

中國文化大學教師教學創新暨教材研發獎勵成果報告書

壹、計畫名稱

Applying Audience Response System (ARS) in Formative Assessment in Freshmen English Class

利用即時反饋系統融入大一英文課之形成式評量

貳、實施課程、授課教師姓名

課程名稱: 外文:英文 (CB21-80)

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參、前言

In the purpose of the education, teachers always use summative and formative assessment to evaluate students' learning. In the summative assessment, the goal is to evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark. The examples include final project, final exam, and standard test (college entrance exam, language proficiency test, etc.). On the other hand, the goal of formative assessment is to monitor student learning to provide ongoing feedback. It can be used to improve teachers' teaching as well as improve students' learning. Examples of formative assessments include draw a concept map in class to represent their understanding of a topic, pop quiz, peer editing, and asking questions. Scholars have observed that learning outcome will improve only through effective implementation of pedagogical strategies in combination with the technology that ultimately influences student success (Reay, Bao, Li, Warnakulasooriya, & Baugh, 2005; Simpson & Oliver, 2007; Draper & Brown, 2004). Audience response system (ARS) is one of the technologies which has been widely used in formative assessment in the educational institutions in USA. Many researchers have found that most of students have high learning motivation when the instructors applied ARS in the learning process.

Audience response system is often used as a classroom response system. It is

called a personal response system, or student response system. It is a set of hardware and software that facilitates teaching activities. These activities can be used as formative assessment. The process of the activity is as follows:

- Teachers create computer- based multiple-choice question to their students through an overhead projector.
- Each student submits his or her answer to the question by using the cellphone.
- ARS will collect and give instant feedback to the students' answers.

As being an English teacher for low English proficiency students, I found that it is really difficult to involve those students in my on-going activities. Moreover, many students did not prepare for the tests or any preview homework because of their low learning motivation. In this case, I redesigned my curriculum and applied ARS into my Freshmen English class.

There are many different kind of software in the market, including socreative, khoot, etc. Kahoot is an extremely useful educational technology tool that requires minimum technical expertise for creating quiz, surveys and discussions. It can be used for learners of all ages and for all subjects. Therefore, I used Khoot as audience response system in my class.

肆、計畫特色及具體內容

There are some advantages as follows (特色):

- Help students identify their strengths and weaknesses and target areas that need work
- Help faculty recognize where students are struggling and address problems immediately
- Increase students' learning motivation through playing games
- Create a fun learning environment
- Set up a systematic formative assessment for students

Procedure (具體內容)

In the Spring semester of 2017, 57 students with low English proficiency who took Freshmen English class were participated in my project. In each two-hour class, I created 6 questions on the Kahoot and students had to answer it by using their cellphone App in the end of the class. Students' scores for each play were collected directly by

Kahoot. Moreover, I gave students two tests to examine their English proficiency in the beginning and in the end of the class in order to know their achievement (pre- and post-test). In addition, students were asked to fill in the motivation questionnaire in the end of the course. Furthermore, I observed and kept recording students' learning behavior throughout the semester.

伍、實施成效及影響（量化及質化）

Quantitative Results:

1. Pre-test and Post-test

In the English proficiency test, the mean of the test before using ARS was 52.6 while the mean increased to 67.2 after applying ARS in the class.

2. Motivation Survey

In table 1, it showed that the appropriate time of using ARS by student's opinion. 10.53 % of the students suggested that ARS should be used for all lectures while 56.14 % of the students preferred ARS to be used for most lectures. Moreover, 29.82 % of the students thought ARS should be used only for most difficult lectures whist 3.51 % of the students did not agree to use ARS in the class.

Table 3. When Should ARS be Used

Response	Number of Students	Percentage (%)
All lectures	6	10.53 %
Most lectures	32	56.14 %
Only most difficult lectures	17	29.82%
Never	2	3.51

Table 4 indicated that 84.21 % of the students preferred a course where ARS is utilized, while 15.79 % of the students preferred the course without ARS.

Table 4. Preference of Using ARS

Response	Number of Students	Percentage (%)
With ARS	48	84.21 %
Without ARS	9	15.79 %

Table 5 showed that 85.96 % students agreed that the use of ARS periodically helps to keep/maintain their attention while only 14.04 % said ARS did not help to maintain their attention in class.

Table 5. Using the ARS periodically throughout the class to helps maintain attention

Response	Number of Students	Percentage (%)
True	49	85.96 %
False	8	14.04 %

In Table 6, most of the students (92.98%) agreed that using ARS was beneficial to summarize and review the lessons.

