Enhancing Quality in Language Education
with Clicker Technology

Karen McCloskey, Nanyang Technological University, Singapore

Abstract: This paper illustrates the cultural and grammatical trials conducted with clickers in order to improve the teaching and learning on both sides of the learning coin. In the first case, students were exposed to a series of clicker questions asking them to choose between two French past tenses in order to establish and reinforce the grammar in question. In the second case, students watched a video containing cultural stereotypes and then answered a series of clicker questions relating to the content to spark discussion. In each case, a control group not having exposure to the clickers is used to contextualize our findings. The trials in addition to the student and professor feedback serve as a springboard in understanding the major advantages (and minor pitfalls) in adopting this technology in language classes.

Keywords: Clickers, Student response systems, Language learning

Introduction

Audience response systems, also known as personal response systems or clickers, have been used in large classes for a decade. Clickers are remote-controlled devices about the size of a credit card that allow users to record a response via radio frequency technology to a multiple choice or true or false question to a receiver connected to the instructor’s computer. Software installed on the computer, in my case Turningpoint, analyses the data and provides a graphical display with immediate feedback of the class’ results, which can be anonymous or linked to the individual student by an ID code. The benefit for the researcher is that the information can be stored for future analysis.

It makes sense to implement a way of easily getting feedback from large amphitheatre classes. However, in the last few years people like Sandra Miller and Jacob Felson have been asking ‘Student Response Systems: Are They for Large Classes Only?’ (the title of their 2009 article). Even fewer examples exist in which clickers are used in the language classroom. When I started using them last year, I found that Derek Bruff, the director for the Vanderbilt Center for Teaching, has a website to keep researchers aware of colleagues that are teaching with clickers. At the time, on his website, he only mentioned Ellen Johnston, a PhD student in Georgetown doing a small project on teaching the two ‘to be’ verbs in Spanish, ser and estar. He and I have both separately found Walcir Cardoso since then, who has so far only published about the students’ perspective of using clickers, but I await more publications about his project using clickers for vocabulary acquisition in the ESL classroom. In fact, Cardoso is the only one that Bruff cites under the language section of his clicker bibliography. Rifka Cook has a video on YouTube about her use of clickers in her Spanish and Hebrew classes.

Clickers in small classes

So, what benefits can the use of clickers offer in the generally smaller language class? Clickers bring with them the promise of a more entertaining atmosphere. Most people are familiar with the use of clickers outside academia on the TV game show “Who Wants to Be a Millionaire”, in which contestants answer a series of multiple-choice questions on a quest to
win a million dollars. En route, they may use ‘lifelines’ or aids including polling the audience, just as we do when we use clickers. So, by using clickers, we instantly evoke a game-like atmosphere that engages students and puts them at ease. Before embarking on my first project, I read the literature to see what the pitfalls might be, but the only general concern was the cost of the clickers (around 50 SGD per clicker) plus the cost of the receiver for the computer (around 300 SGD). Since technology is a focus at the Nanyang Technological University, students are provided with clickers for free, so this was certainly not a drawback for me. So, with no obvious drawbacks and the promise of student engagement, I have attempted to enhance the quality of instruction in my introductory French classes by conducting trials using clickers in varied ways over the last year. I will detail one grammar application and one cultural application as an overview.

**Trial I: Grammar Application**

My first trial consisted of using the clickers for teaching grammar to students who are in their third semester of studying French. The use of the clickers needed to be simple, since I wanted the students to focus on the differences between two complicated past tenses in French, the *passé composé* and the *imparfait*. (Full trial details in McCloskey, K, 2013) The students were taught the formation of *passé composé* the previous semester. I showed them the conjugation of the *imparfait* in the preceding class to my trial and outlined the general more durative uses of the *imparfait* in relation to the easier-to-grasp grammatically perfect (or completed) action of the *passé composé*. I devised 6 questions in which the students would have to supply the verb in one of the two tenses. I constructed the first clicker question so that it was purposefully ambiguous to have the students figure out for themselves the importance of the context in which the utterance was used. As expected, the results of the clicker poll were split almost fifty-fifty between the two options given, as there was no contextualization to further clarify the statement; the students already realized the importance of the context. I used the *think-pair-share* technique in which the student responds to the question using the clicker and then discusses with a peer before joining in a re-poll as a means of sharing the results of the discussion. Since the re-poll gave us similar results, no one was swayed by their ‘more knowledgeable other’ (Vygotzky, L.S., 1978) and realized it was because they could all be correct in a given context. The subsequent questions offered a clear context requiring a specific response. The clicker responses allowed me to track the students’ understanding of the verb tense required. If we had immediate agreement from all students, we could move on to a more difficult point without hesitation. If the responses indicated more reflection was necessary, we could spend the time discussing and re-polling as necessary. For example, I was surprised to see the results of the final question: 46% of the class could not apply the rule whereby the *imparfait* should be used to describe states of mind except when the beginning or the end of the action is known, even though we had just mentioned it in regards to the previous question. We then took the time to reinforce the clues in the sentence that would reveal to us that the beginning or the end of the action was clear. As their instructor, I might have missed this vital practical step had I not been reacting to the clicker feedback that was provided to me instantaneously.

