To Vote, or Not to Vote: That is the Question. Interactive Response Systems and Grammar Practice

Alexandra Christine Green
University of Greenwich (UK), EUROGNOSI SA (Greece)
digialta@gmail.com

Abstract
Though the use of ICT in the foreign language classroom is omnipotent and a wide variety of CALL applications are implemented during class time, little research has been conducted on the use of interactive response systems to aid acquisition. In an aim to ascertain whether the use of an interactive response system, namely JustVote, would enable students to perform better when completing computer-based activities than when completing paper-based activities, an experiment was conducted in a Greek EFL classroom. Two groups of elementary students were created for the purpose of the experiment; a traditional group and a technology group. Both groups were exposed to Processing Instruction, a new genre of grammar instruction, which requires students to complete structured input activities after receiving explicit instruction, which in this case was on the English causative form. It is these structured input activities which were created on paper and on JustVote and which the two groups were exposed to. JustVote is a system that affords sophisticated software, which provides learners with the opportunity to interact with and respond to questions that appear on screen, by using their own personal handsets. During class time, there appears to be increased motivation and interest on the part of students and teachers alike and as such, it was deemed that students exposed to activities on the JustVote system would demonstrate higher results, due to the fact that the multiple choice questions were accompanied by vibrant images and students had the opportunity to 'vote' using their personal handsets, a factor that engages students and generates an element of fun. Further motivation for the study was provided by the fact that the JustVote questions were projected on an interactive whiteboard, a CALL application which according to Orr (2008) has brought the "wow" factor to the classroom. Despite this, however, and the fact that interactive whiteboards are ubiquitous in the contemporary EFL classroom, there is little empirical research on the positive effects the boards may have on second language acquisition. The results of the experiment were certainly interesting and will be discussed during the presentation; in brief, they demonstrated that the performance of the technology group was undoubtedly better than that of the traditional group ***short-term****, providing an affirmative response to the question: To vote or not to vote?, and a motive to conduct further research.*

Introduction
As part of the syllabus at the EUROGNOSI group of foreign language centres, the interactive response system JustVote* is implemented on a regular basis for evaluation purposes, in conjunction with the interactive whiteboard, which according to Tozcu (2008) boosts student enthusiasm, interest and engagement. Furthermore, the interactive whiteboard has been referred to as a 'digital take off' by Lee, Mal (2010) due to the fact that it has encouraged teachers to employ technology routinely.
Of the small amount of research conducted on the use of voting systems in the classroom, one is that of Schmid (2006) during which a voting system, a component of an interactive whiteboard, was used to determine whether it would assist students in the learning process. Findings were promising and they disclosed the potential of using this technology, together with an increase in interactivity amongst the students. Despite this fact however, as affirmed by Golonka et al (2012) "…*for most technologies, actual increases in learning or proficiency have yet to be demonstrated*." (p. 23) and it is this quote which has enhanced motivation for the present experiment, which was conducted in a Greek EFL classroom in order to evaluate the effectiveness of the voting system with regard to grammar practice and acquisition.

The rationale behind the experiment
The primary objective of the present experiment was to compare the effectiveness of process instruction, a new genre of grammar instruction termed as "…a type of focus on form instruction that is predicated on a model of input processing" (Wong, 2004, p. 33). in a traditional classroom setting and

a CALL environment with regard to the acquisition of the English causative. For the purpose of the experiment, therefore, the performance of students completing paper-based activities with the use of paper and pens was compared to that of students completing activities via the interactive response system, JustVote, by means of a computer and an interactive whiteboard.

The participants – a preface

In order to conduct the study, two groups of elementary learners were selected to participate in the experiment. All of the learners are students at the EUROGNOSI group of language centres and they are between 10 and 12 years old. Their mother tongue is Greek and they have all been studying English for approximately five years. Due to the fact that in this particular group of language centres, technology is integrated in language learning, all the students are familiar with the use of the afore-mentioned interactive white board and the interactive response system and during class observations conducted during the academic year, students' interest levels appear elevated when the JustVote system is implemented.

