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Inclusion, Engagement, and Nearpod: Providing a Digital Alternative to Traditional Instruction

Kristina Buttrey
Murray State University, kbuttrey@murraystate.edu

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Abstract

Unfortunately, the onset of Covid-19 and the ensuing pandemic led to a shift in the structure of classrooms across all levels of the educational spectrum. The resulting move to more social distancing methods, including a combination of face-to-face and online formats, led to a need for innovative uses of technology. In this article, Nearpod is explored as an alternative way to present information while increasing engagement and inclusivity in the classroom. Research studies and reviews are scrutinized on the use of Nearpod as tool for teachers and pre-service teachers in K-12.

Keywords

Nearpod, Engagement, Inclusion

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Introduction

In 2020, the COVID pandemic led to school, business and community shutdowns, social

distancing and other measures recommended by the Center for Disease Control to halt the

transmission of the disease in the United States (Centers for Disease Control, 2021, March 15).

Teachers across all levels of the educational spectrum struggled to find ways to continue to

educate in effective and engaging manners, and state departments of education worked to

develop guidance for K-12 remote learning (Reich, et al, 2020). The move to almost universal

part- or full-time online instruction heightened the concerns teachers and professors felt in

regards to successfully teaching students who were not physically in the same classroom. Some

of these concerns are highlighted by Cauthen in a recent January 2021 survey that looked at K-12

schools across the country. In the study, 20 percent of the students were fully online, and 35

percent of the online students were choosing not to log into the online platform. Administrators

in this survey noted a 51 percent achievement loss (Cauthen, 2021). K-12 teachers in this

author's local area have also expressed similar issues. Similarly at the college level, my

conversations with other professors and my personal observations have indicated concerns with

lack of student attendance, engagement, and participation with Zoom video conferencing and

mixed-online formats, leading to questions on how to address these concerns (Zoom Video

Communications, 2021).

My university is located in southeastern United States and has historically offered a wide

variety of Zoom, face-to-face, and interactive television (ITV) courses. While the university

considers Zoom and ITV to be forms of face-to-face instruction, for this study, I will be

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differentiating between in-person, ITV, and Zoom. At the onset of the pandemic in March 2020, all university classes moved to Zoom or traditional online formats with no face-to-face instruction. In the fall semester of 2020, the university offered some limited simultaneous Zoom and traditional face-to-face classrooms and continued this practice through the spring of 2021. With simultaneous Zoom, classrooms were split with half of the students attending via Zoom and the other half attending in person. In response to the university's reliance on online and Zoom classes, this researcher began scrutinizing more closely one specific program, Nearpod (Nearpod Inc., n.d.), to determine its effectiveness with engagement and inclusion in both digital and face-to-face instruction. Nearpod is a software application that converts standard presentations such as PowerPoints into more interactive presentations. My experience with Nearpod began with issues from the use of interactive television (ITV). The coordinator for video conferencing classroom services at my university explained a crude form of videoconferencing began for the university in the early 90's. However, the current form of ITV began to be used for the extended campuses around 2011 (J. Miller, personal communication, June 16, 2021). Professors would physically teach at one site, and the other sites would tune in via large television screens. It was difficult for me to find ways to engage the off-site students until a co-worker suggested using Nearpod in the classroom. This researcher's experience with Nearpod led to further investigation into the findings of other researchers.

The focus of this research stems from our accreditation process which identified two major concerns of the university's education program and which are based on Danielson's domains of instruction: inclusivity and engagement (Danielson, 2009). Domain 2A covers the inclusivity, and Domain 3C pertains to student engagement. A review of literature was undertaken, based on my desire for continuous improvement in the classroom, to determine if

other educators had found any links to increased inclusion and engagement in the classroom using Nearpod. My limited experiences with the practicum students led to speculation whether Nearpod could specifically be shown to be a useful instrument for university practicum students as well as classroom teachers to increase engagement and promote inclusivity in K-12 classrooms.

