

Promoting Junior High Students' English Grammar and Environmental Awareness in a Five-Day English Summer Camp in Taiwan

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Abstract

Learning English grammar is considered an essential part in junior high level in Taiwan. However, learning grammar is tedious, and students may lose interest quickly. Nevertheless, learning will be more effective when students are learned with a meaningful purpose. Recently, the Ministry of Education in Taiwan has put great emphasis on promoting students' environmental awareness, which is also an important global issue. Learning about important environmental issues might enhance students' interest and give them a purpose to learn English grammar. Furthermore, research found that games can be effective in enhancing motivation in learning, grammar retention and environmental awareness (e.g. Arslan, Moseley & Cigdemoglu, 2011; Paris & Yussof, 2012; Phuong & Nguyen, 2017). Therefore, this study aimed to explore the effects of the combination of English grammar, environmental issues and a board game in a five-day English summer camp. The participants were 60 seventh and eighth graders. A board game was developed integrating English grammar and three environmental topics: global warming, pollution and sustainability. The students were giving grammar lessons using the topics and played the board game. They were given a pre-test and a post-test with questions on English grammar and knowledge about the three topics. A survey was also given at the end. The results showed a significant improvement in both English grammar and the knowledge of the three environmental topics. Although in the survey some students said some questions in the board game were difficult, most students expressed that the camp and the board game were helpful.

Keywords: Content and language integrated learning, English grammar, board game

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Introduction

Taiwan has been promoting the integration of important issues with English language education. Environmental education is one of the four main issues included in the core English curriculum. It is also considered as the country's important policy. Nevertheless, high school education in Taiwan is exam-oriented. Students and parents concern about exam scores because they affect their entrance to their desired senior high schools and universities. As English exams mainly include multiple-choice and cloze questions about reading and usage, English grammar and drilling practices usually become the focus in English lessons, and which could be considered boring to students. Nonetheless, the core curriculum also emphasizes on fostering interest in English learning. Research found that games can be effective in enhancing motivation in learning, grammar retention and environmental awareness (e.g. Arslan, Moseley & Cigdemoglu, 2011; Paris & Yussof, 2012; Phuong & Nguyen, 2017). Therefore, this study aimed to explore the effects of the combination of English grammar, environmental issues and a board game in a five-day English summer camp.

The context of the study

The materials developed for the study

Eco-Activist was a board game developed by 14 junior university students majoring in foreign language instruction for their graduation project in Taiwan, and it was supervised by the author. This undergraduate program aims to train students to be EFL teachers. The development of the materials took ten months started from February to December in 2018. The development of the board game was based on the concept of content and language integrated learning (CLIL). Bentley (2018) stated that "CLIL is an approach or method which integrates the teaching of content from the curriculum with the teaching of a non-native language" (p.5). It could enable students to improve their "production of language of curricular subjects" and "performance in both curricular subjects and the target language" (p.6) among others. *Eco-Activist* was designed for junior high students in Taiwan. The aims of the board game were to allow students to review grammar points in the junior high level and enhance their environmental awareness under three topics: global warming, pollution and sustainability.

Descriptions of the board game Eco-Activist

Eco-Activist can be played by two to six players. It is recommended to set the time limit to 60 minutes. The board game includes the concept of rescuing natural disasters on the earth. Players can collect various kinds of elements through answering the questions on the question cards. The questions included grammar questions in the context of the three environment topics and vocabulary and concept questions about the three environment topics. The types of questions included multiple choice, unscrambling sentences and combining sentences (see Figure 1). Players can rescue the disaster spots on the game board after collecting enough elements.

