Journal of English Teaching
e-ISSN: 2622-4224 | p-ISSN: 2087-9628
http://ejournal.uki.ac.id/index.php/jet
Volume 10. Number 2, June 2024, pp. 212-227

A Flipped Classroom-Based Virtual Learning Prototype for Developing Undergraduates' English Receptive Skills

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Article History
Received: 14 April 2024
Accepted: 28 May 2024
Published: 12 june 2024

Keywords
English receptive skills, flipped classroom, virtual learning platforms, virtual learning prototype

Abstract
This research and development study aimed to develop the prototype of virtual learning implemented in flipped classrooms and evaluate its effectiveness as a tool for developing Thai undergraduates' English receptive skills. To assess if the designed prototype is effective, a quasi-experimental method was employed. The experimental sample group consisted of 40 undergraduates studying English as a required general education subject at a university in Thailand. They were purposively selected as their English proficiency level did not meet the university requirement of not lower than 600 of the TOEIC scores for graduation. The actual TOEIC tests as a pre- and post-tests, have been employed to examine if the prototype was effective. The collected data from pre- and post-tests were then analyzed through the t-Test and ANOVA. The results showed that the designed prototype applied in teaching and learning through the three online virtual platforms, namely Second Life, VRChat, and the ClassStart in the flipped classrooms was effective for developing students' English receptive skills, as the overall development of students' English receptive skills, both listening and reading, as shown from their post-test English TOEIC scores had significant development, showing that the post-test scores were higher than those of their pre-test's. Therefore, applying this prototype to language teaching and learning as a pedagogy is highly advised.

How to cite this article (APA, 7th Ed.):
Jehma, H., Prachyapruit, A. & Methakunavudhi, P. (2024). A flipped classroom-based virtual learning prototype for developing undergraduates' English receptive skills. *Journal of English Teaching, 10*(2), 212-227. https://doi.org/10.33541/jet.v10i2.5792

INTRODUCTION

The idea of the 'flipped classroom' is common. Teachers created the video lessons, or any interactive lessons used to be lectured in a class, to be available and accessible at home (Tucker, 2012). However, some drawbacks of applying this approach to teaching and learning have arisen. To illustrate, students new to the method may be initially resistant because it requires that they do work at home rather than be first exposed to the subject in school. Consequently, they may come unprepared to class to participate in the active learning phase of the course. As the pitfalls arise, another innovation has been implemented in teaching and learning in order to hopefully decrease the gap and improve teaching and learning with better outcomes. Virtual learning (VL) has been, therefore, applied. The most recent VL in the classroom developed and implemented in teaching and learning was the Second Life (SL) considered more current compared to online learning, which was reported to have the drawback of students' boredom (Pardede, 2023). It was considered an internet based three-dimensional virtual world, created by San Francisco based company Linden Labs. Originally released in 2003, Second Life has seen a large influx of users over the last few years, now totaling over 16 million registered accounts (Life, 2020) similarly to another VL called VRChat which has offered a promising context for academic learning where multiple users were able to interact in a shared space in real time by creating motional characters. These phenomena have affected not only teaching and learning in general but also language classrooms as they show the overall learning process, allowing the class conductors to keep track of the learning progress of each student, and the mechanism for transmitting the learning process is just as crucial as the knowledge acquired during learning (Saffo et al., 2020). Learners can connect their learning and learning processes by regularly recording their knowledge, allowing them to recognize the content and learn more effectively, and the instructor can also organize the lesson to fulfill the instructional activities (Thongsri, Shen & Bao, 2019).

Despite the growing interest in this environment and its potential usefulness for various projects, few limited studies have been reported on how to use it effectively in the language learning classrooms, especially in teaching and developing English communicative competence which showed some positive development as the flipped classroom environment applied the Moodle can lift the average IELTS score in the listening and reading sections, student engagement in the online course was high, and a higher rate of passing topical vocabulary checkpoints was found (Yaroslavova et al., 2020) while another research mentioned only the significance of confidence building among the experimental group of the English learners in the flipped class of speaking applied the video conferencing method (Sudarmaji et al., 2021). The Edmodo platform was another online learning management system applied in the class of writing. It has been reported that the students in the study were struggling with the complicated use of the program while getting feedback online was useful (Prasatyo & Gustary, 2023). These can clearly show the research gap, which can be filled as this research was designed and employed the flipped methodology applied the different virtual learning fruitful platforms, focusing on the different language skills and receptive skills. This research and

development study, therefore, aims to develop the prototype applying virtual platforms and explore if such a prototype is effective for developing students' English receptive skills for the benefit of language education.

Research questions

1. How to develop the prototype of virtual learning as a tool implemented in flipped classrooms to improve Thai undergraduates' English receptive skills?
2. How effective does the prototype of virtual learning implemented in flipped classroom impact on improving Thai undergraduates' English receptive skills?

