Applying an Online Learning Platform to Enhance Students' Online Education Classroom Learning Experience during COVID-19
Using the Nearpod Platform as an Example

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ABSTRACT
The purpose of this paper is to take a compelling case for the role of online learning platforms in facilitating student learning and to explore plausible strategies for optimizing the student learning experience. The project described in this paper is based on a fourth-grade English language arts course. This research shows that those students who use Nearpod in class are more motivated and capable of improving their learning, which is a change that can be highly beneficial to students. Students were asked to participate in various activities as part of this project. A pre-test was administered at the start of the project to ascertain students' prior knowledge. Numerous assessment tools provided additional data for educational implementation to help students improve their learning process. The project combines self-study and discourse activities to help students develop more complex thinking, and peer-reviewed discussion boards to help develop students' communication skills. Finally, virtual reality was seamlessly integrated into the classroom, allowing students to learn about and interact with the most cutting-edge technological advancements. When considering the difficulties encountered during the pandemic with face-to-face instruction, this method of teaching, which is based on the Nearpod online learning platform, is more easily understood and embraced by a broader range of students.

Keywords: *COVID-19, Online Education, Nearpod, English language Arts.*

1. INTRODUCTION

People have used a variety of technologies to solve a variety of challenging problems over the last few decades as human technology has advanced. In education, the emergence of online learning platforms has opened up new avenues for achieving various types of education. Since the COVID-19 pandemic erupted in 2019, online learning has gained increased acceptance as an excellent educational delivery solution in a variety of major educational application scenarios. In other words, the role of online learning, which was frequently used as a supplement to traditional classroom instruction before the pandemic, has shifted dramatically from a supporting to a leading role. Numerous schools are now offering online learning as an alternative to face-to-face instruction, ensuring the school's continued operation, as it will not halt students' growth due to the pandemic. This means that there is an ongoing need for students to receive an education. Thus, the educational process should not and cannot be halted. Online learning, which has taken a back seat in this context, offers an entirely new way to support students' learning and teachers' lectures.

To address the numerous issues that can be arised during the online learning process, various technology-based online learning platforms provide a plethora of solutions. These solutions may assist students and teachers in communicating more effectively during a pandemic when face-to-face communication is not possible. However, due to the challenges posed by new technologies, both students and teachers must contend with specific issues that may arise when utilizing online

education platforms [1]. For example, the emergence of new technologies will place a strain on teachers' fundamental pedagogical knowledge, necessitating not only pedagogical solid and content knowledge but also additional learning to broaden their technical knowledge and develop comprehensive teacher knowledge based on Technological Pedagogical Content Knowledge (TPCK) to gain the capacity necessary to expand students' learning space and ensure students' learning experience during the pandemic [2]. More importantly, it must equip teachers with specific implementation strategies that enable them to apply their knowledge in real classroom settings and thus ensure the quality of teaching and learning. For example, people can utilize online learning platforms (e.g., Nearpod) to create an adequate learning space that enables students to learn consistently across a variety of environments.

While Nearpod's maturity as an online learning platform has helped it to provide numerous channels for new users to familiarize themselves with a set of tools, there are still significant differences between Nearpod's design and traditional face-to-face education. This adds another layer of difficulty to the teachers' ability to teach during the epidemic's peak. As a result, we conducted a study on the Nearpod platform, attempting to implement several specific strategies for enhancing classroom learning. We decided to focus on English Language Arts as a result of the current research. It results in a project that encompasses the entire teaching and learning process utilizing Nearpod as the primary technological tool in the teaching process to develop a comprehensive online learning course. In this course, a rational approach is used to create an efficient classroom environment. It attempted to create a model to assist educators in the future online learning process. The aim of it is for better utilizing the Nearpod platform in the classroom to aid students in having a more positive learning experience.

2. LITERATURE REVIEW

Distance education develops the theory of distance education and its current state and future direction. Gunawardena defines online education as a distinct educational method that utilizes nontraditional delivery systems [3]. It necessitates the use of advanced devices in this mode of instruction; thus, it should revisit the question of how to teach students via the Internet effectively. The stable and accessible teaching platform and technological tools have a significant impact on traditional education and contribute to the growth of online education. Numerous experts assert that the residential-based model' will become possible in the future, effectively eliminating the learning pattern dependent on fixed time and location [4]. A critical challenge for distance education is adapting to the rapid advancement of technology and the rapid development of the theory [3]. It is necessary to demonstrate whether traditional teaching methods remain effective in distance education or whether online education must summarize an entirely new set of teaching modes.

Moore categorizes teacher-student interactions into three types: learner-content interaction, learner-instructor interaction, and learner-learner interaction. In terms of inquiry-based learning, it should be classified as learner-instructor and learner-learner interaction [5]. The term "learner-instructor" refers specifically to the teacher who provides motivation, feedback, and direction during an utterance. Moore asserts that this type of interaction is viewed as central by many teachers, is desired by learners, and is necessary to acquire new knowledge [5]. It is the discussion between students about ideas in terms of the learner-learner interaction. It encourages students to take the lead in their learning, provides them with positive cognitive effects, and allows students to connect their knowledge.