Nearpod: How it Works

Nearpod is a global application that provides a way to deliver material directly to students on individual devices. With Nearpod, administrators are able to take already created material such as Microsoft PowerPoint presentations or Google Slides and turn them into interactive learning lessons. Further, Nearpod users can also create new interactive presentations directly within the application. Moore (2016) notes in a critical evaluation that Panarea Digital released Nearpod in 2012 and that it offers a free Silver Edition. The silver edition provides many benefits including the ability to have students respond individually to prompts and polls that are then shared with the whole group. Administrators can also add videos, webpages, and pictures from the internet to share with students either individually or as a whole group. Students are able to use various devices to access the application including personal computers and smartphones. Other activities include drawing features and quizzes. Additionally, Wang and Chia (2020) noted advantages of Nearpod include that it is free for educators with smaller classroom sizes, easy to use, and supported with technology help. Disadvantages include extended upload times and the cost to educators with larger classrooms. This researcher's experience has mostly been limited to the complimentary silver edition.

Technology, Inclusion, and Engagement

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For the purposes of this study, a clarification of inclusion is expedient. The term inclusion may be defined differently by various educational agencies. As Colson and Smothers (2018) note, the term does not appear in state or federal statutes and has been "developed by educators to describe the various ways of meeting the Least Restrictive Requirements of special education law" (p.4). Merriam-Webster (2020) defines inclusion as the "act of including." The dictionary goes on in subsequent definitions to mention the inclusion of special education students in regular classrooms and the inclusion of all students regardless of race or gender. As an education professor, my use of the term inclusion embraces all students regardless of ability, learning styles, culture, ethnicity, economic status, and gender; all students should feel connected and safe to learn in the classroom environment. Thus, I reviewed the literature to determine if technology, specifically Nearpod, provides environments that allow all students to succeed and to feel included in the mainstream classroom.

Several researchers have linked the benefits of technology to inclusion. McLeskey, et al. (2018) list using assistive and instructional technologies as one of the key practices for a successful inclusive classroom. Bergen (2002) noted in one case study students were more collaborative with peers, including students with disabilities, when a new technology was introduced into the classroom. Cicconi (2014) also noted the benefit of increased collaboration with technology usage. Sawang, et al. (2017) furthered in their study of a large college classroom that introverts felt more engaged in the classroom through the use of the interactive technology device.

Other researchers focused on engagement. Boyle and Kennedy (2019) assert technology can provide support for learning to students with disabilities, and it can be used to promote student engagement. Sawang, et al. (2017) further noted a positive correlation between the use of

an interactive technology device and student engagement. Additionally, Wu and Huang (2007), in their large study of ninth graders, noted high emotional engagement with a technologically enhanced classroom. While these studies were more general, other researchers investigated specifically using Nearpod as a tool for engagement.

Nearpod and Engagement

Researchers have studied the effects of Nearpod on engagement at both the college and K-12 level. In regards to college usage, Perez indicates various colleges and universities have begun to see the value of Nearpod as a tool for learning (2017). Likewise, researchers have undertaken researching the validity of using Nearpod as a tool. One such researcher, Hakami (2020), looked at the promotion of active learning through using Nearpod. In this study, 74 undergraduate students brought their own learning devices to a classroom where the instructor provided video conferencing in conjunction with Nearpod instruction. Afterwards, the students answered a series of open-ended questions about the experiences. Overall, students indicated an increase in the level of interaction in the classroom and in the level of understanding of the material. This was in spite of the fact that nearly a third of the class indicated they did not like video conferencing in general.

Another college classroom study also looked at the impact of Nearpod as a tool for increasing interaction in the college classroom. In his study, Ryan (2017) used two cohorts in subsequent years with a total of 71 participants in a science-based undergraduate classroom. Students completed a questionnaire at the completion of the Nearpod activities. The researcher additionally kept a reflective diary to record informal discussions and observations. Ryan noted the students believed "interactivity" was the strongest benefit to using Nearpod (p.5). Other researchers, Wang and Chia (2020), did an informal survey with college students after using

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Nearpod in the classroom. They determined through the use of a Likert scale that the students found Nearpod engaging, with a mean of 6.48 out of 7 (p.7).

At the K-12 level, studies were more limited. Bradley (2017), an elementary technology specialist, acknowledges in a technology review that Nearpod would help "immerse students in virtual worlds," alluding to increased engagement of students (p.32). Another review highlights the benefits of using Nearpod in a music classroom. Dunbar (2016) adds, "Nearpod could quickly be integrated into the music classroom as another way to have students learn and manipulate content while allowing students to collect data as a quick and seamless part of a lesson" (p. 37). The analysis also refers to activities that would involve specific student engagement.