LITERATURE REVIEW

Flipped classrooms and virtual learning platforms

The term 'flipped classroom' has become popular as the availability of the internet supports the media implemented in the approach, such as videos and audios be more easily accessible and suit the nowadays generation (Herreid & Schiller, 2013). In other words, it was a busy, collaborative, and social place where extroversion, collaboration, and teamwork were highly valued (Hung, 2014). As the two significant pioneers of this approach, Bergmann, and Sams, realized the effectiveness of chemistry class contents posted online for the students (Tucker, 2012), the strategy has attracted much interest around the world since most teachers have been applying this pedagogy into their classrooms (Sanchez et al. 2000). However, the faculty has solved this problem by giving a short quiz either online or in class or by requiring homework that references information that can only be obtained from outside reading or videos, which have finally been applied in the virtual environment learning (Herreid & Schiller, 2013).

The rationale behind this learning environment is that it helps learners to understand the contents learned better, which finally enhances the learning process (Sanchez et al., 2000). Though virtual platforms nowadays are available both for free and for sale, there have only been a few different tools applied in virtual learning by the teacher since most of the virtual platforms shown are not for free as they mainly serve business organizations rather than educational institutions in general. Interestingly, some virtual platforms were quite popular among teachers or researchers. To illustrate, the Second Life, a technology-based learning platform, plays a crucial role in promoting learners' learning processes in a real-world environment. Second Life provides students with ample opportunities to practice skills efficiently. It also allows learners to gain additional essential skills and reduce their anxiety, which effectively boosts the learning process. The students are eventually allowed to practice problem-solving skills, leading to creativity (Mathews et al., 2012). A few studies have revealed that Second Life was used effectively in the classroom. For example, Campbell (2009) studied student teachers' responses to virtual classrooms for teaching practice. Campbell (2009) aimed to offer senior education students the skills required for learning in the digital age. The results suggested that Second Life helped provide the students with useful experiences about the use of virtual classrooms for teaching practices and encouraged students to have an engaging and comfortable discussion and activity in the classroom, with 87 percent of

students reported that the activities they formed in the classroom were compatible with Teen Second Life (Campbell, 2009).

Given the current approaches, there are different use cases showing how users can adopt such technology, which requires more research to synchronize the requirements for Social VR (Saffo et al., 2020). In 2017, VRChat was released as an online VR game that supports multiplayer. Even though its name includes the word "VR," VR devices are not required for some of its game functions. VRChat enables players to create rooms, have real-time conversations with other players, upload their own profiles, create rooms, or play any kind of media. VRChat is trendy due to its high level of freedom and creativity. In early 2019, more than 4 million people joined VRChat, yet now only 30% are considered VR users, and most users are gamers who only use the game function to create the virtual images rather than utilize the social features. The service puts emphasis on interaction enhancement aiming for entertaining purposes, making VRChat ideal for any kind of team-based game. Despite its lack of social nature, it leans more toward game functions (Wang et al., 2018). In the beginning, users can simply gather and talk, and then they may explore different features, play games, form groups, and even create their own unique experiences within that linked world (Wang, 2020) which is considered similarly to ClassStart, the designed platform based on a student-focused approach and aims to improve Thailand's educational sectors allowing students to access their learning at any time and from anywhere. Users can access the platform on computers as well as all portable devices with internet access. In Thailand, there were approximately 45,000 users and over 3,500 classes from more than 200 educational institutes. Membership, classroom administration, announcements, teaching materials, web boards, groups, lesson exercises, learning progress tracking, and evaluation systems are some of the features of Class Start (ClassStart.org, 2016).

English receptive skills

The terms'receptive skills', sometimes defined as 'passive skills' (referring to reading and listening skills) and 'productive skills' (referring to speaking and writing skills), are frequently used interchangeably. Learners are prone to miss features of connected speech or idiomatic language, resulting in a failed engagement. Similar to reading, if the language or grammar is too difficult, the text becomes unreadable. The main distinction between hearing and reading is that learners receive far less support when listening to material than when working with the written word on the page. Listening necessitates 'real-time' language processing, and unlike reading, there is no straightforward way to check for meaning after the message has ended (Buck, 1992). In applied linguistics, comprehension skills research has received a lot of attention. Speaking, writing, listening, and reading, unlike productive talents, do not produce tangible results. It is disappointing that reading ability, compared to listening ability as its runner-up, frequently appeared at the top when it came to the indication of how important the four language abilities are (Powers, 1986). According to Levine and Revers (1988), reading and listening skills may be derived from a unitary element as well as multiple sub-skills. They claim that the two