Setting up the experiment

In order to differentiate between the two groups, one group was termed the 'traditional' group and the other the 'technology' group and there were four students in each group, making a total of eight students participating in the study. Before the experiment began, a pre-test was administered to all the students in order to ensure that they were not familiar with the target grammatical structure, the English causative. The purpose of this was that their acquisition of this structure was being compared in a traditional classroom setting and a CALL environment and as such, any differences in performance would be attributed to the mode of delivery of the activities they were asked to complete.
There were two kinds of exercises in this pre-test, which was paper-based for both groups; one multiple choice exercise (interpretation task), which required students to choose the correct answer and one sentence completion exercise (production task), for which students were asked to complete the second sentence (view samples hereunder). The results of this test verified that none of the students in either of the two groups was in any way familiar with the target grammatical structure and the performance of both groups of students was comparable.
The production task consisted of eight questions, which each carried two marks. Learners were asked to complete the sentence using the words in brackets, as follows:

1. Robbie can't see very well. He went to the doctor's and he had
   …… (eyes / test).

The interpretation task was multiple choice in nature and learners were required to listen to sentences and circle the correct answer. There were fifteen questions, which each carried one mark.
Listen and circle the correct answer.
The teacher announces: *Mark has his bike fixed before the race* and students circle the correct answer.

1. Who fixed the bike?
a) Mark
b) Somebody else

Assessment

Assessment was measured by means of three tests; the afore-mentioned pre-test, a post-test, which students sat immediately after completing the activities and a delayed post-test, administered a week after the experiment ended. For both groups, all three tests were paper-based and they consisted of a sentence-completion production task and multiple choice interpretation task.

Processing instruction - an insight

All students were instructed by means of processing instruction, form-focused instruction concerned with how learners process input, and as such both groups were provided with the same explicit instruction on the target grammatical structure, which was delivered by the same teacher in the same classroom. It is important at this stage to note that explicit instruction is a prerequisite of processing instruction as are structured input activities, which assist students in making form meaning connections when they process input for meaning (VanPatten, 2002). There are two kinds of structured input activities: referential (view figs. 1.1 and 2.1), where there is a right or wrong answer and affective (view figs. 1.2 and 2.2), where students are required to respond by expressing agreement and/or opinion, using information from the real world.

After explicit instruction, both groups were asked to complete a selection of structured input activities (SIA); the traditional group completed paper-based SIA and the technology group completed these activities on a computer, by means of the JustVote interactive response system. It must be emphasized that the SIA were identical in content, the difference being their mode of delivery.

Ultimately, therefore, it is the students' performance in these activities that was compared in order to determine whether the interactive response system in actual fact aids acquisition.

JustVote - the affordances

In accordance with Collentine (1998) "*In a CALL environment, the principal stimulus candidates appear to be text, sound and video*" (p. 9), all affordances of the JustVote system, which can be implemented for consolidation, tests, quizzes and games and the questions that appear on the screen may be accompanied by images, video extracts and links, thereby generating a real-life setting in the classroom.

Owing to the JustVote system's sophisticated software, learners are provided with the opportunity to interact with and respond to questions that appear on a screen, by using their own personal handsets. During the present experiment, the questions in each activity were projected on an interactive whiteboard, a CALL application which in accordance with Orr (2008) has brought the "wow" factor to the classroom and as affirmed by Golonka et al (2012), has provided students with a greater ability to memorize material.

The experiment itself

In its entirety, the experiment lasted two weeks; two teaching days, each consisting of two 50-minute lessons in week one and the delayed post-test in week two.

On the first day of the experiment, the participants were divided; the traditional group sat at the back of the class and the technology group at the front, in order to have visual contact with the interactive whiteboard and the questions that would be projected from the computer screen onto the board by means of a projector. The teacher used the board for the purpose of explicit instruction and also provided the students from both groups with handouts which included information pertinent to the structure. The students were then asked to complete the structured input activities (examples of which are visible hereunder in figures 1.1, 1.2, 2.1 and 2.2). The traditional group circled the correct answer on paper and the technology group made use of their individual handsets in order to 'vote' for the correct answer, by pressing the button corresponding to the correct answer on their personal handsets.

Figure 1.1 Paper-based referential activity

Look at each picture and choose the sentence that matches.

1. a) Sam has his dog walked every morning.
   b) Sam walks his dog every morning.

Sam

Figure 1.2 Paper-based affective activity

Example:
Think of a friend of yours. Which of the following things happened to him / her yesterday? Which happened to you? Compare your answers with your partners.