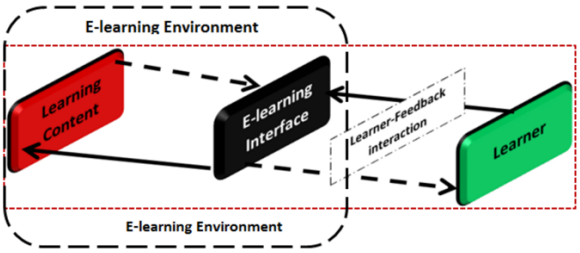

Figure 1. Types of Interaction proposed by Moore [5]

Martin and Temple Scheetz compare distance education and on-campus education [6]. According to the author, distance education's guiding principle is the assumption that the expectations and components of the offline course should also be available and accessible via the Internet. As a result, the direction is the same regardless of where students take their classes. According to Majeski and Stover, online courses can incorporate all critical learning components if they are carefully designed and organized [7]. Additionally, the author emphasizes that while online education and traditional education share many similarities, it is essential to note that the interaction between teachers and students is significantly different. In a traditional classroom, this type of negotiation occurs more frequently in real-time, and the response is more spontaneous. It means that teacher feedback can be immediate and tailored to the students' level. Teachers can observe students' facial expressions in a face-to-face classroom to determine whether they understand clearly or not. Thus, teachers can implement measures to ensure the class's quality, such as appropriately moderating the degree of difficulty, repeating them, or explaining them in other words. Online conversations, on the other hand, may encounter additional challenges. Teachers may feel more isolated from their students in an online class, and the spontaneity of instruction may be compromised due to the lack of physical proximity [8].

Additionally, online education is regarded as a viable solution to the issue of educational equity [9]. The authors use China as an example, noting that while most premium education resources are concentrated in affluent areas, underdeveloped regions face significant hardship and a teacher shortage. As remote education is not constrained by spatial distance, these children can benefit from educational resources that are as comparable as possible to those found in large cities. Thus, online education can help students meet the demand for a high-quality education among students living in impoverished areas.

Bell et al. defines inquiry-based learning as an active learning process guided by the students' responses to data analysis [10]. Learners can develop scientific questions and create an effective plan for data collection during this process, which also trains them in the research method. Additionally, Bell et al. divides inquiry-based learning into four levels based on the information provided to students [10]. Confirmation, structured inquiry, guided inquiry, and open inquiry are the four levels of inquiry. The higher level indicates that students are more actively involved in this process and have a more excellent cognitive grasp of the material.

Figure 2. Modified version of the four-level model of inquiry. How much information is given to the student?

Level of inquiry	Question?	Methods?	Solution?
1	x	x	x
2	x	x	
3	x		
4			

Figure 2. The model of inquiry-based learning [10]

Levy discuss the implication of inquiry-based learning in ELA education [11]. The author considers that this kind of teaching method can create a productive environment for students and build confidence and creativity. However, due to the high degree of interaction between teachers and students, the contradiction is difficult to reconcile when different opinions occur around topics such as politics, ethics, and race. Although inquiry-based learning can provide an opportunity to discuss a learner's opinion, it is difficult for people to have a concession on some sensitive questions. It will lead to the worthless time cost on these non-teaching content and strengthen the divergence between teachers and students. Furthermore, inquiry-based learning is helpful to encourage students to carry out cross-disciplinary research. Students in this activity can use multi-medium material and study knowledge from another area. It encourages learners to integrate their understanding from different aspects together.

Weerasinghe explored the implication of inquiry-based learning in an online classroom with and without the support of the facilitator [12]. This essay aims to investigate whether students who use inquiry-based learning online can engage in deep and meaningful learning. To figure out how the teacher's interaction affects this process, the authors apply the Community of Inquiry (CoI) model to analyze the conversation in the teaching. The CoI model is a kind of tool based on the community of inquiry framework; this approach can reveal the interaction of participants in inquiry-based learning. Therefore, the interaction in inquiry-based learning can be measured by analyzing the discussion of social, teaching, cognitive and metacognitive presences. The results reveal that students can engage in the task and carry out meaningful and deep learning without the support of facilitators. Hence, this research rejects the argument that students cannot have effective self-learning under the minimal guidance. This research demonstrates that students should have the motivation to achieve the goals and would like to collaborate with peers. It also points out the direction of future study; researchers should figure out what kind of component can motivate students to engage in the courses and interact with others.

3. METHODOLOGY

To improve focus, the project identified in this study will provide a lesson to fourth-grade students on Describing Characters in Language in Detail with Specific Details, an English language subject. Students will complete several sessions to learn about character descriptions and then apply the commands used in character descriptions to real-world situations, providing sufficient information to tell their own stories with a richer perspective and more varied techniques.