To assess the effect of this technique using clickers, I administered a pre-test and a post-test to see if there was an evolution in the understanding of these verb tenses. The two tests were also applied in a control classroom where the clickers were not used. While both classes showed a similar improvement in test scores, every student in the clicker classroom improved consistently, whereas in the control classroom the improvement was inconsistent (meaning some students had improved significantly but others not at all or scored lower). This
demonstrates that the group dynamic and immediate clicker feedback allowed for a deeper real-time reflection by the students and opportunity for the teacher to immediately identify gaps in understanding that conventional methods do not offer. I have since repeated this clicker class in the following semester with similar effect.

**Trial II: Culture Application**

Since the students were very animated in the grammar clicker trial and I found that I gained insight into the inner thoughts of my small class of 17 students, I decided to try another clicker project, but this time with a cultural focal point. Since, as Claire Kransch tells us in Language and Culture, ‘Our perception of someone’s social identity is very much culturally determined. What we perceive about a person’s culture and language is what we have been conditioned by our own culture to see, and the stereotypical models already built around our own” (1998, 67). So we know that our language students are coming to their introductory classes with some degree of these widely held but oversimplified images and thought perhaps we could address them instead of ignoring or (worse yet) reinforcing them through our language instruction, as was the finding in Isabelle Drewelow’s recent study with some American learners of French (2011). This project spanned three introductory French classes with approximately 20 students in each. The project was part of a larger scale project of similarly-sized Japanese courses taught by a colleague, but which I will not address here. The goal of this trial was to see whether an overt discussion of stereotypes in an introductory language would have a bearing on the affirmation or refusal of said stereotypes.

The trial was structured so that the three classes were treated differently. Only two groups had a discussion about stereotypes after watching a humorous video containing stereotypes about the French (more specifically Parisians). There was also a control group that did not have an overt discussion about stereotypes, but like the others they watched the video and did have a pre- and post-film questionnaire (in fact the questionnaire was administered late in the semester to take stock in the eventual evolution of the students’ thought processes). The purpose of the questionnaire was to establish the currently held stereotypes. As a Canadian still getting to know Singaporean culture myself, I was unsure what the students would state as stereotypical of things French. The responses from the questionnaire were used to frame the discussion about stereotypes for the two discussion groups. The difference between these groups was that one had a discussion using clickers and the other did not.

From questions such as “What is the difference between Singaporean culture and French culture?”, I was able to see several ideas emerging as generally maintained stereotypes of my Singaporean students. French people enjoy ‘good food’, are ‘refined’, ‘well-dressed’, ‘artistic’ and a bit ‘arrogant’. They considered the French as ‘laid-back’ compared to the ‘hectic’, ‘stressful’ and ‘busy’ lives that they lead as Singaporeans. The most common word used to describe their culture was ‘diversified’, as there are Chinese, Malay, Indian and Foreigners in Singapore.

Bearing these impressions in mind, I devised a lesson plan in which students watched a video containing humorous stereotypes in hopes of opening their eyes to their own, but without spoon-feeding my own thoughts on the subject to the students. I showed an excerpt of the film, *Bienvenue en Suisse* (Welcome to Switzerland) in which a French woman in her 40s vacations in Switzerland and has difficulty adapting to Swiss culture. As the same time, the Swiss respond in kind with stereotypes of the French (such as not respecting traffic signals and throwing trash on the ground).
The discussion session following the film was enlightening. I will highlight two questions posed to the students for contemplation. In the first class, I conducted the discussion without clickers. Bear in mind, the students in our language classes are non-linguistic specialists from a variety of fields, so the discussion was met with varied levels of preparation for discussion. When asked why the film was funny, the non-clicker class was not eager to share their ideas, as is often the case at the beginning of a discussion when no one wants to single himself out. This was not at all the case in the clicker class where the students merely had to choose one of three responses: because we do this 1. a lot in my culture 2. a little in my culture or 3. not at all in my culture. This was then the jumping off point for the discussion, as we could all, myself included, respond to the position of every student in the class. Of course, one could argue that this type of class was better structured for clicker use and that the non-clicker class was disadvantaged from the start, but I could not think of a method that would better suit a cultural discussion for these introductory language students.

