USE OF PLICKERS ASSESSMENTS TO ENHANCE STUDENT ENGAGEMENT IN ESL CLASSES

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ABSTRACT

Understanding and evaluating students' attention and engagement are pivotal issues and challenges during lecture hours yet an important criteria of classroom management. Thanks to emerging researches that document the positive effects of quizzes and polls that prove to be effective today in regular offline classes in order to foster active learning and mitigate student distraction effectively. The purpose of this study is to document the positive impacts of conducting quizzes or polls using Plickers. After multiple times of experimenting with Plickers, it is found that the teacher is able to instantly check the student responses and assessment report for every question based on classroom lectures and student engagement. Students found this activity highly convenient, engaging, and easily accessible because they don't need any device like mobile/laptop/PC/tablet to answer the questions. Automated results of quizzes and quantitative analysis of student questionnaire confirm the enhanced engagement and active participation of students. Thus, the use of Plickers is suggested to be an effective strategy for enhancing student engagement in ESL classes.

Key words: Plickers, student engagement, quizzes or polls, lecture hours, active learning

INTRODUCTION

It is quite common for a teacher to walk in a classroom having unenthusiastic, unwelcoming or even slumber some students irrespective of any lecture hour in a day. That too, in the post-COVID situations,

there has been an increasing pressure among teachers that the attention span of students is worse and some have developed an aversion or inhibition towards long lectures being delivered. However, if the teacher's motive is to instigate student engagement in classes, he/she can find a unique way to incite learning, interaction and feedback among students through the implementation of student response systems (SRS) such as Plickers. As experienced teachers, we always ensure that our lectures are packed with enough information related to the content, coupled with an experience of the most common mistakes students do when they attempt those questions in tests and exams. Hence, interactive SRS like Plickers becomes a mandatory tool for an outcome oriented teacher. The method of application is one and easy, yet the objectives to conduct this Plickers activity are many.

Plickers assessments can be held as the first activity of the teacher in the beginning of the class to assess how far students have assimilated the previous lesson or as the diagnostic test for the lesson of the day to understand their entry level knowledge. Otherwise, as in Coursera courses, it can be conducted during the lecture time to cross verify the students' listening and the questions can be based on

the lecture that is being delivered. Also, the same can be conducted in the last few minutes of the class to have a quick revision of that day's important take away. Thus, Plickers activity can be heldas a three-tiered (pre-in-post lecture) activity. Besides these, there are many benefits like, the automated results recorded automatically can instantly display the levels of interest, participation and progress shown by the students.While there has been limited research on the use of Plickers in English as a Second Language (ESL) classes, there are few studies that have investigated its potential effectiveness. One study by Raja and colleagues (2019) investigated the use of Plickers as a formative assessment tool in a Malaysian ESL classroom. The study found that students were engaged and motivated by the use of Plickers, and that it was effective in helping teachers to identify areas where students needed additional support. Additionally, the study found that Plickers helped to create a more interactive classroom environment, which helped to enhance student's learning experiences.

Another study by Abdullah and colleagues (2018) investigated the effectiveness of Plickers in assessing students' understanding of English vocabulary in an ESL classroom in Saudi

Arabia. The study found that Plickers was effective in assessing students' understanding of vocabulary and that it helped to identify students who needed additional support. The study also found that Plickers was easy to use and that it helped to create a more interactive classroom environment. A study by Aljuaid and colleagues (2020) investigated the effectiveness of Plickers in assessing students' understanding of grammar in an ESL classroom in Saudi Arabia. The study found that Plickers was effective in assessing students' understanding of grammar and that it helped to identify students who needed additional support. The study also found that students were engaged and motivated by the use of Plickers and that it helped to create a more interactive classroom environment.

Overall, the limited research on the use of Plickers in ESL classes suggests that it can be an effective formative assessment tool. Plickers can help to engage students effectively, identify areas where they need additional support, and create a more interactive classroom environment. However, further research is needed to determine the effectiveness of Plickers in different contexts especially in a larger Indian classrooms and with different group

of ESL learners. This particular study is an attempt to enhance student engagement in ESL classes using the Plickers activity.