Following the pre-determined course content and to aid students in their comprehensions, the project began the course with an open-ended question about the importance of sharing their experiences based on their prior knowledge, which would enable students to connect their new knowledge to their prior knowledge and provide a more direct channel for their comprehension [13]. The program then provided an introductory session in which students gained more direct knowledge about in-depth descriptions, and this process included examples to help students comprehend the various modes of illumination. This was followed by a direct matching test, which enabled students to grasp the fundamentals of their character descriptions quickly. Following that, the program allowed for independent research and group discussion. This section includes video and website resources to assist students in conducting independent research on character description techniques and specific

questions about how to write compelling narratives to help students grasp the material. Students are then given a discourse activity to practice their character description skills and apply newly acquired techniques and methods to narrate their time experience, increasing talk-based descriptions [14]. Finally, students will be able to analyze specific characters in virtual reality scenarios, allowing them to apply their knowledge in real-world situations and equipping them with a combination of expressive abilities and more full character descriptions.

After implementing this project case, we observed student engagement through the classroom process, attempting to understand changes in student experience within this content and online classroom activities, and anticipating the possibility of student resolutions of online learning difficulties through high inquiry activities.

4. RESULTS

This study anticipates reading about students' learning experiences using this model of Nearpod-based e-learning classroom from technical and pedagogical perspectives by observing their experiences and providing feedback on the classroom.

4.1. Technology Support

In terms of technology, the program is designed to make the most of technology in various areas. Much of the course is built on the Nearpod platform, which enables the instructor to provide students with rich information in a rich media format and a variety of assessments and feedback. The project uses several Nearpod technology tools, beginning with an open-ended quiz with a timer that keeps track of each student's progress through the activities. The program then provided:

A rich media set contained videos and various web resources; Enabling students to watch videos directly in Nearpod and immediately access recommended web pages; Enhancing classroom learning. Additionally, it established a collaborative discussion board to provide students with an easy and direct means of communication during the discussion session. Students post the data they have gathered on the cooperative board based on their independent research. Others, including the instructor, have easy access to and analysis of all data, facilitating collaboration between students and faculty to improve learning outcomes [15]. The course utilizes Google Slides, a collaborative platform that enables students to collaborate on slide creation and the teacher to provide real-time feedback to students, a powerful enhancement tool because everything is in sync. This strategy fosters student collaboration while increasing the efficiency of formative assessment [16]. The program then presents students with virtual reality scenarios to identify possible events in a realistic system. Virtual reality technology is a superior technology that provides a near-realistic immersive experience. This innovative digital tool can significantly boost students' motivation and interest [17].

4.2. Pedagogical Support

This project has a variety of pedagogical applications. The project's design incorporates numerous scaffolds and provides students with multiple specific questions to assist them in thinking and conducting research. This problem-based approach facilitates the activation of students' immediate developmental areas and creates additional space for learning [18].

Furthermore, the program made extensive use of assessment and feedback strategies. Students were expected to provide additional generative data to aid in tracking their overall development and change and provide the instructor with other data to help optimize the course's design. Open-ended questions posed at the start of the course deeply engaged students in the formative assessment process, which was conducted without guidance and thus provided a realistic understanding of the extent to which students utilized their roles during the pre-course narrative, a critical component of formative assessment [19]. The course provides multiple opportunities to assess student learning throughout the course, gives immediate feedback to assist students in comprehending their progress, and assists teachers in understanding student comprehension. This procedure will ensure that students achieve their learning objectives by conducting more in-depth understanding assessments [20]. After the course, two introductory sessions were held to validate student learning outcomes: a discourse activity in which students described their experiences in detail and a final VR activity in which they analyzed real-world scenarios. This final assessment will be compared to the pre-course evaluation at the start, allowing students and teachers to identify potential problems and obstacles during the learning process and make necessary adjustments [19].

5. CONCLUSION

Learning on online learning platforms such as Nearpod can take extensive use of media formats to provide a diverse range of teaching and learning resources that can assist students in developing a more nuanced understanding of learning. They can do this by incorporating more interactive activities into traditional instructional sessions, which will allow students to practice learning from a variety of perspectives. Using discourse activities and self-study activities are two examples. These activities can help students improve their ability to learn and process information in specific areas and practice their understanding of and integration of new technology with what they are learning through the use of virtual reality (VR) technology. Compared to

the traditional classroom's one-way indoctrination, this process can provide students with a more nuanced and multidimensional perspective on learning. This change can significantly boost student motivation and equip students with a broader set of technical skills.

Among the necessary skills for the twenty-first century, using information technology effectively is a critical criterion for evaluating an individual's personal development. In other words, students cannot learn effectively. Rather, they should prioritize the development of comprehensive and holistic skills. Additionally, learning through the use of such online learning platforms. Not only will it help alleviate the anxiety and difficulties associated with learning during a pandemic. Also, it can provide more opportunities for students and teachers to interact with technology and use it as a critical learning orientation to enhance the classroom learning experience. This process of optimizing the learning experience influences students' subjective perceptions and provides teachers with opportunities and directions for self-improvement on a variety of different levels. Therefore, this research is contributive to future technology-based lessons, which inspires future teachers to combine Nearpod with teaching contents effectively, and also provides some implications for utilizing Nearpod in the real teaching contents.

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