receptive skills are built up from a single factor because both skills share an extent area to the same sub-skills and comprehension process, based on various studies and analyses about correlation and regression. Buck (1991) conducted a study that revealed that listening comprehension is a different trait from reading, contrary to Levine and Revers' statement that listening is deemed a single factor and an individual talent. Buck, on the other hand, claims in a 1992 study that there is evidence against the idea of promoting listening skills as a separate trait. He based his argument on two studies, one of which suggested no significant trait effect but an intimate correlation of both traits, and the other study, which revealed a large trait effect. He continues to suggest that the implication regarding listening and reading can be distinguished based on just the substantial phenotypic effect observed in one study cannot necessarily be made. Applied linguists now consider that language competency is built on different components, including but not limited to only grammar, pronunciation, and organization but also the four abilities to listen, read, speak, and write. It is obvious that theories play a critical role in having an influence over the findings from research. Regardless of how conflicting the existing evidence about listening and reading may be, the two talents are thought to be independent in theory based on numerous levels (e.g., Richards, 1983). The difference between both linguistic skills has also been shown to be effective in practice. From both a theoretical and a practical standpoint, this separability is the driving force behind the current research.

Research objectives

There were two main objectives of this study, as follows:

1. To develop the prototype of virtual learning implemented in flipped classrooms for improving Thai undergraduates' English receptive skills, and
2. To evaluate the effectiveness of the prototype of virtual learning implemented in flipped classrooms as a tool for developing Thai undergraduates' English receptive skills.

METHOD

Research Design

This research was designed as a research and development study aiming to develop the prototype of virtual learning applied in the flipped classroom for developing English receptive skills. To assess if the developed prototype is effective, the quasi-experimental method has been employed by implementing the pre- and post-tests performed by the participants.

Participants

The experimental group of samples in this study were 40 undergraduates enrolled in an autonomous Thai higher education institution in Thailand, selected by purposive sampling. They all shared a similar educational background as they have taken the class of required English subject for the students who did not meet the university English proficiency level of not lower than 600 TOEIC scores as a requirement for graduation. The classes have been conducted for 10 weeks. They were asked to take the TOEIC

exam before the class started as a pre-test and another one at the end of the semester as a post-test.

Research procedures and instruments

There were four main steps of the research procedure in this study, according to the objectives mentioned earlier. The steps were shown in Figure 1.

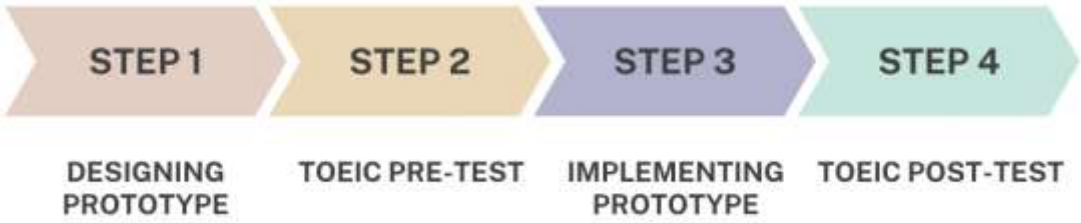

Figure 1**.** The Steps of the Research Procedure

To design the prototype of virtual learning applied in the flipped classroom for developing English receptive skills, a literature review related to its contents was initially done before designing the prototype and creating the flipped virtual classroom, where the virtual learning (VL) platforms, namely Second Life, VRChat, and the ClassStart were adopted. After the prototype was ready, the experimental samples were asked to take the TOEIC test as a pre-test before the class started. The samples joint the classes implemented the prototype, aiming to develop their receptive skills for 10 weeks, and they took the TOEIC test again at the end of the semester as a post-test to see if there was significant development of the students' English receptive skills.

Data Collection and Analysis

The prototype was designed before being validated through the Index of consistency (IOC) by the three experts who were specialized in teaching methodology, teaching English and the expert specialized in educational technology, who corrected and gave feedback concerning the prototype features. The researcher initially collected the actual standardized TOEIC scores of the students participating in this study, and the scores were then analyzed. To evaluate the effectiveness of the prototype, the researcher applied it initially in the flipped classroom and collected the data from the students' post-test, which was the actual standardized TOEIC scores at the end of the study. The ANOVA and t-Test have been applied in the analysis procedure. The analyzed data were finally discussed in the aspects of the students' years of study, fields of study, and genders descriptively.

