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VIEWING ENGLISH LEARNING THROUGH THE EYES OF SPECIAL NEEDS STUDENTS: A NARRATIVE INQUIRY ON VR IMPLEMENTATION WITH MILLEALAB

[MELIHAT PEMBELAJARAN BAHASA INGGRIS MELALUI PERSPEKTIF SISWA BERKEBUTUHAN KHUSUS: SEBUAH PENELITIAN NARATIF TENTANG IMPLEMENTASI VR DENGAN MILLEALAB]

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Abstract

This research is focused on the implementation of the MilleaLab VR platform for teaching English to a student with ADHD at SMP Plus Rahmat, Kediri, Indonesia. Traditional methodologies in teaching are often less engaging for students with ADHD, and alternative methods are increasingly needed. That is where Virtual Reality comes in. MilleaLab can offer an interactive learning environment that takes away stress, maintains focus, and increases interest in learning. After going through Narrative Inquiry, one could deduce that the participant was interested in learning because of the

enrichment through Virtual Reality learning. The student was very keen to learn and was more relaxed when it came to learning English; this meant that Virtual Reality did have some advantage over its rivals. The student showed a more profound understanding of the stories told during the classes and seemed to remember them more; this would mean that VR can significantly improve memory and understanding. This points to the need to offer teaching techniques relevant to each individual for the students to continue their studies with success. These findings point out Virtual Reality as the preferred method of teaching, where the student mentioned the desire to continue working on MilleaLab. The results form an emerging understanding of the place of VR within inclusive education and point to some potentially productive directions for further research into the use of technology within diverse learning environments.

Keywords: ADHD; millealab; narrative inquiry; teaching english; virtual reality

Abstrak

Penelitian ini berfokus pada penerapan platform VR MilleaLab dalam pengajaran bahasa Inggris kepada seorang siswa dengan ADHD di SMP Plus Rahmat, Kediri, Indonesia. Metode pengajaran tradisional yang sering kurang menarik bagi siswa dengan ADHD membutuhkan alternatif yang lebih inovatif, dan di sinilah Virtual Reality (VR) berperan. MilleaLab menyediakan lingkungan pembelajaran interaktif yang dapat mengurangi stres, menjaga fokus, dan meningkatkan minat belajar. Melalui pendekatan *Narrative Inquiry*, ditemukan bahwa siswa menunjukkan antusiasme lebih tinggi, merasa lebih rileks, dan memiliki pemahaman yang lebih mendalam terhadap materi pelajaran, terutama dalam mengingat cerita yang disampaikan selama pembelajaran. Hal ini mengindikasikan bahwa VR dapat secara signifikan

meningkatkan daya ingat dan pemahaman, sekaligus menunjukkan keunggulan dibandingkan metode pembelajaran lainnya. Siswa juga menyatakan keinginan untuk terus belajar menggunakan MilleaLab, yang menguatkan potensi VR sebagai metode pengajaran yang relevan untuk kebutuhan individu, khususnya dalam pendidikan inklusif. Hasil penelitian ini memberikan pemahaman yang lebih luas tentang peran VR dalam mendukung keberhasilan belajar siswa dengan kebutuhan khusus dan membuka peluang untuk penelitian lebih lanjut mengenai teknologi dalam lingkungan pembelajaran yang beragam.

Kata Kunci: ADHD; *millealab*; *narrative inquiry*; mengajar bahasa Inggris; *virtual reality*

Introduction

Inclusive education is a learning model that aims at making children with special needs go to and attend regular school just like all other children (Anderson & Putman, 2020). In this form of education, any child with learning difficulties has physical, sensory, or a Communicational disorder such as ADHD, autism, and other forms of disabilities can be educated along with other children who do not have these disabilities. It seeks to infuse the techniques of delivering teachings and learning that may be appropriate for every learner through the use of different technologies and approaches we have developed now (Baragash et al., 2022). New myopia is emerging with the help of technologies like Augmented Reality (AR) and Virtual Reality (VR) thus making inclusive education more viable where students with special needs are offered more interactive sessions. Such an approach based on technology can help educators make the learning environment more personalized and relevant to each learner as a way to promote the development of their learning skills more efficiently (Alkhawaldeh & Khasawneh, 2023; Bjelic & Keller, 2021).