Table 6. Using the ARS for summaries and review is beneficial to me

Response	Number of Students	Percentage (%)
True	53	92.98 %
False	4	7.2 %

Table 7 indicated that 54.39 % of students liked ARS only when extra credit is involved, 40.35 % students liked the ARS with or without credit involve, and only 5.26 % students did not like ARS at all.

Table 7. Opinion on ARS with Extra Credit

Response	Number of Students	Percentage (%)
I like the ARS only with extra credit	31	54.39 %
I like the ARS with or without extra credit	23	40.35 %
I don't like ARS at all	3	5.26

Qualitative Results

Aside from the survey, I also kept recording of the following observations throughout the whole semester.

1. Student attendance / attention

One of the main reasons for adopting ARS is to increase student motivation to attend class and actively engage in the learning process. Before the Mid-term period, when ARS was not applied yet, the attendance rate was 78 %. After the Mid-term, when ARS was applied, the attendance rate jumped up to 90%. It has also been observed that at the beginning of the semester, about half of students in the class got bored easily, usually fell asleep, involved in unwanted talk with each other, or started flipping through their cell phones. However, after applying ARS in the class, only a few students had unexpected learning behaviour.

2. Anonymity and participation

The students have developed more interests and likeness in using ARS in just less than two weeks of applying ARS. Most of the students were showing their excitement when I was about to use Kahoot in the end of the class.

陸、結論

This project found out that majority of the students were satisfied with using ARS just after few weeks of applying it in the classroom. Secondly, the findings of this study showed that the interaction among students were increased after using Kahoot in the classroom.

However, a few students who did not like Kahoot in this project was because they had a little computer proficiency.

Formative assessment is very important in the course of any classes. It is used to determine students' understanding of a particular topic without grades, in order to identify their weakness and alter the course of classroom instruction. ARS is therefore, a tool used to calibrate overall student understanding of a topic. A regular use of ARS in the class can offer real time feedback to both instructors and students as to how well a topic or a subject is being understood.

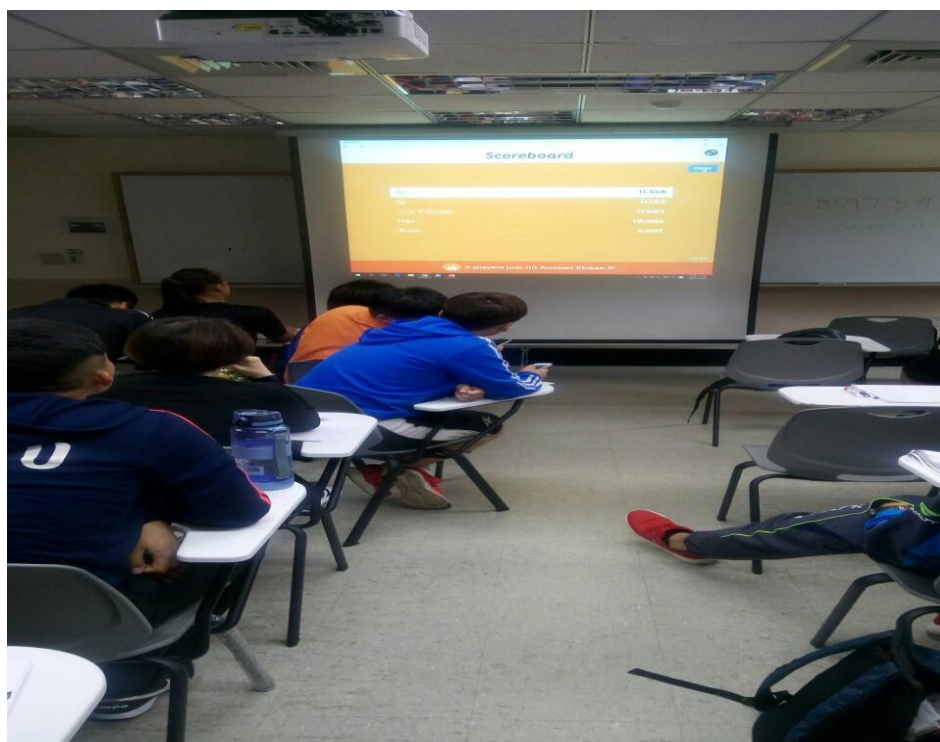
This project also found out that ARS promoted a competitive atmosphere. After ARS feedback was presented to the class, students were able to compare their understanding with their classmates, because students like to see how well they are doing in relation to their peers. Also, some students may want to monitor their progress in the classroom, while others may want assurance that they are not alone in their misunderstanding of the topic in the class.