Examples of grammar points included:

- tenses (e.g. simple present, present perfect, past continuous, future)
- passive voice
- subordinating conjunctions
- modal verbs
- relative pronouns
- question tags

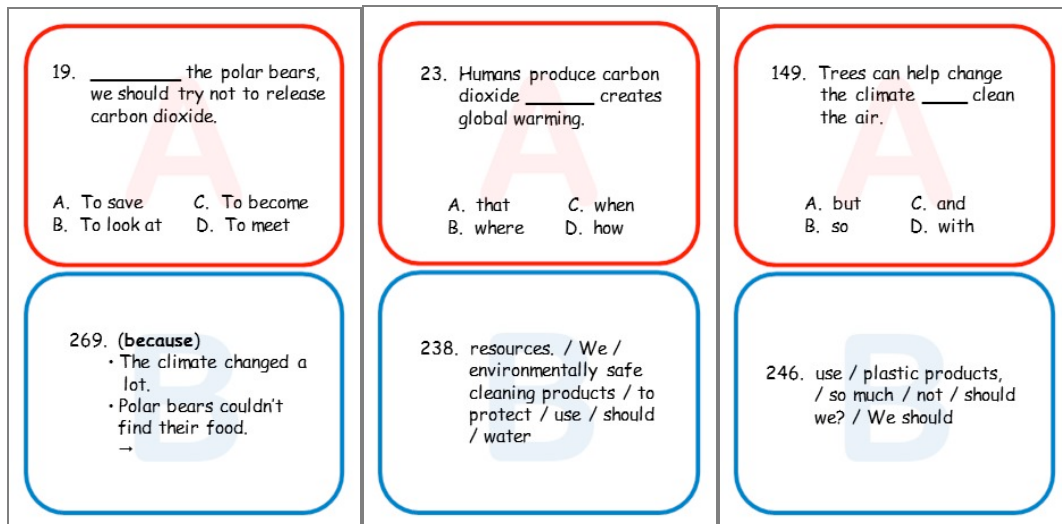


Figure 1. Examples of questions on the question cards of *Eco-Activist*.
(The images are authorized to use in this paper.)

Game components (see Figure 2):

- One map (printed on a piece of fabric; 15 disaster spots)
- Sixty pieces (six colors and ten pieces for each color; made of wood)
- One dice (made of wood)
- “A” (2 sides): Answer question A
- “B” (2 sides): Answer question B
- “A/B”: Choose questions A or B to answer
- “AB”: Answer both A and B
- One hundred and fifty question cards (each card contains two questions (A and B) on one side and different numbers of elements on the other side)
- Twenty function cards (each card contains different numbers of elements on one side which looks the same as the other question cards and a particular function on the other side)
 1. Remove: Remove one piece on the map.
 2. Rescue: Put one of your pieces on any non-rescued disaster spot.
 3. Switch: Exchange all your pieces with any player, but you need to choose a disaster card and roll the dice to answer the question. If you answer correctly, you can use this function card. After you answer the question, you have to put the disaster card back into the deck.
 4. Stop: Choose one player to pause one round, and each player cannot be stopped two times in a row.
 5. Element: Get the elements on this function card.
 6. Exchange: Exchange one of your cards with another player’s.
 7. Pass: Pause on the next round, and each player cannot be stopped two times in a row.
 8. Defend: Defend against all the function cards, but you need to answer all the questions on this card.
- One answer keys
- One instruction sheet