Another example of the effect of the clicker use occurred when I asked the students why it was funny that the Parisian woman threw her trash on the ground and all the Swiss stopped to remark upon it. In the non-clicker class, I was given the impression (as only one or two students voiced their opinion and no one disagreed) that in Singapore it is against the law to litter and so none of the students would do this. But, living in Singapore I do see trash on the ground and came prepared to class with a few photos, so I asked the students where does this trash come from then? In a culture where it is very important to ‘save face’ no one wanted to admit that they might have done a misdeed in contributing to the litter, but they did concede that obviously someone is littering. However, in the clicker class I was surprised to see that when we polled the class 63% of the students admitted to sometimes throwing trash on the ground. The anonymity assured by the clickers allowed the students to express themselves freely and truthfully. The students could then react to the thoughts of their peers, knowing where they placed amongst the views of their classmates.

After administering a late-semester questionnaire to the students, we were able to see that 33% of the students in the non-overt discussion group felt their opinions of stereotypes of the French had changed compared with 55% of the clicker class and 64% of the non-clicker class. Since the non-discussion group also saw the video and filled out the questionnaires, some of them were apparently able to reflect on the subject on their own. In the final survey, students made fewer generalizations, such as “people in France are very particular about fashion, but this is not particular to all the French”. One student mentioned that she noticed a respect for ‘seniors’, as evidenced by the use of the formal ‘vous’ or ‘you’ form, as a demonstration of something that she had not known before and something that brought her culture where this is also evident closer to that of the French. Stereotypes were used as a pedagogical aid enabling students to more closely identify with the target culture. Since an evolution in the thought process was recorded in the last survey, the students moved beyond the ‘cultural appropriateness’ of the language and have made one step toward the concept of appropriation, which Kramsch describes as happening when “learners make a foreign language and culture their own by adopting and adapting it to their own needs and interests” (1998, p. 81).

Discussion

So what have these trials taught me about integrating clicker technology into the language classroom? After all this technology is a tool and not a pedagogical strategy in and of itself.
By comparing two very different uses of it some trends emerge. First, the primary benefit of clickers is the immediate feedback that they offer. In *Input and Evidence*, Carroll reminds us “Correction and feedback are thus always a sort of interruption of the normal flow of information […] It defines ‘a mental space’ to which the learner’s attention can be drawn and within which additional processing can occur” (Carroll, S., 2001, pp. 355-56). Clickers allow the feedback to have more of a starring role than the usual interruption to language production, and subsequent correction can come from peers or from the instructor. Despite the numerous studies on the advantages and disadvantages of implicit and explicit feedback in language classes, Metcalfe, in his study of vocabulary learning, maintains that “[…] a compelling argument for why immediate feedback might result in superior performance can be made: If an error is allowed to stand uncorrected, it may be rehearsed, consolidated, and strengthened and may be more likely to recur than if it were immediately corrected. If feedback is given immediately, the correct answer, rather than an error, can then be rehearsed and consolidated” (Metcalfe, J. et al, 2009. p. 1077). In the case of grammatical correction, this logic is solid. When students are interacting with clickers they are called to think critically about the tasks and to be continually processing ‘on the spot’ and therefore the immediate feedback is integral to the process. When asked in student surveys if they liked the immediate feedback that clickers provide, the students overwhelmingly give a positive response (In fact, 100% of the students of the grammar project said that they prefer the immediate feedback offered by the clickers to delayed feedback).

In addition to the usefulness of the immediate feedback afforded by the clickers, the coupling of the technology with a think-pair-share pedagogical approach is a particularly effective method for peer learning. Although this method by which a student thinks about an answer, pairs with a peer and then shares about the discussion with the class can be useful on its own, it is even more effective when used with clickers. The knowledge of where the students’ answer fits into the class responses seems to fuel the debates more. At least this was the case in my trials, as a student very rarely held an idea by himself and therefore was arguing his point with the backing of a certain percentage of his peers.

As with any technology, there are bound to be some pitfalls and I would be remiss to not mention the minor ones that I have encountered. There is no one technique to creating clicker questions and they are the absolute key to a sound pedagogical application of the technology. Therefore, a lot of time goes into constructing the right questions and there is some trial and error involved as well. If I were to repeat my culture trial, I might not oversimplify the options that I presented to the students, for example. Gaining a working knowledge of the software did not pose a problem, as it is quite user-friendly. Extracting the data requires an extra step and some supplementary knowledge that again is a bit time consuming. I have, however, encountered a little bug when incorporating my usual Powerpoint slides into a Turningpoint presentation if I have a hyperlink in one of them. I have since been assured that this has been taken care of in the most recent version of the software.

**Conclusion**

Student feedback on the clicker technology seems to echo that of the instructors involved in the projects I am working on. Anecdotally, I can say that clickers improve the atmosphere of the class. They live up to the claim to be ‘fun’. It is not easy to take an approach that will engage every student; especially when conducting discussions, there are always students that are more vocal than others. Clickers offer a chance for everyone’s opinion to be shared. In the culture trial, 100% of the students in the clicker class said that we should continue to use
clickers in our French classes. Such a consensus with any technique is truly noteworthy. There is quite a debate surrounding whether clickers improve grades, but in my experience they definitely increase the quality of language learning in my classroom.

References


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