METHODOLOGY

The researcher used the plickers app for conducting a quiz usually at the beginning of the classes and rarely towards the end of the classes to check students' understanding. The following steps are adapted by the researcher. First to download and install the Plickers app. Classwise students' names were then logged separately in the Plicker app's dashboard (Figure 1). Jumbo size Plickers cards were freely downloaded from the website that had print-ready cards in various sizes and quantities. A Plickers card has a customized quick response (QR) code printed on a paper that has four options (A, B, C or D) and the corresponding card number between 1 and 63 on the sides of the bar code (Figure 2). Each student was assigned a (according to their namelist order) plickers card having numbers from 1 to 63. Students were briefed on how to hold choice options using the plickers cards. After briefing and clarifying doubts, individually assigned plickers cards were handed out physically to each student in the classroom. Multiple-choice questions were shown to the students using the projector. When all the students held up

their corresponding answers to questions using plickers cards, the teacher scanned the answers of students using the mobile phone. When the quiz was completed, student's cumulative scores were scrutinized to understand their assimilation level. The quiz conducted using plickers cards provided an exciting opportunity for students and teachers to conduct formative assessment without the stress of taking a test. An attitudinal questionnaire was designed and generated from Google Forms to elicit feedback from students regarding the Plickers activity held by the teacher. Students' responses provided the researcher with a much-needed incentive to continue the activity in the following semesters.
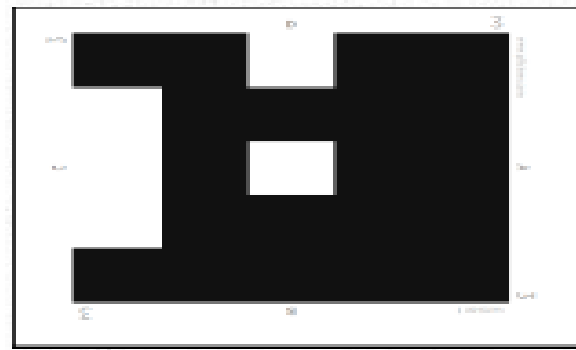

Figure 2–Sample Plickers Card Result

The report data that are collected after scanning easily allow the teacher to identify where a learner has performed better or poor (refer Figures 4.1. and 4.2). The overall class report also indicates knowledge gaps, as well as being able to identify on the whole-class level where learners lack understanding. Hence, based on which the teacher can work on modifying his/her lectures accordingly so that the understanding level is improved among all the students. Here, the use of Plickers can improve both the teaching strategies of the teacher and the learning ability of students.
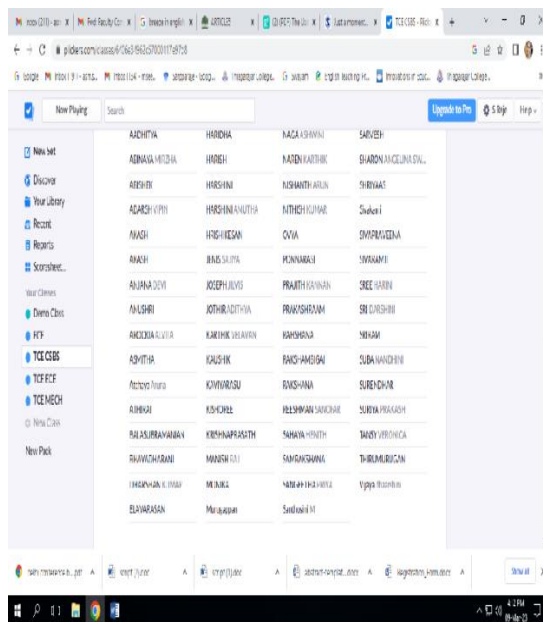

Figure1 Shows–Researcher's Plickers Dashboard

Figure 3–Plickers Report of the Class

Mukunthan N • 100%

13 February - 19 February 2023   1 correct •0 incorrect •1 missed

| Determiners 100%

MISSED

Choose the appropriate quantifiers to complete the sentences:
1. We have interviewed with twenty candidates for the vacant position, but ---- of them was actually a good fit.

☑ neither
B most
C none
D much

Moreover, the analysis of the student questionnaire reveals the benefits and the positivity students have on Plickers activity (table 1). 72% of students were interested in the activity and 88% students responded that they paid attention during the activity. 61% of students agreed that they got motivated by scores and no student was bored out of the activity. Through the analysis, it was understood that the students appreciated and welcomed the activity.