Reference

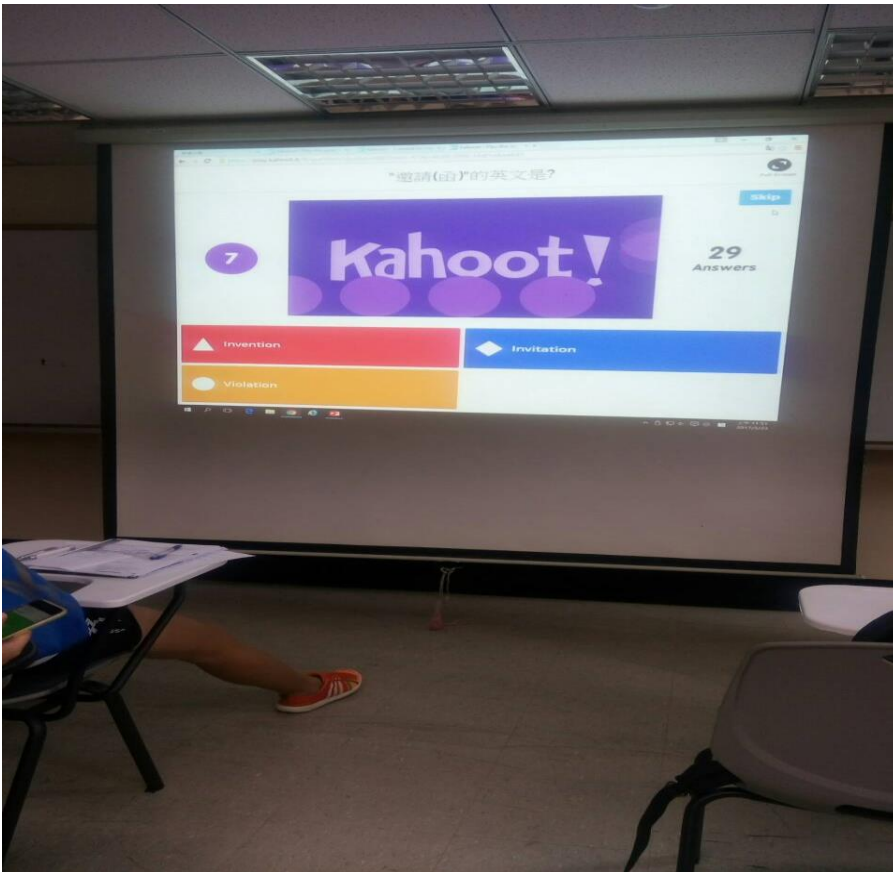
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柒、執行計畫活動照片



The process of using Kahoot



The example of the question showing from overhead projector



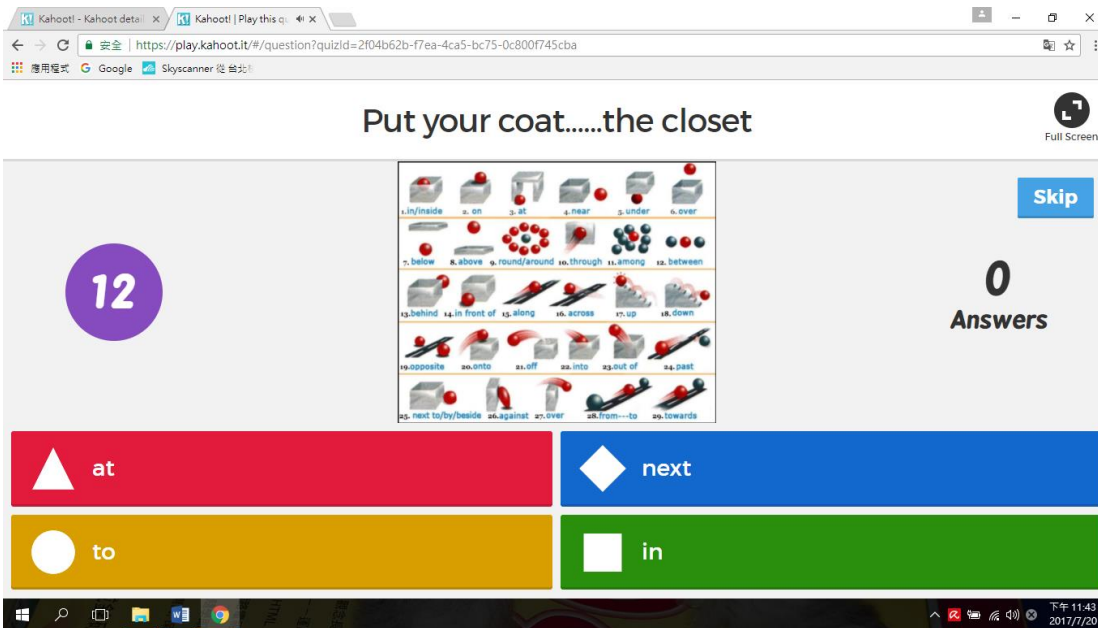
Students are ready to use their cellphone App for the Kahoot game

