

The Effects of Online Peer Tutoring on First-Year Undergraduate Students' English Grammar Achievement

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Abstract:

The purposes of this research were to study the effects of online peer tutoring on the first-year undergraduate students' English grammar achievement and to examine their satisfaction towards an online peer tutoring process. The sample used in this study consisted of 53 first-year English major students, registered for the course of English Structure 2 in Semester 2/2017. The research instruments used for data collection were pre-and post-tests, a questionnaire with a reliability of 0.84, and a semi-structured interview. The obtained quantitative data were analyzed by mean, percentage, standard deviation, and paired sample t-test, while the students' answers from the interview were analyzed based on the qualitative analytical methods. The results showed that the students' English grammar achievement was significantly improved at the .01 level after the process of online peer tutoring covering five compulsory grammar points in the course syllabus, comprising conditional clause, indirect speech, causative form, transitional words, and subjunctive mood. Besides, the students' satisfaction towards the online peer tutoring process was overall rated at a very high level as it, compared to in-class activities and a traditional teaching method, more apparently helped promote not only students' grammatical knowledge retention, sense of responsibility, and genuine collaboration with classmates but also their motivation and confidence in using English for daily communication.

Keywords: Online Peer Tutoring, English Grammar Achievement, Undergraduate Students

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Introduction

For over a decade, English has been considered as an essential foreign language and deliberately taught as a compulsory subject in all Thai educational institutions. A large number of Thai students are then encouraged to put a great effort into learning English so as to use it with more proficiency. Obviously, even though some students are able to speak and write English somewhat fluently, their produced sentences include a number of grammatical mistakes. In order to make use of the language properly, accuracy should be taken into consideration. English grammar is thus a main focus in all English classes in Thailand. Still, most students cannot use proper structures as they personally believe English grammar is difficult and different from the structures of their mother tongue. Furthermore, many of them tend to forget the English structures they have learnt, leading to such mistakes and unsatisfactory learning achievements. To illustrate this point, first-year English major students at Thepsatri Rajabht University, according to the curriculum, have to take two English grammar courses, English Structure 1 and English Structure 2, but in Semester 1/2017, very few received the highest grades from English Structure 1, while more than 50% of them failed this course. As a result, students' cognitive retention and their accurate uses of English structures are a key success to English learning enhancement, and such teaching approaches have been recently implemented with EFL and ESL learners so as to come up with an appropriate one that can authentically help improve their English accuracy.

An interesting teaching approach that has not only long been attracting such researchers but also been used in different areas of subject matters is peer tutoring. It is believed that learners' knowledge is particularly constructed by interaction and collaboration among friends. Topping (1996) states that peer tutoring promotes real social interaction and active learning, resulting in a decrease of students' learning anxiety and an increase of learning achievements. Peer tutoring is an instructional method that requires strong students to support weak ones in terms of academic subjects as they create a learning platform for an exchange of knowledge in order to develop their competencies and comprehensions based on a particular basis of a curriculum (Sobral, 2002; Woolfolk, 2007; Nguyen, 2013). It is also reasonable to say that the advantages of peer tutoring are given not only to students with high performances but also to those with low performances. The student tutors gain experiences and confidence, while the tutees can improve their academic achievements as well as practical skills and abilities through a peer tutoring process as they assist and facilitate each other based on sense of responsibility, friendly supports, and a positive learning atmosphere, all of which make learners feel relaxed and become more active in classes (Chai and Lin, 2013; Wessel, 2015; Campit et al., 2015; Raheem et al., 2017). Haider and Yasmin (2015) mention that another advantage of peer tutoring, apart from learning achievements, is learners' better attitudes on teaching and learning activities because they are cordially motivated by peers. Besides, through peer tutoring, students have an opportunity to develop their knowledge before assisting others, perceived as a real active learning approach and in accordance with cognitive learning theories, leading to students' knowledge retention (Matusov and Hayes, 2000; Haider and Yasmin, 2015). Peer tutoring, due to the aforementioned advantages, has been used in a great deal of research to enhance students' knowledge and learning achievements in a variety of areas such as math, science, social studies, languages, etc. Kamps et al. (2008) investigated students' satisfaction towards peer tutoring and found that most of the participants preferred a peer tutoring method to a traditional teaching approach which was more teacher-centered. Driscoll (2015) studied the benefits of a peer tutoring course and explained that peer tutoring was an effective method and could raise learners' self-preparation for further lessons. Mkpanang (2016) pointed out in his study that reciprocal peer tutoring strategies could significantly improve the participants' problem solving abilities as they, during the implementation process, helped each other to learn and try to solve particular provided problems.