FINDINGS

Developing the prototype of virtual Learning as a tool implemented in flipped classrooms for improving Thai undergraduates' English receptive skills

In response to the first research objective, the prototype and its procedure have been designed and validated by the experts. The prototype has been evaluated for their validation by the three experts from three different fields, namely, education, educational technology, and English teaching. The Index of Item Objective Congruence (IOC) was used to qualify the content validity of the prototype in three items; virtual platforms applied in the prototype, the steps and the virtual tasks in the prototype, and virtual tasks and the skills to be evaluated in each step. The IOC index evaluation rated by the experts indicated that 100% of the items were rated higher than 0.5 of the IOC Index, meaning that they were acceptably congruent with each aspect. The prototype has been, therefore, applied in the next research procedure and described as follows:

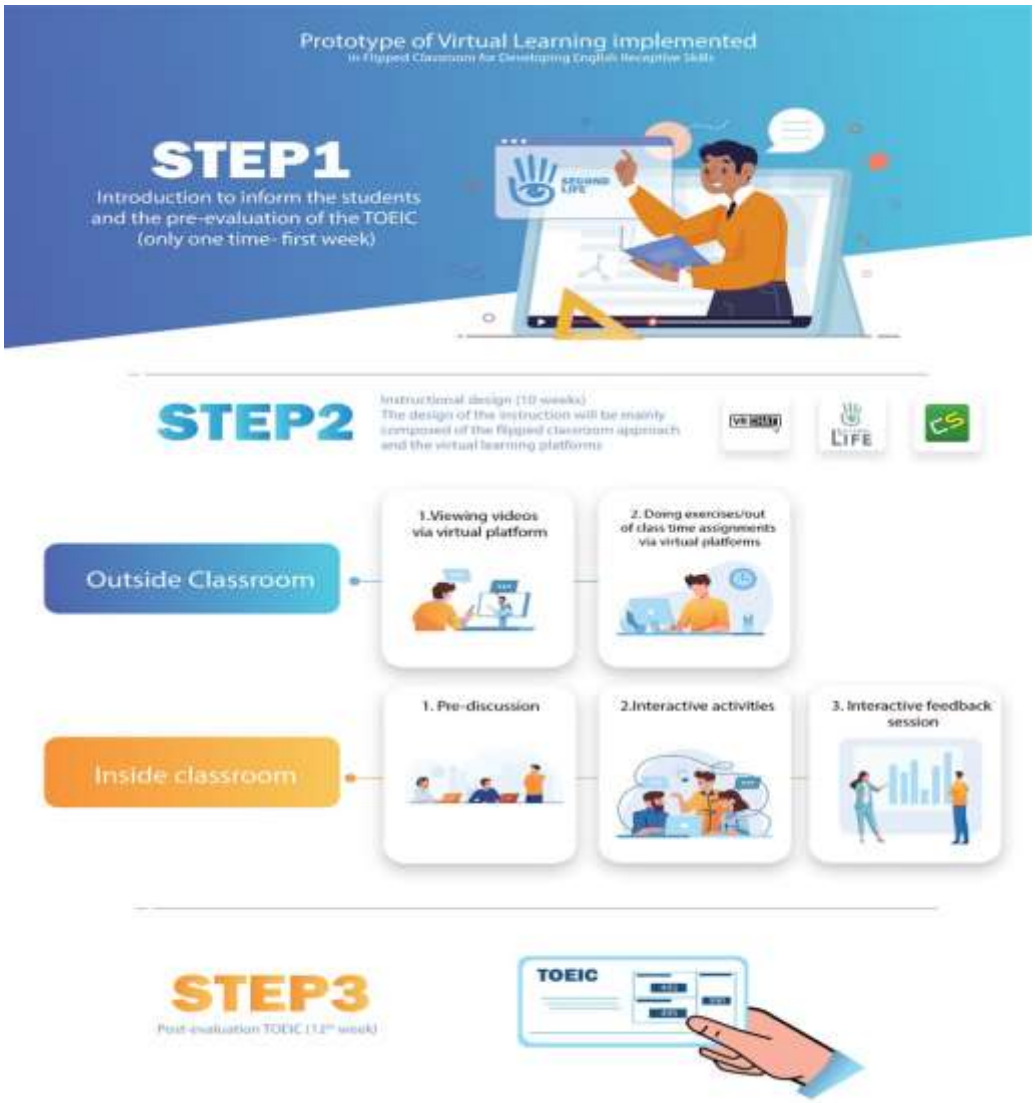

Figure 2. Prototype of Virtual Learning Implemented in Flipped Classroom for Developing English Receptive Skills.

Step 1

Before the students were asked to start learning and developing their receptive skills following the lesson plans designed in the step 2, they all have been introduced the lessons, the classroom regulations and how the class is going to be instructed while distributing the course syllabus as a reference. They were also introduced the virtual learning (VL) platforms, Second Life, VR Chat, and Classstart, and asked to register each VL platform in order that the students are ready for the next following classes. On top of that, they were asked to take the TOEIC exam as a pre-test before the class starts.