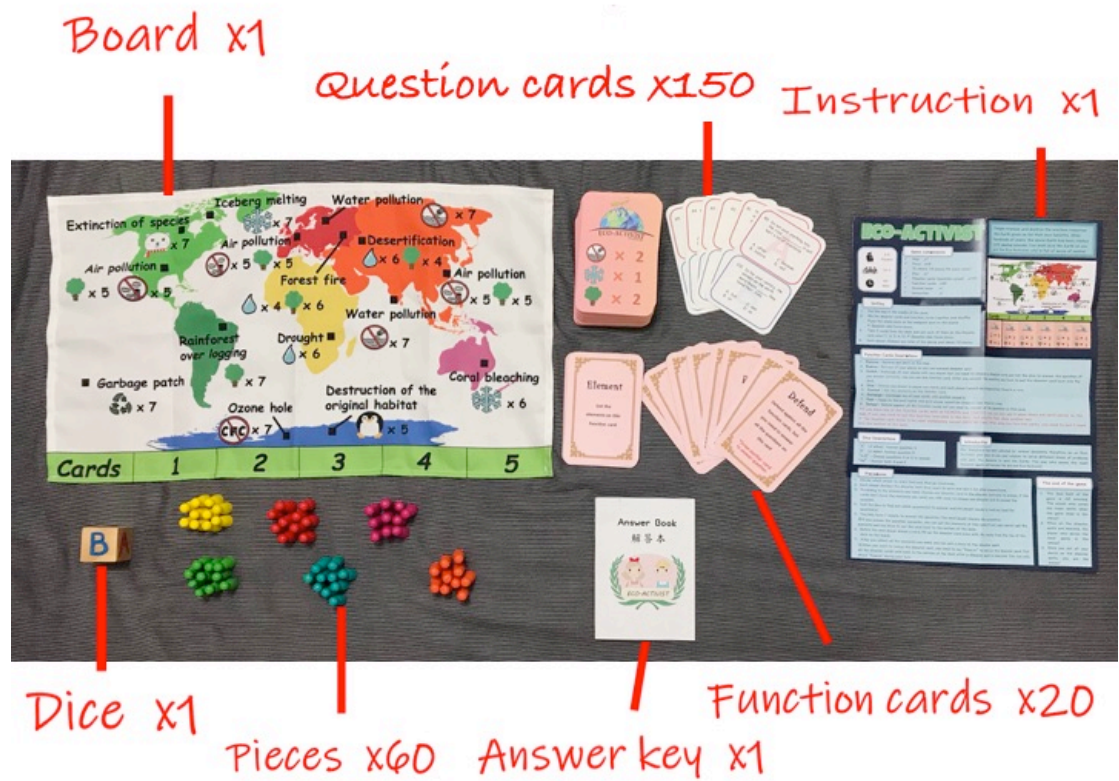


Figure 2. The components of Eco-Activist.
(The image is authorized to use in this paper.)

Setting of the board game:

1. Put the map in the middle of the desk.
2. Mix the question cards and function cards together and shuffle. Place the whole deck (question side facedown) on the assigned spot on the board.
3. Take 5 cards from the deck and put each of them (question side facedown) on the question card zone (1, 2, 3, 4, 5).
4. Each player chooses one color of the pieces and takes 10 pieces.

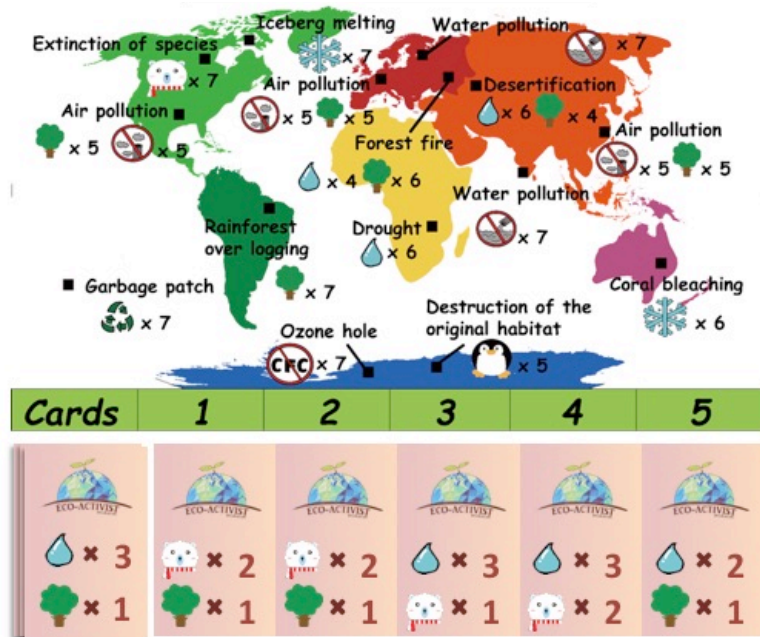


Figure 3. The setting of Eco-Activist before the game starts.
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How to play the game:

1. Decide which player to start first and then go clockwise.
2. Each player decides the disaster spot they want to save and do not let other players know.
3. According to the elements the player needs, choose one disaster card in the disaster card zone to answer. If the cards do not have the elements the player needs, the player still needs to choose one question card to answer the question.
4. Roll the dice to find out which question(s) to answer and the player needs to read out loud the question(s).
5. The player only has one minute to answer each question. The next player checks the answer(s).
6. If the player answers the question correctly, the player can get the elements on this card; if not, the player cannot get the elements and the player has to put the card back to the bottom of the deck.
7. Before the next player draws a card, fill up the question card zone with the cards from the top of the deck on the board.
8. After the player collects all the elements he/she need, the player can put a piece on the disaster spot.
9. When the player wants to rescue the disaster spot, the player needs to say "Rescue" to rescue the disaster spot. Put all the question cards used back to the bottom of the deck after a disaster spot is rescued. The player can only shout "Rescue" during his/her turn.

How to win the game:

1. The time limit of the game is 60 minutes. The player who saves the most spots when the game ends is the winner.
2. When all the disaster spots are rescued, the player who saves the most spots is the winner.
3. Once a player puts all his/her pieces on the disaster spots, he/she is the winner.

Implementation of “Eco-Activist”

This study was conducted in the form of a summer camp in a junior high school in Taiwan; therefore, it did not interfere with the school’s regular curriculum. Nevertheless, it provides students extra learning opportunities in the summer.

In this study, the 14 junior university students who developed the board game *Eco-Activist* (referring as student teachers from now on) designed a five-day English summer camp combining English grammar and environmental awareness. Environment protection was the theme of the camp. The board game *Eco-Activist* was used in the camp to review the lessons. These 14 student teachers did this five-day English summer camp in July as part of their graduation project. They started preparing four months before the English camp took place under the guidance of their advisor. They were responsible for all the camp activities, English lessons, learning materials, teaching aids and teaching in the camp. Before the English summer camp took place, 53 seventh grade students and 25 eighth grade students from the school were recruited to join this summer camp.

Two 45-minute lessons were assigned to the topic of global warming on the first day. Three 45-minute lessons were assigned to the topic of pollution and another three 45-lessons were assigned to the topic sustainability on the second and third days respectively. There were 45-minute practice activities after lunch on the first three days. A period of 100 minutes was assigned to the board game *Eco-Activist* before the end of the day from day one to day four. There were also review activities in the morning at the beginning on the second, third and fourth days. There were also three 45-minute periods assigned to group activities on the fourth day. On day five, there were a Q&A competition and a closing ceremony. Figure 4 shows the time-table of the camp.

Eco-Activist

	Mon	Tue	Wed	Thurs	Fri	
8:00 ~8:20	環 保 小 尖 兵 報 到					
8:20 ~ 9:05	開幕典禮 暖身活動	環境保衛戰	環境保衛戰	環境保衛戰	腦力 對抗賽	
9:05 ~ 9:15	下 課 時 間					
9:15 ~ 10:00	Say hi!	汗所不在 Gloomy Land	綠野仙蹤 The Green Wonderland	明天過後 The Day After Tomorrow	腦力 對抗賽	
10:00 ~10:10	下課時間					
10:10 ~ 10:55	熱浪來襲 Heat Waves Coming	汗所不在 Gloomy Land	綠野仙蹤 The Green Wonderland	明天過後 The Day After Tomorrow	成果驗收	
10:55 ~ 11:05	下課時間					
11:05 ~ 11:50	熱浪來襲 Heat Waves Coming	汗所不在 Gloomy Land	綠野仙蹤 The Green Wonderland	明天過後 The Day After Tomorrow	頒獎閉幕	
11:50 ~ 13:10	午休&午餐時間					
13:10 ~ 13:15	下課時間					
13:15 ~ 14:00	拯救北極熊	髒土試煉	綠境重逢	桌伙來學習		
14:00 ~ 14:10	下課時間					
14:10 ~ 15:50	桌伙來學習	桌伙來學習	桌伙來學習	桌伙來學習		
15:50 ~ 16:00	開心放學					