Even though there are many studies on the effects of peer tutoring, there are very few conducted to enhance students' English structures with an online platform, which truly breaks the boundaries in terms of places and time to make peer tutoring more flexible with excitement and enjoyment.

Purposes of the Study

The main focus of this research was on the effectiveness of an online peer tutoring process with two particular purposes as follows:

1. To study the effects of online peer tutoring on the first-year undergraduate students' English grammar achievement.

2. To examine the first-year undergraduate students' satisfaction towards an online peer tutoring process.

Conceptual Framework of Online Peer Tutoring

In this study, a process of online peer tutoring was systematically designed and consisted of three major steps, pre-online peer tutoring, during online peer tutoring, and post-online peer tutoring. Most importantly, scaffolding and guidance should be provided by a teacher, based upon a specific task, so as to prepare a student tutor prior to the implementation of peer tutoring, and 2-5 students should be included in one group so that all learners can equally collaborate with friends (Falchikov, 2001; Colvin, 2007; Wessel, 2015). A conceptual framework of online peer tutoring was shown in Figure 1.

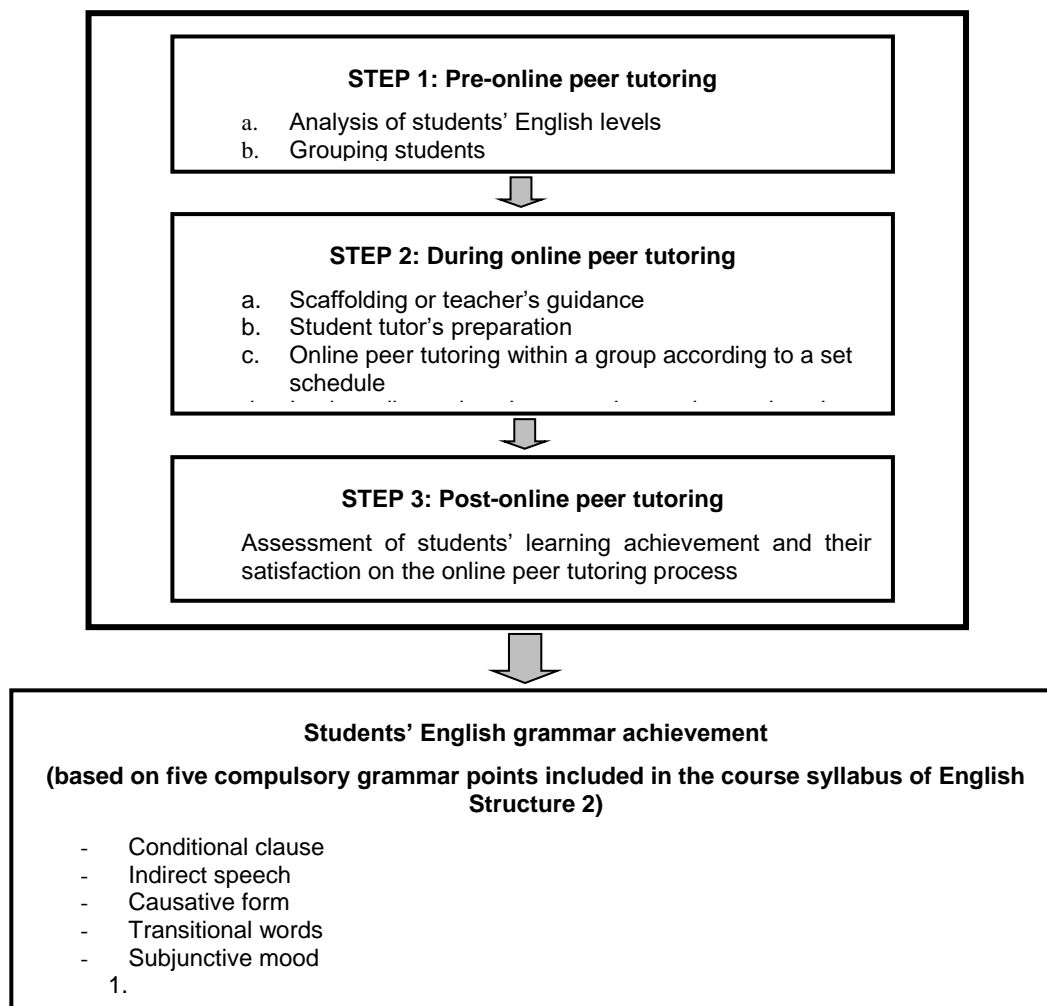


FIGURE 1. A conceptual framework of online peer tutoring

Method

This was a quasi-experimental study emphasizing the enhancement of students' English grammar achievement through online peer tutoring. The scope of contents was mainly based on the five grammar points in the course syllabus of English Structure 2, which were conditional clause, indirect speech, causative form, transitional words, and subjunctive mood. The process of online peer tutoring was displayed in details in Table 1.

TABLE 1. Details of the 12-week process of online peer tutoring

| Week | Activity |
|------|--|
| 1 | The students' English levels were analyzed using pre-tests. The students |

then were divided into ten small groups with 5-6 students in a group in accordance with their levels. Facebook was selected as an online platform because its functions facilitated online peer tutoring activities, and all of the students were accustomed to this social network. The orientation in terms of

| Week | Activity |
|------|--|
| | contents, materials, tutoring schedules on Facebook, in-class discussions, and assessment was presented by the teacher. |