Figure 4 Plickers Report of a Student

Table 4.1. – Analysis of Student Questionnaire regarding the Plicker's Activity

S.No	Items on Questionnaire	Mean	Mode (in %)	SD
1	Today's Plickers activity kept me interested.	4	72.7	0.68
2	I paid attention during today's activity.	4	88.1	0.79
3	I wanted to complete the quiz first.	4	76.27	0.68
4	The quiz was boring and not engaging.	2	100	NA
5	I get motivated by the rewards/scores/points.	4	61.01	0.72
6	I clicked random answers to the quiz and poll questions.	2	89.6	0.35
7	I concentrated on the quiz to get correct answer.	4	67.72	0.88
8	I answered the quiz without seeing others.	4	72.88	0.64
9	I do not think this Plickers activity was worth our time and effort.	2	99.73	0.27
10	I felt increased pulse to check my answers on the scoreboard	4	72.88	0.69

Note: Likert scale items = from 1 - strongly disagree to 5 - strongly agree.

SD- Standard Deviation,

NA- Not Applicable,

Mode = maximum median respondents value / total population response numbers.

Based on the data analysis provided in table 1 on the use of Plickers activity to enhance student engagement in ESL classes, the following inferences are drawn:

Regarding overall interest, incorporating technology into classroom activities can increase student interest and

engagement (Mazer *et al.,* 2007). Also, a study by Kim, Park, and Baek (2014) shows that interactive technology, such as Plickers, can enhance student motivation and attention during language learning activities. Rightly confirming their findings, the score 4 indicates that students found the Plickers activity interesting, suggesting that it successfully captured their attention and kept them engaged. Studies by Chen and Wang (2018) and Warschauer and Healey (1998) demonstrates that using technology-based activities can create a more dynamic and interactive learning environment in ESL classes, leading to increased students' attention and focus. Rightly, the score 4 for the statement "I paid attention during today's activity" suggests that students were attentive during the Plickers activity, indicating a positive level of attention and focus.

Researches by Hughes and Higgins (2010) and Hidi and Renninger (2006) highlights the importance of goal-oriented activities, such as quizzes, in fostering student motivation and engagement in the learning process. Similarly, the score of 4 for the statement "I wanted to complete the quiz first" suggests that students perceived the quiz as important and were motivated to prioritize completing it. The mean score of 2

for the statement "The quiz was boring and not engaging" indicates that no student found the quiz uninteresting or boring.While there is no specific literature evidence provided for this inference, it is essential to consider that individual student preferences and engagement levels may vary. It is possible that some students may find certain activities less engaging or boring, even if the majority finds them interesting. However, without any deviation, every student has approved the interesting nature of the Plickers activity is one worthwhile point to incorporate the same in ESL classes.

A study by Deci and Ryan (2000) emphasizes the significance of extrinsic motivators, such as rewards and points, in enhancing student motivation and engagement. Further research by Garris, Ahlers, and Driskell (2002) suggests that the use of game-like elements and rewards in educational activities can increase student's engagement and motivation. Matching their findings, the score 4 for the statement "I get motivated by the rewards/scores/points" suggests that the students were motivated by the rewards, scores, or points associated with the Plickers activity. The low mean score of 2 for the statement "I clicked random answers to the quiz and poll questions" indicates that only an

insignificant percentage of students may have randomly selected answers instead of engaging in thoughtful responses. Although there is no specific literature evidence provided for this inference, it is generally commended to encourage thoughtful and meaningful responses from students to promote deeper engagement and learning.

The score 4 for the statement "I concentrated on the quiz to get the correct answer" suggests that students were focused on obtaining the correct answers during the Plickers activity. This outcome is similar to the research findings by Bainbridge, McCalman, and Sheard (2007) which highlights that technology enhanced quizzes can promote student concentration and focus on the learning task. The score 4 for the statement "I answered the quiz without seeing others" indicates that the students answered the quiz questions independently without being influenced by their peers. This confirms to the research finding by Wu and Marek (2017) who found that the use of technology tools promotes individual participation and independent responses from students.

