results of vocabulary learning strategies). This repetition requires more study time than normal class hours. Hence, students experience online learning fatigue and time management issues.

It is important to note that my Thai students do not normally ask questions in classes. They tend to wait until the classes are over and meet with the teacher in person to clarify what they do not understand. An online discussion forum does not offer opportunity for such interactions.

In addition, the lack of peer help may stem from that online classes allowed students to study and do the assignments at their convenient times and pace. In this learning mode, students may not have completed the assignments at the same time, so they discussed the activities/assignments less often than when they studied in traditional classes

Student evaluations of teaching suggest that, despite the effectiveness of online vocabulary learning, students prefer traditional classes to online classes. They report that they are not familiar with

asking questions through an online platform and that online classes are more draining than the traditional classes. This is perhaps because they are doing more of the work themselves or working harder and/or longer.

4. Effective online assessments are needed to minimize cheating.

Students are more inclined to cheat on online examinations. Not all online assessments are equal. This finding suggests that an open-book examination might be a better alternative to a closed-book examination during unproctored online examinations as students already are tempted to use their textbook and notes during the examination. A previous study that compared the performance of students who had tested during open or closed book examinations showed no significant difference in performance during a delayed post-test regardless of the format of the examinations (Senkova, Otani, Skeel & Babcock, 2018). This suggests that closed-book examinations do not increase vocabulary retention.

Online assessments still need additional support. Specifically, educators should design the assessments in a way that discourages academic dishonesty. Current monitoring techniques are insufficient, and the effectiveness of each monitoring technique may be specific to the context. Rethinking assessment methods is essential. Further research on the validity of assessments is needed. In regard to strategies used during online learning, learners reported to

Conclusion

Education has changed dramatically due to COVID-19 outbreak. Classes can no longer be conducted in a traditional classroom setting. To ensure learning continuity, teaching is done remotely on online platforms. With the limitation of interactions between teacher and students and interactions among students themselves, there is a concern regarding the effectiveness of online classes, particularly to promote learners' vocabulary learning. The results of this research indicated that it is possible for online classes to be as effective as traditional classes, if not more so, to increase language learners' vocabulary acquisition. However, students often experience learning fatigue and online assessments still need additional support. Proctoring methods that are effective online need to be developed since most students tend to cheat to varying degrees since it is so easy to cheat when online and extremely easy to evade remote proctoring. In conclusion, online channels seem to show promise but the potential issues need to be overcome before it can begin to compete with traditional teaching methods.

Suggestions

1. Suggestions for Application

1.1 Educators should create opportunities for students to engage with the materials and interact with the teachers and students, and at the same time promote self-studying. For example, a short video with a discussion forum would allow students to learn at their own pace and interact with the class when they are available.

1.2 Educator should employ various tools to teach vocabulary to increase the students' exposure to the words. For example, they may use a combination of text, picture, and audio.

2. Suggestions for Future Research

The use of learning strategies to promote vocabulary learning. The participants reported using various strategies during online learning. The most frequently used strategy was watching supplementary videos. Learners may use different learning strategies when they are learning online compared to when learning in a traditional classroom setting. To be able to identify effective learning strategies that are appropriate for different settings would assist educators in planning their lessons.

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