Teaching children with Attention Deficit Hyperactivity Disorder (ADHD) can be an overwhelming challenge, especially when the subject

is English, which demands focus and communication skills. Children with ADHD often struggle to maintain attention on one task for extended periods. Individuals with ADHD are particularly sensitive to environmental stimuli, such as sounds, movements, and visual distractions, which significantly disrupt the learning process (Grønneberg, Engebretsen, & Løkkeberg, 2024). This constant struggle with maintaining focus and controlling impulses makes traditional, static teaching methods ineffective for these students, especially when these methods lack visual and physical engagement. These challenges affect not only their academic performance but also their confidence and motivation to learn (Kurniawan, Sanjaya, & Rakhmawati, 2021).

In the context of learning English, these difficulties become even more pronounced. Understanding vocabulary, and grammar, and developing speaking and listening skills require high levels of concentration and structured learning, which can be difficult for students with ADHD. These children often become bored or frustrated when faced with repetitive or monotonous tasks. They need dynamic and flexible learning experiences that can help sustain their interest and focus. As a result, traditional teaching methods such as lectures or direct reading often fail to engage them effectively (Healy & Landis, 2023).

This is where Virtual Reality (VR) comes into play as a potential solution. VR offers a more interactive and immersive way of learning that can help capture the attention of students with ADHD. With VR, educators can create virtual environments rich in multisensory stimuli, allowing students to interact with the learning content more directly and engagingly (Alkhawaldeh & Khasawneh, 2023). MilleaLab, a VR platform designed specifically for educational purposes, provides a solution tailored to the needs of ADHD students. This platform helps educators create adaptable learning content that can be customized to meet each student's individual needs and abilities. MilleaLab enables teachers to design simulations and scenarios that engage ADHD students more effectively, creating a colorful, interactive learning environment that enhances their involvement and retention (Agusty, 2020).

Beyond being just a visual aid, MilleaLab is equipped with features that allow teachers to customize learning materials, such as adjusting difficulty levels, types of interactions, and diverse visual content. These features give teachers the flexibility to create active learning experiences

where students can explore virtual objects and practice English in realistic contexts, such as conversations in everyday life or vocabulary comprehension in specific environments (Czimre et al., 2024). This hands-on approach is believed to be particularly beneficial for ADHD students, who tend to respond better to dynamic and interactive learning activities (McMahon et al., 2020). Moreover, MilleaLab offers tools to track and analyze student interactions during learning, allowing educators to easily monitor progress and assess students' responses.

In this study, narrative inquiry is used to explore the personal experiences of ADHD students while using MilleaLab for learning English. This method allows researchers to document students' perceptions and experiences with VR technology, as well as track changes in their motivation and engagement. By focusing on the personal experiences of ADHD students, this study aims to provide concrete insights into the impact of VR on their language skills development and how this technology can address the barriers that traditional methods often struggle to overcome (Arifatin, 2022; Courduff & Moktari, 2022).

This research hopes to provide a more comprehensive understanding of the potential of VR in supporting inclusive English language learning for ADHD students. It aims to offer guidance for educators in navigating the unique challenges of teaching these students, while also advocating for the use of technology to create a learning environment that is more responsive to the needs of children with special needs.

Research Method or Approach of Discussion

This study employs the methodology of Narrative Inquiry to investigate students' insights and experiences in using MilleaLab as a medium for learning English. This method allows for the processing of experiences and knowledge, which can then be shared with others (Toledano & Anderson, 2020).

Data were collected through interviews that focused on the perceptions and understanding of children with special needs, especially those with ADHD, regarding the use of MilleaLab in the learning process, as well as their assessment of this tool. According to Arifatin (2022),

Narrative Inquiry explores the stories related to specific aspects of individuals' lives.

The research was conducted at SMP Plus Rahmat Kediri in Kediri, East Java, involving one child with special needs diagnosed with ADHD. This study took place during the second semester of the 2023/2024 academic year. The data were processed qualitatively, utilizing observational data and interview data gathered from the ADHD child about the application of MilleaLab in the study of the English language using Narrative Text materials.