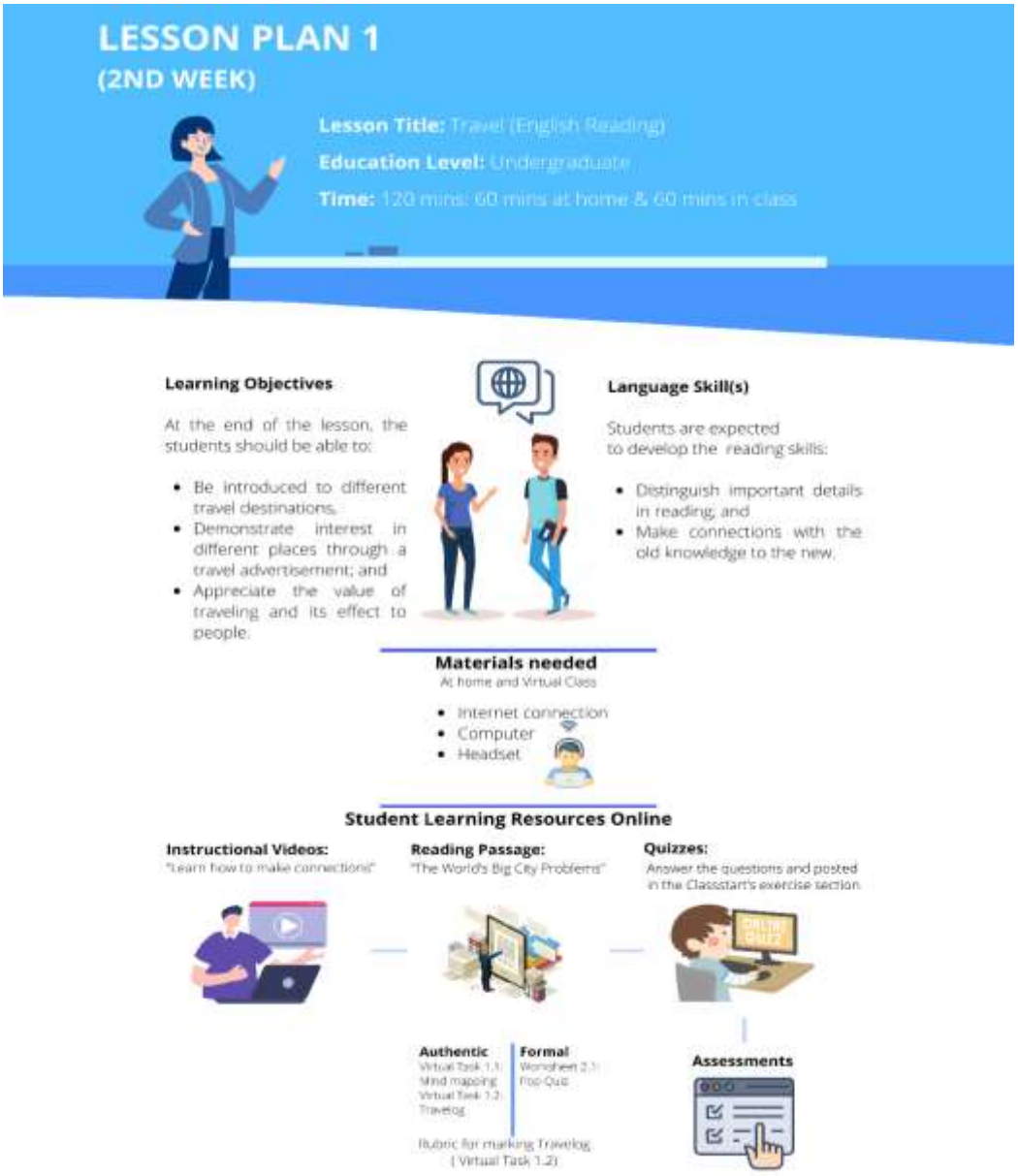

Figure 3**.** Sample Lesson Plan

Step 2

The 10 flipped class lesson plans have been designed by applying the virtual platforms, the Second Life, VRChat, and the Classstart. There are two main stages in each lesson. The stage one itself was about studying virtually at home as a pre-class and after class through specific virtual learning platform, the Classstart by themselves while the stage two was concerning the in-virtual-class through the virtual learning platforms, Second Life or VR Chat.

Step 3

After the ten weeks of the experiment following the lesson plans mentioned earlier, the students were asked to take the post-evaluation exam which was the TOEIC test, and the scores were compared to the pre-test in the step one. This step was purposively for evaluating the effectiveness of the prototype.

Effectiveness of the developed prototype of virtual learning implemented in flipped classroom for improving Thai undergraduates' English receptive skills

After the ten weeks, the students were asked to take the post-evaluation exam and the scores were compared to the pre-test done in the step one. The results of pre and post-tests comparison was analyzed and shown in the next following section.