Figure 4. Summer camp timetable.

Research Method

The participants were 60 seventh and eighth graders in a junior high school in Taiwan participating in a 5-day English summer camp. At the beginning, more than 60 students participated in the summer camp, but only 60 of them have completed both the pre-test and post-tests. Therefore, only these 60 students were included as the participants of this study. Environmental protection was the theme of the camp. It included the three topics: global warming, pollution and sustainability. The students were giving lessons about the topics in the morning and played the board game *Eco-Activist*, which integrated English grammar and the three environmental topics, in the afternoon. The students were given a pre-test and a post-test with questions aiming at English grammar and environmental knowledge of the three topics at the beginning and at the end of the camp. There were total of 25 multiple choice questions in the pre-test and post-test. The total score of the tests was 100. Fifteen questions (60 points) and ten questions (40 points) were about English grammar and environmental knowledge of the three topics respectively. After the pre-test, the students were divided into two classes according to their scores. Thirty-two participants with higher scores were in Class A and 28 participants with lower scores were in Class B. At the end of the camp, a survey was also given to find out whether the students felt the board game help them learn. The scores of the pre-test and post-test of the participants in Class A and B were analyzed using dependent-sample t-tests on the on the Social Science Statistics website (<http://www.socscistatistics.com/tests/ttestdependent/Default2.aspx>). The survey was analyzed by the researcher.

Results

In order to compare the English grammar and environmental knowledge scores between the pre-test and post-test, dependent-sample t-tests were conducted. The analysis of pre-test and post-test showed significant improvement in English grammar ($P < 0.05$) in both Class A and Class B with mean differences at 4.13 and 7.00 respectively. The analysis of pre-test and post-test also showed significant improvement in environmental knowledge ($P < 0.05$) in both Class A and Class B with mean differences at 4.38 and 8.72 respectively (see Table 1 and 2). In both the pre-test and post-test, Class A, which was the higher-level class, had higher scores in English grammar (30.00 and 34.13 respectively) and environmental knowledge (24.25 and 28.63 respectively) than Class B, which was the lower level class (16.43 and 23.43 in English grammar and 12.14 and 20.86 in environmental knowledge respectively).

Class / Items	Pre-test Scores		Post-test Scores	
	Means	SD	Means	SD
Class A (n=32)				
English Grammar	30.00	9.42	34.13	9.90
Environmental Knowledge	24.25	8.00	28.63	8.26
Class B (n=28)				
English Grammar	16.43	7.57	23.43	8.76
Environmental Knowledge	12.14	6.58	20.86	8.46

Table 1. The means and standard deviations of English grammar and environmental knowledge scores of the pre-test and post-test

Class – Items	Mean Difference	Sig. (2-tailed)
Class A – English Grammar Pre – Post	4.13	0.023
Class A – Environmental Knowledge Pre – Post	4.38	0.010
Class B –English Grammar Pre – Post	7.00	0.000
Class B –Environmental Knowledge Pre – Post	8.72	0.000

Table 2. Significance of English grammar and environmental knowledge scores between the pre-test and post-test

The analysis of the survey showed that more participants liked the board game part of the camp (55.26%) among group activities (28.95%) and English lessons (15.79%). In Class A, 54.29% liked the board game, 34.29% liked the group activities, and 11.42% liked the English lessons. In Class B, 56.10% like the board game, 24.39% liked the group activities, and 19.51% like the English lessons.