| 2 | The students from each group presented their materials about <i>conditional clause</i> that they would be using to teach their friends to the teacher. |
| 3 | Each student took turn broadcasting prepared tutoring lessons to their peers on Facebook according to their set schedules under the teacher's supervision. |
| 4 | The discussions on <i>conditional clause</i> was organized in class. The students from each group then presented their materials about <i>indirect speech</i> that they would be using to teach their friends to the teacher. |
| 5 | Each student took turn broadcasting prepared tutoring lessons to their peers on Facebook according to their set schedules under the teacher's supervision. |
| 6 | The discussions on <i>indirect speech</i> was organized in class. The students from each group then presented their materials about <i>causative form</i> that they would be using to teach their friends to the teacher. |
| 7 | Each student took turn broadcasting prepared tutoring lessons to their peers on Facebook according to their set schedules under the teacher's supervision. |
| 8 | The discussions on <i>causative form</i> was organized in class. The students from each group then presented their materials about <i>transitional words</i> that they would be using to teach their friends to the teacher. |
| 9 | Each student took turn broadcasting prepared tutoring lessons to their peers on Facebook according to their set schedules under the teacher's supervision. |
| 10 | The discussions on <i>transitional words</i> was organized in class. The students from each group then presented their materials about <i>subjunctive mood</i> that they would be using to teach their friends to the teacher. |
| 11 | Each student took turn broadcasting prepared tutoring lessons to their peers on Facebook according to their set schedules under the teacher's supervision. |
| 12 | The discussions on <i>subjunctive mood</i> was organized in class. The students then responded to the questionnaires and got interviewed by the teacher regarding their satisfaction towards the process of online peer tutoring. Post-tests were finally administered in order to assess the students' English grammar achievement. |

Participants

The sample used in this research included 53 first-year English major students registered for the course of English Structure 2 in Semester 2/2017. Each student was allowed to use any materials related to the five grammar points during online peer tutoring, but they had to be examined their appropriateness and correctness by the teacher.

