

# Effects of Using Nearpod in a High School Biology Classroom

## Background

My school began implementing a one-to-one technology initiative a few years ago. This was the first year that all of the classes I teach were officially one-to-one with iPads. Teachers are encouraged to integrate the iPads into daily classroom life as much as possible.

Many of the students in my 11<sup>th</sup> grade biology course did not regularly participate in class discussions. They seemed disengaged and several struggled with the content as well. Thus, I decided to try out the mobile presentation application Nearpod while presenting lectures to see if it would help increase student engagement and achievement in biology.



## Methodology

**Treatment Group:** 22 students in a high school biology course that utilized Nearpod during lessons in the spring of 2017

**Non-treatment Group:** 20 biology students from the spring of 2016 that did not utilize Nearpod

The exact same chapter tests were administered both years and scores were compared using the Randomization Permutation test.

The Student Attitudes toward Biology Survey was administered to the treatment group before & after treatment. Responses were compared and analyzed using the Wilcoxon Signed Rank test.

Teacher observations were recorded and post-treatment interviews were conducted.

## Data and Results

Test	Mean (%)		Median (%)		p-value
	2016	2017	2016	2017	
Chapter 13	78.6	80	77.5	80	0.74
Chapter 16	83.45	83.09	84	83	0.92
Chapter 19	79.9	82.04	80	88	0.33
Chapter 18	86.95	90.41	87.5	93.5	0.23

Table 1. Comparison of Test Scores between Treatment and Non-Treatment Group (N=22)

Students responded very positively about the use of Nearpod in biology in post-treatment interviews. However, statistical analysis showed no significant difference in achievement or engagement.

## What is Nearpod?

- A global application, launched in 2012
- Allows educators to create lessons and provide guided presentations to students directly on the screens of their personal devices
- Interactive features such as polls, quizzes, live websites, images, video, or audio content can be inserted into slides
- When the instructor is ready to launch a lesson, students join the presentation using a unique PIN and then the instructor is notified if any students exit the presentation screen while the lesson is being conducted
- Instructor is able to access reports that provide detail on individual student responses as well as analyze group performance (Moore, 2016)

Moore, S. N. (2016). Nearpod. *The Charleston Advisor*, 17(4), 31-34.

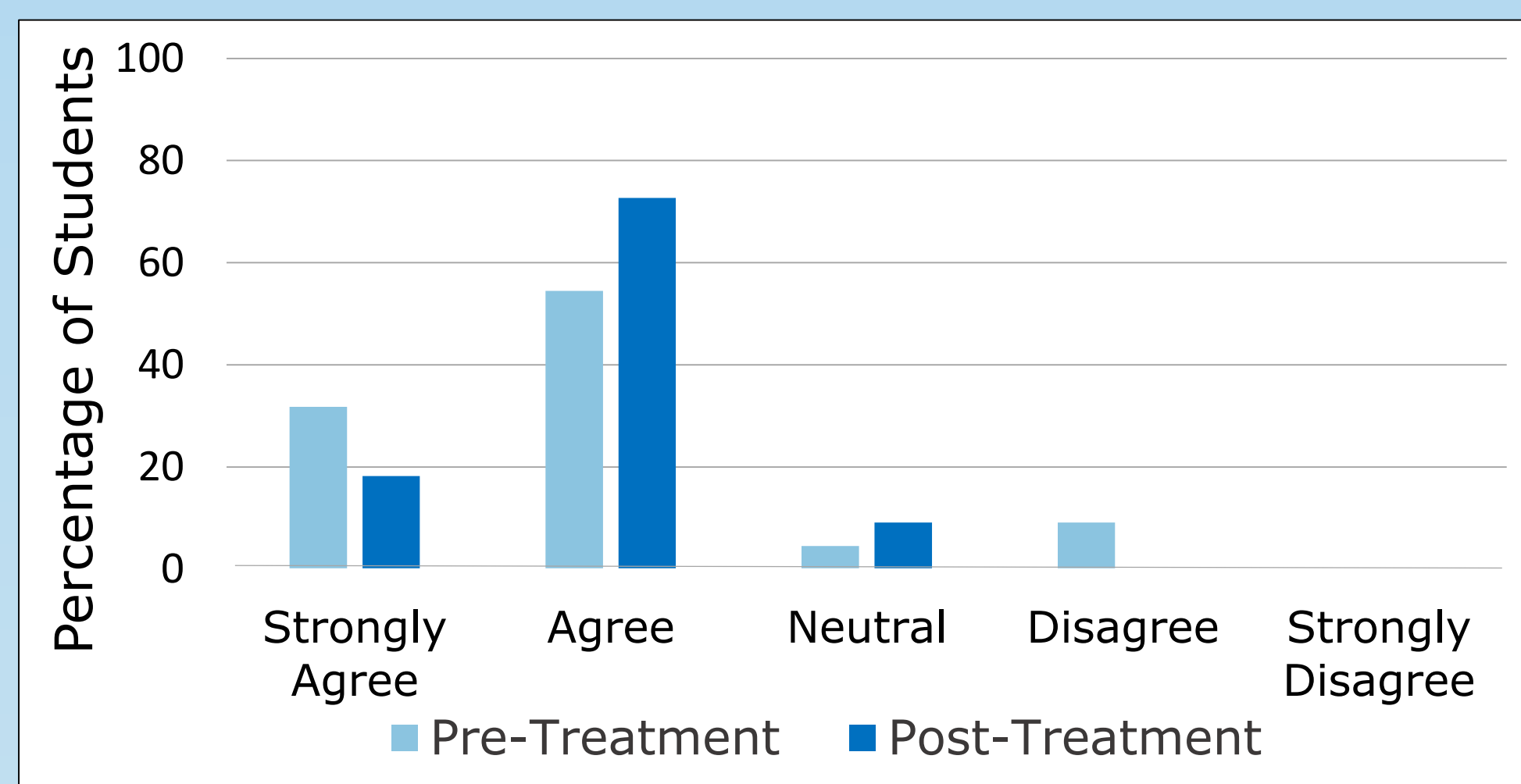


Figure 1. Student responses regarding feelings of engagement in biology class, (N=22)