Table 1. Pre-Test TOEIC Total Scores

Total scores (Pretest)									
Variables		N (40)	Mean	S.D.	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Year of Study	Y1	18	422.22	69.138	16.296	387.84	456.60	315	520
	Y2	12	411.67	117.344	33.874	337.11	486.22	250	585
	Y3	10	404.00	86.243	27.272	342.31	465.69	260	590
Fields of Study	Sci	20	407.50	106.035	23.710	357.87	457.13	250	590
	Soc	20	421.50	67.417	15.075	389.95	453.05	315	520
Genders	M	17	386.76	82.461	20.000	344.37	429.16	295	575
	F	23	435.00	88.008	18.351	396.94	473.06	250	590

Table 1 clearly shows the Pre-test-TOEIC total scores of 40 students participated in this study divided by their years of study, fields of study, and genders. The mean scores of the students divided by their years of study were considered interesting as the freshmen score was ranked the highest at 422.22 followed by the sophomore's and the junior's, 411.67 and 404.00, respectively. Considering their fields of study, the students

from social science score was ranked higher than that of the science's (421.50 and 407.50) while females had the scores higher than that of males (435.00 and 386.76).

Table 2. *Analysis of Variance of the Pre-Listening and Pre- Reading Scores Divided by Different Backgrounds of Students*

Pre- listening	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Years of study	Between Groups	2863.472	2	1431.736	.477	.625
	Within Groups	111096.528	37	3002.609		
	Total	113960.000	39			
Fields of Study	Between Groups	2402.500	1	2402.500	.818	.371
	Within Groups	111557.500	38	2935.724		
	Total	113960.000	39			
Genders	Between Groups	4706.931	1	4706.931	1.637	.208
	Within Groups	109253.069	38	2875.081		
	Total	113960.000	39			
Pre- reading	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Years of study	Between Groups	690.139	2	345.069	.164	.850
	Within Groups	77969.861	37	2107.294		
	Total	78660.000	39			
Fields of Study	Between Groups	22.500	1	22.500	.011	.918
	Within Groups	78637.500	38	2069.408		
	Total	78660.000	39			
Genders	Between Groups	6756.931	1	6756.931	3.571	.066
	Within Groups	71903.069	38	1892.186		
	Total	78660.000	39			
Total Pretest	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Years of study	Between Groups	2272.222	2	1136.111	.140	.870
	Within Groups	299667.778	37	8099.129		
	Total	301940.000	39			
Fields of Study	Between Groups	1960.000	1	1960.000	.248	.621
	Within Groups	299980.000	38	7894.211		
	Total	301940.000	39			
Genders	Between Groups	22742.941	1	22742.941	3.095	.087
	Within Groups	279197.059	38	7347.291		
	Total	301940.000	39			

According to the analysis of variance table above, it was found there were no difference of the TOEIC pretest mean scores at .05 significant level (p = 0.625, 0.371, 0.208, 0.850, 0.918, 0.066, 0.870, 0. 621, and 0.087 respectively). To clarify, the mean scores of the pretest: pre-listening, pre-reading, and total scores of students in any years of study, fields of study, and genders had indifferent mean scores of TOEIC test (P> .5). This was to ensure that all participants in both experimental groups shared the similar English knowledge background.

Table 3. *Post-Test TOEIC Total Scores*

Total scores (Post-test)									
Variables		N (40)	Mean	S.D.	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Year of Study	Year 1	18	541.39	77.589	18.288	502.80	579.97	390	645
	Year 2	12	476.25	101.559	29.318	411.72	540.78	350	650
	Year 3	10	466.00	100.824	31.883	393.87	538.13	360	620
Fields of Study	Sci	20	464.25	100.633	22.502	417.15	511.35	350	650
	Soc	20	541.75	73.847	16.513	507.19	576.31	390	645
Genders	Male	17	462.06	80.488	19.521	420.68	503.44	350	620
	Female	23	533.26	96.030	20.024	491.73	574.79	360	650

Table 3 clearly shows the Post-test-TOEIC total scores of 40 students participated in this study divided by their years of study, fields of study, and genders. The mean scores of the students divided by their years of study are considered interesting as the freshmen score was ranked the highest at 541.39 followed by the sophomore's and the junior's, 476.25 and 466.00, respectively. Considering their fields of study, the students from social science major score was ranked higher than that of the science's (541.75 and 464.25) while females had the scores higher than that of males (533.26 and 462.06).