Research Instruments

The research instrument used to compare the students' learning achievement was pre-and post-tests, comprising 50 multiple choice questions, particularly created based on the five compulsory grammar points. All the items were validated by three language experts and thoroughly revised according to their suggestions. In terms of the students' satisfaction, a likert scale questionnaire with a reliability of 0.84 was used to collect quantitative data, while a semi-structured interview was conducted for qualitative data.

Data Analysis

The students' learning achievement from the comparison between pre- and post-tests was analyzed by mean, standard deviation, percentage, and paired sample t-test, while the data of their satisfaction towards the process of online peer tutoring, obtained from the questionnaires, were analyzed by mean and standard deviation. The qualitative data obtained from the interview were categorized and presented to support the quantitative data in terms of the students' satisfaction on online peer tutoring.

Result

According to the research purposes, the results with regard to the students' English grammar achievement and their satisfaction on the process of online peer tutoring were presented.

The Students' English Grammar Achievement

The students' English grammar achievement in relation to the five grammar points, namely conditional clause, indirect speech, causative form, transitional words, and subjunctive mood, was analyzed from their scores of pre- and post-tests and shown in Table 2.

TABLE 2. Results of Students' English grammar achievement

| Grammar Point | Pre-test | | Post-test | | t | Sig |
|--------------------|-------------|--------------|--------------|--------------|----------------|-------------|
| | Mean | SD | Mean | SD | | |
| Conditional Clause | 1.96 | 1.829 | 4.85 | 2.332 | -8.085 | .000 |
| Indirect Speech | 2.00 | 1.971 | 6.17 | 2.259 | -12.956 | .000 |
| Causative Form | 2.08 | 2.008 | 4.25 | 2.638 | -5.910 | .007 |
| Transitional Words | 1.91 | 1.735 | 4.25 | 1.697 | -7.678 | .001 |
| Subjunctive Mood | 2.00 | 2.000 | 4.30 | 3.067 | -5.224 | .008 |
| Total | 9.94 | 8.243 | 23.81 | 8.749 | -12.191 | .000 |

In accordance with Table 2, the students' English grammar achievement was overall significantly improved at the .01 level. Even though the average total scores after the implementation were not higher than 50%, there was, compared to the average total scores of pre-test, a significant improvement in terms of English grammar achievement. It can be said that online peer tutoring positively affected their English learning as Mack and Leavitt (2014) stated that between tutors and tutees, peer tutors normally gained more knowledge through their teaching preparation prior to doing peer tutoring, and their research also showed apparent development of student tutors' academic achievements after more than six months of experiments. In this research, the students had to perform their duties as both tutors and tutees, which could enhance their grammatical knowledge within two months of the implementation, and their improvement of each grammar point was clearly illustrated in Figure 2.