Finding

In this research, the focus is set on an ADHD student attending SMP Plus Rahmat and learning English with the use of Virtual Reality (VR) within the framework of MilleaLab. When studying the traditional process of classroom learning some conclusions can be made about this student such as: this student is often distracted and tends to daydream due to the various stimuli outside the classroom. The intense conditions of a crowded and loud class environment interfered with his ability to focus on the class. For children with ADHD, such a learning environment means that it is impossible to concentrate in the classroom. VR, therefore, offered a more fun and engaging way to learn, because what was created was a controlled environment that allowed the student to focus only on what was being put into her or his head. But for him, this approach was a new concept and was quite fun compared to the traditional classroom lessons.

He expressed that using VR made learning enjoyable, unlike the monotony of conventional classroom methods. While traditional classes often relied heavily on teacher-led instruction, VR provided interactive features specifically designed to enhance the learning process. During the interview, he added that these features helped him stay focused, making it easier to concentrate on the material and engage with the learning experience.

Besides these tools, MilleaLab offered numerous elements for learning, such as images, videos, and texts. These were prepared to capture interest and improve the student's grasp of the subject matter. For instance, in this study, the selected content was a narrative text in the form of a story “Sura and Baya” presented in the English language in the

form of a video that was created creatively in a way that would enable him easily to recall the content of the story and understand easily. This was good; the next time we conducted a follow-up interview, he repeated the story of "Sura and Baya."

To the extent that physically, he never felt any pain or ill effects like dizziness or eye strain that are often related to technology use. He pointed out that the VR headset did not feel heavy on his head; the tools given imposed a serene environment. This indicates that VR, when implemented effectively, will be an appropriate learning aid for ADHD children who are usually receptive to textures as a result of hand fidgeting.

The observer's reflective account in this particular student's learning context means that VR may help to maintain and boost motivation for learning and effective learning behaviors and even improve the general attitude toward studying English. In this way, by creating a more individualized learning environment, VR helps students combat various issues that may appear in the conventional educational process. These studies prove the effectiveness of VR use in inclusive education; and the benefits of using immersive learning tools to capture a large number of students especially those easily distracted in a typical classroom setting.

The positive response shows that VR has a great opportunity to be applied in different fields of education, especially in the field of inclusive education. With the help of VR, teachers, and educators can create a more suitable environment in terms of the students' preferences and requirements. If VR is properly employed, adequate learning conditions for ADHD students can be attained, which will enhance positive results concerning both learning and further students' personality development for those who have different learning disabilities.

Discussion

In this paper, a student with ADHD was interviewed and asked to discuss his use of MilleaLab which is a Virtual Reality (VR) based application for learning English. In striving for an answer to our research question, the intention was to perform several interviews to understand how this particular student experienced this type of technology and how using VR affected motivation, emotions, and comprehension of lessons.

Initially when the student was asked such a question, “Is this your first time learning with VR?” The response was simple yet enthusiastic: "Yes." As seen in his explanation, VR was a new experience for the student but one that appeared to provoke interest. This response was not totally out of the ordinary since the infusion of technology in learning; particularly for students with special needs such as Attention Deficit Hyperactivity Disorder (ADHD) is still quite recent. According to Agusty (2020), VR platforms like MilleaLab can enhance motivation as well as students’ engagement in knowledge acquisition especially for those students who easily get bored. The student was positive after this first encounter with virtual reality and stated that there is potential for the technology in future learning experiences.

When questioned about the feeling when one is learning with the VR, the student said: “Happy, because I can focus”. This reaction underscored a key benefit of VR technology: how it helps to attract students’ attention in a way that perhaps the standard classroom does not successfully do. The student proceeded, “It is fun because there are pictures and videos.” And there’s music too." The use of images, articles, or talks with incorporated films as well as music appeared to evoke a positive response in the students. Ramadhani and Fithriani (2022) state that multimodal approaches facilitate student interaction and enhance their learning experiences through the use of diverse tools and activities, demonstrating particular effectiveness for students with special educational needs. In the case of this particular learner, VR is not another mode of teaching and learning; it is a tool that maintains both attention and interest.

In the next part of the interview, the student was posed this question, “Do you feel more excited learning with VR?” The answer came with a smile: Of those, “Yes, I’m more excited because I can play while learning” has been chosen. There is the fact that working with VR the effect of playfulness was seen and due to that, the process of learning was different from performing a simple task. This finding has supported the work of Ramadhani and Fithriani that students, especially special needs, have a good understanding of what is taught if the student can enjoy the process as well as learn. The fun appearance of VR appeared to give the students motivation to learn more content.