The screenshot shows a Kahoot! quiz interface. At the top, the browser address bar displays the URL: <https://play.kahoot.it/#/question?quizId=2f04b62b-f7ea-4ca5-bc75-0c800f745cba>. The main title of the question is "Please file these invoices.....payment pending." On the left, a purple circle contains the number "18". On the right, a blue "Skip" button is visible above the text "0 Answers". The central area features a 2x4 grid of images illustrating prepositions: "on" (owl on box), "under" (owl under box), "next to" (owl next to box), "in front of" (owl in front of box), "behind" (owl behind box), "between" (owl between boxes), "around" (owl around box), and "through" (owl through box). Below the grid are four colored buttons: a red button with a triangle and the word "under", a blue button with a diamond and the word "over", a yellow button with a circle and the word "on", and a green button with a square and the word "inside". The Windows taskbar at the bottom shows the time as 11:42 on 2017/7/20.

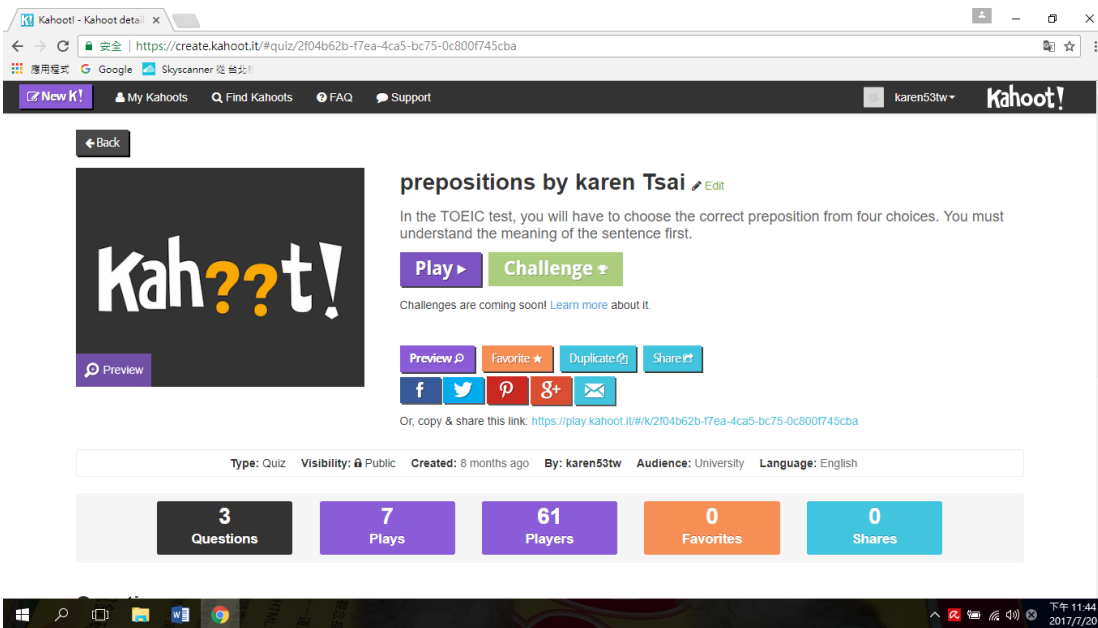
Example of the question

The screenshot shows a Kahoot! quiz interface. The browser address bar displays the URL: <https://play.kahoot.it/#/question?quizId=2f04b62b-f7ea-4ca5-bc75-0c800f745cba>. The main title of the question is "I always get nervous driving.....heavy traffic." On the left, a purple circle contains the number "16". On the right, a blue "Skip" button is visible above the text "0 Answers". The central area features a diagram titled "Prepositions" with the text: "Some of them tell us where or when things happen." and "Prepositions are small words that help us to add extra information to sentences." The diagram includes illustrations of a helicopter, a chef, a kangaroo, a horse, and a dog, each with a speech bubble or caption using a preposition. A list of prepositions is provided: above, against, all, before, beneath, between, but, during, except, for, into, like, near, opposite, over, past, since, through, until, within. Below the diagram are four colored buttons: a red button with a triangle and the word "on", a blue button with a diamond and the word "in", a yellow button with a circle and the word "by", and a green button with a square and the word "at". The Windows taskbar at the bottom shows the time as 11:43 on 2017/7/20.

Example of the question



Example of the question



Example of the question