According to Table 4, the different mean scores had been found between pairs at .05 significant level which were presented based on types of each test. In terms of the post listening scores, there were different mean scores found in this category which were (1) year of study, 1st year students had a greater mean score of the post listening test ($\bar{x}$ = 345) than 2nd year student ($\bar{x}$ = 287.5) at .05 significant level whereas the1st year students also had a greater mean score of the post listening test ($\bar{x}$ = 345) than 3rd year student ($\bar{x}$ = 283) at .05 significant level, respectively. In terms of the post reading scores, there was a different mean score between the sex of students. Female students had a greater mean score of the post reading scores ($\bar{x}$ = 206.96) than male students ($\bar{x}$

= 168.82) at .05 significant level (p= .017). Lastly, the different mean scores were found in the total mean scores of TOEIC. To clarify, students majoring in social science had a greater mean score of the total mean scores of TOEIC ($\bar{x}$ = 541.75) than those majoring in science ($\bar{x}$ = 464.25) at .05 significant level (p= .008).

Table 4. *Analysis of Variance of the Post-Listening and Post- Reading Scores Divided by Different Backgrounds of Students*

Post- listening	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Years of study	Between Groups	35212.500	2	17606.250	6.078	.005
	Within Groups	107185.000	37	2896.892		
	Total	142397.500	39			
Fields of study	Between Groups	34222.500	1	34222.500	12.022	.001
	Within Groups	108175.000	38	2846.711		
	Total	142397.500	39			
Genders	Between Groups	10689.572	1	10689.572	3.084	.087
	Within Groups	131707.928	38	3465.998		
	Total	142397.500	39			
Post- reading	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Years of study	Between Groups	1220.972	2	610.486	.226	.799
	Within Groups	99956.528	37	2701.528		
	Total	101177.500	39			
Fields of study	Between Groups	3610.000	1	3610.000	1.406	.243
	Within Groups	97567.500	38	2567.566		
	Total	101177.500	39			
Genders	Between Groups	14214.073	1	14214.073	6.211	.017
	Within Groups	86963.427	38	2288.511		
	Total	101177.500	39			
Total Posttest	Source of variance	Sum of Squares	Df	Mean Square	F	Sig.
Years of study	Between Groups	48803.472	2	24401.736	2.938	.065
	Within Groups	307286.528	37	8305.041		
	Total	356090.000	39			
Fields of study	Between Groups	60062.500	1	60062.500	7.710	.008
	Within Groups	296027.500	38	7790.197		
	Total	356090.000	39			
Gender	Between Groups	49556.624	1	49556.624	6.143	.018
	Within Groups	306533.376	38	8066.668		
	Total	356090.000	39			

It can be clearly seen in Table 5 that the students had some English receptive skills development after applying the prototype into the teaching methodology through ten

lesson plans. Though the TOEIC mean scores of each variable did not show their level of development considered by the CEFR levels, there were some TOEIC levels of proficiency development. To illustrate, the students in year three have developed their receptive skills from the Elementary proficiency level to the Elementary proficiency plus level with the percentage of development of 6.26. The male students have also achieved their proficiency levels of English receptive skills from the Elementary proficiency level to the Elementary proficiency plus level with the percentage of development of 7.6. Considering the percentage of development, the social science students have achieved the highest level at the percentage of 12.14 followed by the freshmen with the percentage of 12.04, while the least were students from science with the percentage of development of 5.73.

Table 5. *Students' Receptive Skills Development*

Students' Receptive Skills Development								
Variables		**N (40)**	**Mean (pre-test)**	**TOEIC Level of Proficiency**	**Mean (post-test)**	**TOEIC Level of Proficiency**	**CEFR Levels**	**Percentage of Development**
Years of Study	Year 1	18	422.22	Elementary Proficiency Plus	541.39	Elementary Proficiency Plus	A2	12.04
	Year 2	12	411.67	Elementary Proficiency Plus	476.25	Elementary Proficiency Plus	A2	6.53
	Year 3	10	404.00	Elementary Proficiency	466.00	Elementary Proficiency Plus	A2	6.26
Fields of Study	Sci	20	407.50	Elementary Proficiency Plus	464.25	Elementary Proficiency Plus	A2	5.73
	Soc	20	421.50	Elementary Proficiency Plus	541.75	Elementary Proficiency Plus	A2	12.14
Genders	Male	17	386.76	Elementary Proficiency	462.06	Elementary Proficiency Plus	A2	7.6
	Female	23	435.00	Elementary Proficiency Plus	533.26	Elementary Proficiency Plus	A2	9.92