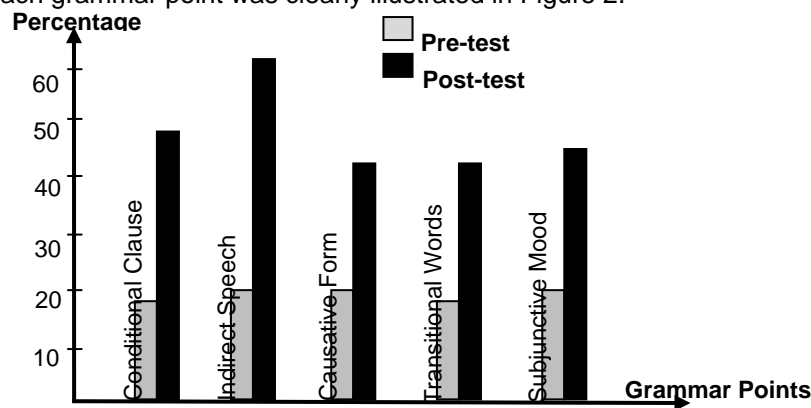


FIGURE 2. Comparison of pre-and post-test results of five grammar points

The Students' Satisfaction towards the Process of Online Peer Tutoring

In this study, the analyzed quantitative data in terms of the students' satisfaction on the process of online peer tutoring were presented in Table 3, while the qualitative data obtained from the semi-structured interview were categorized into two main categories: Advantages of Online Peer Tutoring and Satisfaction on Online Peer Tutoring.

TABLE 3. Students' satisfaction on online peer tutoring

| Item | Statement | Mean | S.D. | Level of Satisfaction |
|--------------|--|------|-------|-----------------------|
| 1 | Online peer tutoring is exciting and enjoyable. | 4.49 | 0.724 | High |
| 2 | I feel relaxed when doing online peer tutoring activities. | 4.47 | 0.668 | High |
| 3 | The process of online peer tutoring is flexible and easy to follow. | 4.51 | 0.724 | Very high |
| 4 | Online peer tutoring can help me improve my English grammatical knowledge. | 4.62 | 0.657 | Very high |
| 5 | After online peer tutoring activities, I feel more confident in using English. | 4.45 | 0.722 | High |
| 6 | I do not easily forget the English structures that I have taught my friends on Facebook. | 4.53 | 0.668 | Very high |
| 7 | Online peer tutoring encourages real collaboration and interaction. | 4.53 | 0.668 | Very high |
| 8 | Online peer tutoring is advantageous to English teaching and learning. | 4.47 | 0.668 | High |
| Total | | 4.51 | 0.688 | Very high |

In Table 3, the students' satisfaction on the online peer tutoring activities was overall at a very high level (mean = 4.51, S.D. = 0.688). Also, they were very satisfied with the flexibility of the online peer tutoring process as it was easy to follow, and they believed that online peer tutoring was very useful for their English grammar enhancement as they had an opportunity to teach their group members, which made them easily memorize the grammar rules, while their friends could share ideas and ask questions for more clarification at the same time, considered as a real interactive activity.

Besides, from the interview questions asking them about the online peer tutoring process, the obtained data were transcribed and categorized into two categories as follows:

Advantages of Online Peer Tutoring

Interestingly, all the participants perceived the online peer tutoring as very advantageous to their learning in terms of gained knowledge. A student said, "I have gained the grammatical knowledge from teaching my friends, and when I received positive compliments from them, I felt more confident and wanted to practice English more". Apart from the particular knowledge that the students received, they increased their sense of responsibility and knowledge retention as a student mentioned, "During the online peer tutoring activities, I had to work hard in order to understand all the points that I would teach my friends. If I had not understood them correctly, I could not have given them clear explanations. So, I spent two to three days preparing my lessons before I taught them on Facebook. Online peer tutoring made me work so hard as I had to be responsible for my teaching, and after I finished all the lessons with friends, I felt like I could still remember most of the grammar rules that I had explained". Some of the students also stated that they enjoyed doing online peer tutoring due to the fact that they could interact with friends anywhere and anytime through Facebook, which made them feel more enjoyable than studying in classes only.

Satisfaction on Online Peer Tutoring

One thing that most of the participants were very satisfied with was their friends' suggestions that made them aware of what they had to adjust and improve when they did further online peer tutoring. A student mentioned, "After my teaching on Facebook, some friends gave me suggestions and comments about my lesson. I found them beneficial to my teaching improvement in terms of contents, appropriate examples, clear explanations, and so on". All of the students were familiar with Facebook and thought that it was the most convenient social network in Thailand because it was easy to use with multifunction. A student said, "A social network is very important to a success of online peer tutoring activities, and I believe Facebook can be one of the best social network choices in Thailand at this time".