In Class A, 81.25% of the participants thought that the board game helped them learn, 18.75 thought that it helped them learn a little bit and no one thought that the board game did not help them learn. In Class B, 64.29% of the participants thought that the board game helped them learn, 35.71% thought that it helped them learn a little bit, and no one thought that it did not help them learn. Nevertheless, 31.25% of participants in Class A and 67.86% in Class B felt that the board game was difficult.

Through the camp, the participants expressed that they had learned vocabulary (20.39%) the most among environmental issues (14.80%), grammar (14.17%), listening (12.17%), speaking (12.17%), reading (11.51%), writing (10.19%), and cooperation (3.78%). In descending order, the participants in Class A thought that they had learned vocabulary (21.21%), grammar (17.85%), environmental issues (14.81%), reading (11.45%), listening (10.44%), speaking (10.44%), writing (8.42%) and cooperation (5.39%), and Class B thought that they had learned vocabulary (19.61%), environmental issues (14.79%), listening (13.82%), speaking (13.82%), writing (12.54%), grammar (11.58%), reading (11.58%) and cooperation (2.25%). Furthermore, 93.75% of participants in Class A and 88% in Class B expressed that they wanted to participate in this camp again. Table 3 listed the reasons the participants provided.

I would join this camp again.	I would not join this camp again.
Reasons	Reasons
<ul style="list-style-type: none"> ■ I can learn a lot of English. ■ I can improve my English ability. ■ I can learn English through games; the board game is fun. ■ I can learn a lot of knowledge. ■ The camp has diverse activities. ■ I can learn various vocabulary. ■ The camp is fun and interesting. ■ The lessons are fun and I can learn something. ■ I want to play board games. 	<ul style="list-style-type: none"> ■ I was forced to join this camp. ■ I will have a family trip. ■ I don't have time. ■ I'm not interested in English

Table 3

Conclusions

The aims of the study were to explore the effects of the combination of English grammar, environmental issues and a board game in a five-day English summer camp. *Eco-Activist* was the board game used in this study. It was designed by 14 undergraduate juniors in Taiwan. Players had to answer English grammar and knowledge questions related to three environmental topics – global warming, pollution, and sustainability, to collect a number of elements on the question cards to save disaster spots on the earth on the map. Participants played the board game at the end of day one to day four to consolidate their learning of the lessons in the summer camp. The results of this study showed a significant improvement on both English grammar and environmental knowledge. Also, most participants expressed that the board game helped them learn. Nevertheless, more participants in the lower-level class expressed that the questions in the board game were difficult. The grammar questions in the board game covered many different grammar points in the junior level, some of which were not covered in the lessons in the camp and which they might not have learned, and the content was content-based, which involved vocabulary about environmental issues. With a lower level of English grammar and comprehension of English vocabulary related to environmental issues at the start, the questions in the board game could be beyond their ability to answer just after their lessons in the camp. Despite their lower level, their post-test scores still showed improvement. Nonetheless, the questions in the board game could be put into different levels for different levels of players.

This study combined three elements: English grammar, environmental issues and a board game. Integrating other subject areas like environmental issues in this study with English grammar in a board game could be an effective way to help students consolidate students' English grammar and promote knowledge of particular subject areas at the same time. Lee (2012) believed that board games were an effective tool for language learning. A carefully designed board game combining English grammar and subject knowledge could replace some of the tedious English grammar drilling practices in regular schools. Fung and Min (2016) maintained that “board games can add diversity in classroom activities” (p.269) and reduce stress. Students could be more motivated and could be less struggled when reviewing English grammar through board games. Being able to learn other subjects at the same time could be another advantage. Nevertheless, the results of this study were only limited to the particular

setting in this case. This study should be repeated in more different settings in order to confirm the results.

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