The low mean score of 2 for the statement "I do not think this Plickers activity was worth our time and effort" suggests that a majority of students found

the Plickers activity valuable or worthwhile. The perceived value and worthiness of an activity can vary among students but it is significant to note that except a slight deviation, most of the students agree to the worthy utilization of time while answering during Plickers activity. While there is no specific evidence provided for this inference, it is crucial to consider student's individual perspectives and experiences when assessing the value of an activity. The score 4 for the statement "I felt an increased pulse to check my answers on the scoreboard" suggests that students were motivated to monitor their performance and compare it to their peers through the scoreboard. Studies by Kuh and Hu (2001) and Butler and Winne (1995) prove that performance comparisons and feedback can positively influence the student engagement and self-regulation.

Overall, the data analysis presented in table 1 indicates that the Plickers activity was successful in generating interest and maintaining student engagement. It is also important to note that a significant number of students perceived the activity as worthwhile. Yet another major benefit of Plickers is that it is very minimal to no expense for the teacher or institution. As the app relies on laminated or printed cards that

are scanned by a single smartphone/tablet, this can be less intimidating for technology-challenged teachers. It allows teachers to focus more on teaching than on setting up of the assessment (Kent, 2019). The teacher can keep the technology away from students to make them concentrate only on the lecture content being delivered. However, there were a notable proportion admitted to randomly selecting answers. These findings can provide insights for improving future implementations of Plickers activities in ESL classes to enhance student engagement and address areas of concern.

DISCUSSION

Since students possess multiple forms of intelligence, the outcomes from just one type of assessment cannot indicate the multiple intelligence in learners nor project their true capabilities. Therefore, assessment for learning has assumed greater importance than assessment of learning these days (Singh *et al.,* 2022). Equal to assignment submissions, 'formative assessment' conducted using this type of Plickers activity or Kahoot, quizziz or mentimeter is also gaining importance now-a-days and given low-stakes weightage that goes into the final grades of the students. Though Plickers kind of assessment is not reliable most of the times, it creates an intriguing experience for the students to develop an interest to listen the lectures seriously and sincerely. It kindles their interest to engage actively in the learning process. Therefore, it should be properly planned and implemented to bring out the effective results.

This study thus suggests the use of Plickers activity as one such valid form of formative assessment that can be conducted among students to determine student engagement in learning. Instead of assessments that solely focus on ranking and achievement, Plickers report can make teachers to take important decisions regarding delivering information packed lectures and widening student engagement during lecture hours.

While Plickers has several potential benefits as a formative assessment tool, there are also limitations that should be referred. One of the major limitations of using Plickers activity next to an inevitable technical glitch is that only 63 cards are available in the pack. Hence, in a larger class scenario, the teacher has to find alternate options otherwise a few students would be disappointed. Second limitation is quite invincible, even under the teacher's supervision students may tend to discuss the answers and hold the options playfully.

Third to mention is that Plickers is limited to multiple-choice questions, which may not allow for the assessment of higher-order thinking skills or open-ended responses. This means that Plickers may not be suitable for all types of assessments, such as those that require more complex reasoning or problem-solving. Also, the use of Plickers may be time-consuming and require additional preparation time for teachers. Teachers need to create and print out the Plickers cards before class, and also need to familiarize themselves with the software and its features. In summary, while Plickers has several potential benefits as a formative assessment tool, there are also several limitations that should be considered, particularly in terms of its suitability for certain types of assessments, its reliance on technology and internet connectivity, its time requirements and authenticity of students' results.

There are several potential future directions for using Plickers as an assessment tool in ESL classrooms. One direction could be to explore the use of Plickers in areas of language learning, such as reading comprehension, writing, or listening comprehension. This could help to identify areas where students need additional support and provide teachers with real-time feedback on students' progress in these areas. Additionally, future research could explore ways to integrate Plickers into existing teaching practices and curricula, as well as identify strategies to effectively train teachers on how to use Plickers and interpret the results.

Finally, research also explores the use of Plickers as a tool for student self-assessment and peer assessment, as well as ways to integrate Plickers into assessment practices at the institutional level. Although designed to be used with one card per student, this can be adapted to assigning a card to pairs or groups to encourage discussion amongst students or teamwork activities, with responses being scanned once after members confirm a response (Warschauer, 2011 as cited in Kent, 2019). This would allow for the development and inclusion of collaborative learning activities where students work in groups or pairs to develop and demonstrate understanding of content and concepts. Overall, the future direction of using Plickers as an assessment tool in ESL classrooms should focus on expanding its use beyond multiple-choice questions and exploring its potential to provide real-time feedback on collaborative learning that supports both teachers and students.

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