Discussion

In this study, it was found that online peer tutoring facilitated students' learning effectiveness and promoted their self-learning. Undoubtedly, the students' grammar achievement was higher because during online peer tutoring, all the students had to be well-prepared so as to finish their tasks effectively. Being responsible for others became one of the crucial elements that could be seen from this study as Bradford-Watts (2011) explained, "Peer teaching is a suite of practices in which peers instruct each other in a purpose-driven, meaningful interaction" (p. 31). Consistent with Voigt's and Girgensohn's research (2015), peer tutoring evidently raised learners' abilities in academic writing, especially with non-native writers. Collaboration played a crucial role in their study on account that both tutors and tutees could fruitfully share ideas and exchange knowledge through the process of peer tutoring. In addition, Indrawati (2017) studied the effects of peer tutoring on reading comprehension achievement and found that peer tutoring significantly enhanced the students' reading proficiency. During the reading tasks, the students helped one another in order to become familiar with the instructions so that they could complete the tasks provided by the teacher. The findings agreed with the results of this study that the students' achievement was improved as they had a similar goal to reach, which they could not of course do it by themselves but together with their friends. Online peer tutoring or peer tutoring can be an approach that not only improves learners' achievements but also promotes knowledge construction, collaboration, and positive attitudes towards particular subject matters.

According to the research results, three significant factors of online peer tutoring including *knowledge management*, *knowledge transfer*, and *knowledge discussion* were discussed. Knowledge management consisted of tutors' preparation and practice, leading to their clear comprehensions on particular matters prior to transferring such knowledge to tutees. The teacher played an important role as their coach who provided them with practical suggestions and assisted them throughout their preparation. When the tutors were ready, they taught their group members, explaining knowledge in details, giving clear examples, and getting them actively involved in the practice through provided exercises. Knowledge transfer here could be considered as one of the active learning approaches on account that the role of tutors was a giver who produced meaningful learning experiences, which were fully beneficial to their long-term knowledge retention. The other significant factor was knowledge discussion related to knowledge check. The discussions, in this research, were conducted among the teacher and students once a week in order to verify their gained knowledge in terms of correctness and clarity of knowledge comprehension. The relationship of the three factors were shown in Figure 3.

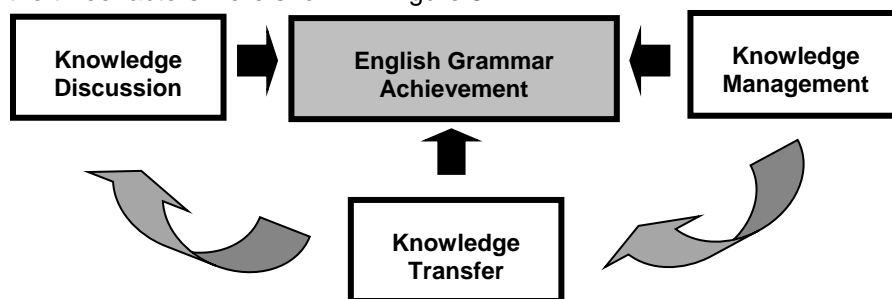


FIGURE 3. Relationship of the three significant factors of online peer tutoring

Conclusion

As the purposes of this research were to study the effects of online peer tutoring on the first-year English major students' English grammar achievement and to examine their satisfaction towards online peer tutoring, the results revealed positive effects on both students' grammar achievement and satisfaction after the implementation of the online peer tutoring. That is, the students' grammar achievement was significantly enhanced, and their satisfaction on the process of online peer tutoring was overall at a very high level. The five keys to online peer tutoring success found in this study were sense of responsibility, preparation, collaboration, cooperation, and interaction, all of which were mainly from learners themselves.

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