In a more formal study, Delacruz (2014) conducted a small case study at an elementary school that followed nine students, four of whom were English Language Learners (ELL), to determine if students preferred to use Nearpod on an iPad or traditional books during a guided reading lesson. All nine students indicated a preference for the Nearpod lessons, pointing to the interactive lessons as the determining factor.

Nearpod for Inclusivity

An additional finding in Delacruz's (2014) provides support for using Nearpod to promote inclusion. The four English Language learner students showed improvement after using Nearpod in a guided reading lesson. Another study looked at multilingual students in a middle school science classroom. The two research reviewers, Allman and Guethler (2021), discussed usage of Pear Deck (2020a) and Nearpod. According to Pear Deck's website, it is an application that helps make Google Slides more interactive (Pear Deck, 2020b). They noted both

applications provide multilingual students easier access to presentations; these students can also interact with peers by using the drawing features. The researchers further indicated that teachers can subsequently allow students to communicate ideas directly in the students' native languages. Other programs could then help teachers privately translate at a later time.

The Trial

This researcher's immediate concern for the interactive television (ITV) classroom was the lack of engagement and inclusion from the three satellite campuses. I rotated to the different sites to be able to engage in person with at least one of the campuses each time. However, the other students on the television screens would become disengaged throughout the lessons. I noted students talking to one another, looking at phones, working on other assignments, etc. After attending a professional development session on Nearpod recommended by another professor, I set up a Nearpod, silver edition account, and began a trial. I was determined to discover if using Nearpod would help increase engagement and inclusivity with all of my students, regardless of location.

After uploading a previously created Microsoft PowerPoint presentation into the Nearpod application, I was able to add multiple interactive activities including a survey, quiz, drawing feature, video, and discussion board. Students were given a code to enter and were immediately able to access the presentation. The activities were done simultaneously at all three campuses, giving students less down time to become disengaged. I was able to see immediately who had completed activities and could provide more timely feedback. I did struggle with some technical issues, e.g., students getting kicked out or having trouble logging into computers. However, the students responded positively to using Nearpod. A few of the students verbalized the Nearpod

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session was more enjoyable to them than just having material shown over the television screens or monitors.

After the initial implementation of Nearpod, I created a lesson to teach my pre-service students how to use this application in their practicum settings. They were able to practice using Nearpod and creating presentations for their own classrooms. The class continued to use Nearpod lessons throughout the rest of the semester.

After implementation of Nearpod, I observed that the pre-service teachers were more actively engaged in the classes, both face-to-face and ITV. Misconceptions were monitored with immediate feedback from quizzes. A variety of learning styles were met through the various features. The students watched videos, pinned immediate responses to discussion questions on a virtual message board, took quizzes, and drew images, all of which could be viewed by the entire group or just by the instructor. This allowed the students to participate as one cohesive group although students were located at three different campuses. Additionally, engagement participation rates increased from about fifty to one hundred percent, monitored by participation rates on the Nearpod application. Before implementation, engagement was difficult to track through the television screens. After implementation, multiple students carried the use of Nearpod into their practicum classrooms and reported the students and cooperating teachers were enthusiastic with the results.

Conclusion

The limited trial in this study noted anecdotal evidence that engagement did increase with the use of Nearpod. However, the trial did not provide much evidence for an increase in inclusivity other than providing for different learning styles. A more formal study would be

beneficial to determine if Nearpod is a useful tool for preservice and K-12 teachers to increase both engagement and inclusion in the classroom.

For the broader question of whether Nearpod should be used as a tool for preservice and K-12 classrooms, reviews and research studies from educators in K-12 and higher education have indicated Nearpod is showing promise as a tool to assist teachers in keeping students actively engaged whether face-to-face or via on-line formats. Additionally, researchers have noted positive benefits to using technology for subgroups. However, little research exists exploring the link between inclusion and Nearpod. While the variety of activities provided with the application allows the teachers to design collaborative classroom instruction and to provide for different learning styles, no definitive conclusion can be reached about Nearpod 's role in maintaining inclusivity in the classroom. Future, in-depth studies on using Nearpod as a tool for inclusion would be beneficial for educators to determine best practices while using this application. Further, additional studies at the K-12 level would provide more validity to using Nearpod as a tool for preservice teachers.

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