DISCUSSION

The results clearly shows that there was some significant difference between the pre-test and post-test as the Pre-test-TOEIC listening scores of 40 students participated in this study divided by their years of study, majors, and genders mean scores of the students divided by their years of study are considered interesting as the freshmen scores was ranked the highest at 267.78 followed by the junior's and the sophomore's, 252.50 and 249.58, respectively. Considering their majors of study, the students from social science majors were ranked higher than that of the science's (266.25 and 250.75) while females had the scores higher than that of males (267.83 and 245.88). Compared to the pre-test, the Post-test-TOEIC listening scores of the students participated in this study had been higher than that of their pre-test. The mean scores of the students divided by their years of study are considered interesting as the freshmen score was ranked the highest at 345.00 and it is higher than their pre-test of 267.78 scores followed by the sophomore's and the junior's, 287.50 which is higher than that of their pre-test of 252.50 and 283.00

which is higher than that of the pre-test of 249.58, respectively. Considering their majors of study, the students from social science major score was ranked higher than that of the science's (341.50 and 283.00) which are higher than that of the pre-test scores (266.25 and 250.75) while females had the scores higher than that of males (326.30 and 293.24) which are higher than that of their pre-test scores (267.83 and 245.88).

In terms of reading skills, the results of pre and post-tests comparison was analyzed and they clearly show some significant difference between the pre-test and post-test as the Pre-test-TOEIC reading scores of 40 students participated in this study divided by their years of study, majors, and genders mean scores of the students divided by their years of study are considered as the sophomore scores was ranked the highest at 162.08 followed by the freshmen's and the junior's, 154.44 and 151.50, respectively. Considering their majors of study, the students from science major score was ranked higher than that of the social sciences' (156.75 and 155.25) while females had the scores higher than that of males (167.17 and 140.88). Compared to the pre-test, the Post-test-TOEIC listening scores of the students participated in this study had been higher than that of their pre-test. The mean scores of the students divided by their years of study are considered interesting as the freshmen score was ranked the highest at 196.39 which is considered higher than that of their pre-test of 154.44 followed by the sophomore's and the junior's, 188.75 which is higher than that of their pre-test scores of 162.08 and 183.00 which is higher than that of their pre-test scores of 154.44, respectively. Considering their majors of study, the students from social science major score was ranked higher than that of the science's (200.25 and 181.25) which are higher than that of the pre-test scores (156.75 and 155.25) while females had the scores higher than that of males (206.96 and 168.82) which are higher than that of their pre-test scores (161.17 and 140.88).

Considering the overall development of students' English receptive skills, the results show that students had significant development of their English receptive skills both listening and reading as their total English TOEIC scores from the post-test are higher than that of their pre-test. To be more specific, the freshmen had some development in English receptive skills as their post-test mean score was 541.39 which was higher than that of their pre-test, 422.22, at 119.17. Similarly, the sophomores' mean score of the pre-test, 476.25, is also higher than that of their pre-test, 411.67, at 64.58 while the results show some development happened among the juniors in a similar direction. The post-test mean score of the juniors, 466.00, is higher than that of their pre-test, 404.00, at 62. Overall, the freshmen had the highest development of English receptive skills followed by the sophomores and the juniors', respectively.

In terms of majors of study, the results show that the students in both majors, science, and social science, had some development in English listening skills as their post-test mean score is higher than their pre-test. To be more specific, the students from majors of science had some development in English listening skills as their post-test mean score is 283.00 which is higher than that of their pre-test, 250.75, at 32.25. Similarly, the social science students' mean score of the pre-test, 341.50, is also higher than that of their pre-test, 266.25, at 75.25. Overall, the students from majors of social science had

higher development of English listening skills than the students from science at 43. Similarly, students with different genders had shown the significant English receptive skill development. Both males and females had some development in English listening skills as their post-test mean score is higher than their pre-test. To be more specific, the male students had some development in English listening skills as their post-test mean score is 293.24 which is higher than that of their pre-test, 245.88, at 47.36. Similarly, the female students' mean score of the pre-test, 326.30, is also higher than that of their pre-test, 267.83, at 58.47. Overall, the female students had higher development of English listening skills than the male students.

CONCLUSION

In brief, applying the methodology from this study is highly suggested not only for the language educators, yet all faculty members who are facilitating their students' development. Although this study has been conducted particularly in English language teaching and learning for developing language learners' English receptive skills which were listening and reading skills, other productive skills namely speaking, and writing was interesting topics that could be explored as there have been limited studies conducting the topic by applying the virtual platforms advised from this study. Another potential research was with other students in different levels of education such as high school students, and the post-graduates were advised. Exploring the students studying teaching or the teacher themselves teaching in different subjects such as science and social studies related to applying the virtual platforms such as the Second Life, VRChat and the ClassStart.

ACKNOWLEDGEMENTS

My sincere gratitude to Associate Professor Dr. Apipa Prachyapruit, and Emeritus Professor Dr. Pateep Methakunavudhi for invaluable advice and guidance. Without their great encouragement and attention to every detail of this study, it would not be successfully completed. In addition, I could not forget to thank The 100th Anniversary Chulalongkorn University for Doctoral Scholarship and The 90th Anniversary of Chulalongkorn University Scholarship for funding this study.

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