

Effectiveness of clickers as a source of feedback in a Spanish language classroom

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Introduction

Explicit feedback, particularly metalinguistic explanation, has been shown to have an advantage over implicit types of feedback in promoting second language development.² However, in studies comparing the relative effects of type of feedback on grammatical development,^{1,3,4} either a teacher or computer has served as the primary source of feedback. No literature currently exists regarding the use of clicker technology as a method for providing simultaneous feedback in language instruction.

This study contributes to the second language feedback literature by exploring the effects of explicit feedback using clickers on the performance of the problematic distinction of the two verbs in the Spanish language that are used to mean “to be”. Our goal was to use clickers as a way to provide simultaneous feedback to promote development of this verb, and at the same time explore the effectiveness of clickers in language learning since neither has been studied.

Method & Design

Participants	Criteria	Treatment	Testing materials
-Age: 18-35 yrs. -Beginning level Spanish -Four intact classes SPAN 001 -Original N=58	-Background Q -Home language: English -Other home languages accepted (+Eng) -No study abroad experience -Pretest scores (avg. across groups) -N=37	-PPT: Introduction to all uses of <i>ser</i> and <i>estar</i> with examples -20 treatment slides w/clicker feedback +1 reason slide stating why answer is correct	-Grammaticality Judgment Task (9 target): Pre → Post → Delayed (+4 new) -Structured production (5 target): Pre → Post → Delayed (+5 new) -Reflection Q's (student & instructor)

Figure 1: Quick overview of study.

As Figure 1 shows, this study took place over the course of one semester using four beginning Spanish classes. A total of 58 college-aged English-speaking beginning learners of Spanish participated in the study while four Spanish instructors observed. Learners were divided into two groups; one group was shown the reason why the answers were correct while the other group of learners had to first generate the reason why the answer was correct before seeing it.



All learners were introduced to uses of *ser* versus *estar* in context and given a pretest. A series of 20 multiple-choice clicker questions were used. Learners were shown the correct answer, viewed their performance in relation to their peers, and then completed posttests.

Two weeks later, learners completed delayed posttests to include retention performance in the study. At the end of the experiment, all learners and instructors were asked to complete a short questionnaire to assess instructor and learner perceptions on the use and effectiveness of clickers in relation to their respective tasks of teaching and learning.

Findings

Statistical analyses of the data were carried out using One-way Analysis of Variance (ANOVA) to determine learning outcomes. The data presented in Figure 3 show that significant improvement from pre to posttest for both the receptive (GJT-Grammaticality Judgment Task) and productive measure (PROD-structured fill-in-the-blank) tests. Moreover, the tests on delayed learning (the delayed Time 3 scores) show retention was maintained over a two-week period.

In addition to the quantitative data collection, we also administered a questionnaire to participants at the end of the study. Learner feedback produced qualitative response trends in which the adjectives “attention”, “motivating”, “fun”, “cognitively engaging”, and “effective” were frequently repeated. They found them to be a beneficial use of class time, as well as helpful in improving performance with continued use.

Instructors who observed the class period shared their perspectives, which were highly positive as well in terms of allowing them to gauge student performance as a whole and subsequently target their feedback in a more coherent manner.

Therefore, findings suggest that clickers not only prove beneficial in teaching verb and grammar concepts, but also in promoting student engagement, attention, and participation.

Significant immediate learning effects?

♦ Immediate learning: Pre (T_1) → Posttest 1 (T_2)

Repeated Measures ANOVA (2x2)	Time (Old)		T_2 (Novel)
GJT	* $p < .001$	GJT	2.65/4 (0.87)
PROD	* $p < .001$	PROD	2.83/5 (1.5)

♦ Delayed learning: (T_1) → T_2 → Posttest 2 (T_3)

Repeated Measures ANOVA (3x2)	Time (Old)	2x2 (T_2 → T_3)	Time (Novel)
GJT	$p = .13$ ✓	GJT	$p = .20$ ✓
PRODUCTION	$p = .07$ ✓	PROD	$p = .12$ ✓

Figure 3: Results of immediate and delayed learning.

Conclusions & Recommendations

After conducting this study, it is evident that clickers can be useful tools in the second/foreign language classroom. The use of clickers seems especially relevant for providing practice and feedback for problematic areas of development, like the *ser/estar* distinction for beginning English-speaking learners of Spanish. Clickers could also be used to enhance learning for other known, difficult targets such as the preterite/imperfect past tense distinction or used to create competitive games and review activities. At more advanced levels, clickers could potentially be used to foster discussion of content and to elicit opinions in the target language by having students defend their answers. Although this study is based on one clicker experiment at one proficiency level, there are endless possibilities to explore with this personal response system.

Literature Cited

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