	Friend	***Me***
Had his / her breakfast made		
Had his / her dinner cooked		

Figure 2.1 Computer-based referential activity

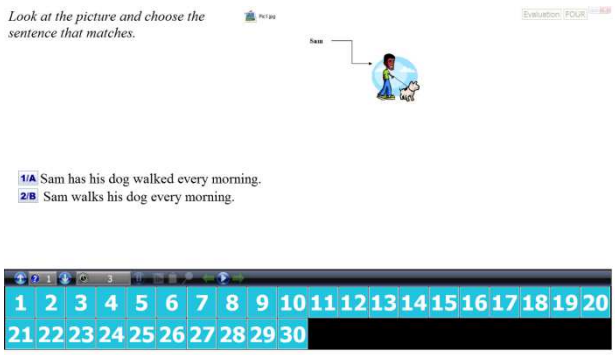


Figure 2.1.1

As illustrated in the image hereunder, the JustVote system enables students to click on the image or video extract and to view it full screen.

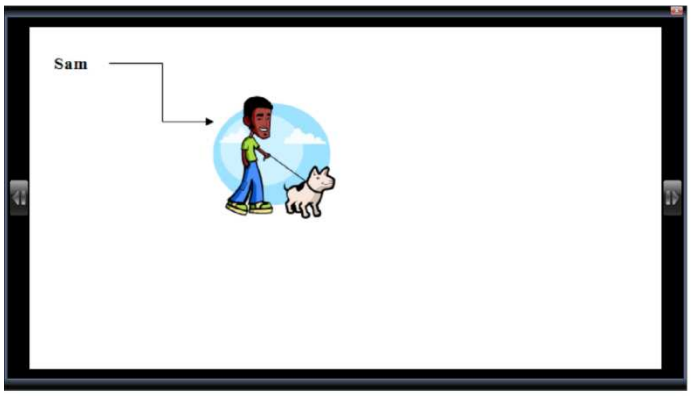
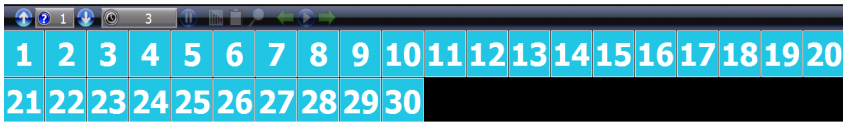


Figure 2.2 Computer-based affective activity

Which happened to you?

Compare your answers with your partners.

1/A Had breakfast made	2/B Had dinner cooked
3/C Had his/her bike fixed	4/D Had his/her room tidied
5/E Had his/her clothes ironed	6/F Had his/her house cleaned
7/G Had his/her homework done	8/H Had food delivered



On the second day of the experiment in week one, students were briefly exposed to explicit instruction once again and they were then asked to go to their groups and to complete additional structured input activities; the traditional group completed activities on paper and the technology group computer-based.

The aftermath

After students completed the activities, at the end of the second day, they sat a post-test, which was identical in structure to the pre-test administered prior to the beginning of the experiment and which would determine whether the interactive response system does in fact aid acquisition. It was estimated that the technology group would outperform the traditional group in this post-test, simply due to the fact that during class time, according to teachers in the group of language centres, motivation levels are elevated when the JustVote system is implemented as a result of the vibrant images accompanying the questions and the innovation of the handsets, enabling students to 'vote' for the correct answer. A delayed post-test was administered a week later.

The much-anticipated outcome

The results were certainly motivating and have provided food for thought with regard to the use of voting systems in class. After receiving explicit instruction and completing the structured input activities, the performance of both groups increased considerably. Nonetheless, the technology group did, without a doubt, outperform the traditional group in the post-test, both in the multiple choice (interpretation task) and sentence completion (production task) exercises. In the former exercise, their average score increased from 6.25 out of 15 in the pre-test to 14.5 out of 15 in the post-test and whilst that of the traditional group increased from 6.0 out of 15 to 12 out of 15, it did not match the improvement made by the technology group. With regard to the sentence completion exercise, the mean of the technology group increased from 5.25 to 13 out of 16 in the post-test, whilst that of the traditional group increased from 3.5 to 9.25 out of 16. In the delayed post-test, there was not such a

significant difference in the performance of both groups, something that may be attributed to the fact that the technology group had wished to complete a computer-based test, using a voting system.
The results of the experiment provide an affirmative answer to the question: to vote, or not to vote. The answer is yes, based on the results of the present experiment, interactive response systems in the EFL classroom not only motivate learners and ensure class interaction, they also increase students' performance and assist in short-term acquisition. There is definitely room for further research on the use of voting systems in the foreign language classroom, in tandem with the interactive whiteboard, and a starting point could potentially involve the presence of a computer '*on every desk'* (Bax, 2003), so students would not only have their own personal handsets but their personal computers, too, which would provide them with enhanced motivation and would potentially guarantee long-term results.

*JustVote Aclass technology (UK) Ltd

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