When he was asked, “What did you learn using VR?” the student enthusiastically recounted a story they had encountered: "I learned a Narrative Text. The animal figures presented are a crocodile and a shark. Their names are Sura and Baya. They fought over food. After that, they agreed never to disturb one another again. Yet the crocodile attacked the shark again, and so they fought each other to the point they dripped blood. Finally, that is known as Surabaya.” This was a great opportunity to not only question the assimilation of the content by the particular student but to also see whether or not VR would enhance the recall of the lesson. Arifatin (2022) found that narrative-based learning, complemented by visual media leads to improvements in story recall and retelling performances. To the incoming student, the VR environment helped to make the narrative not only more comprehensible but also more meaningful.

The interview also asked whether the student felt uneasy during the learning with VR, the question hence used was ‘Do you feel comfortable learning with VR? Have you any complaints such as dizziness or any other complaint?” was asked. This feels quite natural to me; I did not experience any discomfort while wearing the headset, and it is lightweight. I also enjoyed the accompanying music,” he remarked during the interview." This implies that physically the student had no discomfort using the technology, a critical success factor for determining whether VR can be a viable medium for learners with learning disabilities. For instance, Suradi et al., (2022) established that the physical features of the technology are important in crafting the learning session environment where students can comfortably learn without distractions.

As the interview progressed, the student was asked to compare their learning experiences: “Would you prefer learning with VR or in a traditional classroom setting?” The student responded promptly, stating, “I prefer using VR.” During my class, we have many friends, and they disturb me by making a lot of noise. This feeling pointed to a major benefit of VR to students with ADHD in that they are easily distracted in a normal classroom environment. Grønneberg et al. (2024) supplement this by pointing out that a closely managed environment like virtual reality offers a quiet, orderly learning space to students who might otherwise feel surrounded by too many stimuli.

The student was also asked if he grasped how MilleaLab operated as a firm. he said, “Oh no, I got the meaning when it was explained to me.” This means that once MilleaLab was explained to the student it was easy to use proving that the graphic user interface used in the design of the platform was easy to comprehend. According to Kurniawan et al. (2021), such technologies should be integrated and simple so that learners with various learning disabilities can devote their attention to the content rather than the controls.

Last, of all, the questions were, “Would you like to continue learning with MilleaLab and VR?” the student's response was clear: Yes, so that I can memorize English. And this final answer was able to highlight the student’s positive experience with VR mainly the utilization of VR in language maintenance. Ramadhani and Fithriani (2022) point out that when students find technologies attractive to engage with they will not easily lose focus in their studies. For this student, VR was no longer an interesting activity that he had to look forward to; but an effective method that would enable him to enhance his learning and therefore come up with brilliant results.

The conclusion of this interview highlights how MilleaLab and VR can shape a student’s learning experience. Through VR, this student with ADHD experiences learning English as fun, comfortable, and effective. These findings indicate that immersive technology can play an important role in helping students with special needs learn new concepts, engage with the content more effectively, and have more fun doing so. This type of learning enables learners such as this one to have better intervention educational experience as well as growth and development.

Conclusion

The integration of the MilleaLab Virtual Reality platform into English instruction for a student with ADHD at SMP Plus Rahmat Kediri has demonstrated positive outcomes. Interview data reveal that VR not only enhances the student's motivation but also effectively supports sustained attention and fosters greater engagement in the learning process. The student reported increased enthusiasm and comfort when learning with VR, emphasizing the advantages of the immersive and

interactive nature of the VR environment in contrast to traditional classroom methods

In tune with the available literature, this study also supports a novel child-centered learning method by completely responding to the needs of students with special needs. By the fact that students expressed their desire to be able to continue the use of MilleaLab in the future for English learning, it is evident that VR might become one of the preferred teaching methods. This study will not only contribute to understanding the role of VR in educating students with special needs but will also give ground for further research on integrating advanced technologies into educational practices to meet various learning needs. Finally, VR use in learning enhances not only learning but also educational experiences among children with ADHD since it opens more opportunities to create an inclusive and supportive environment of learning.

Therefore, VR is beneficial for designing a sufficient atmosphere conducive to fruitful learning among students with ADHD and fun at the same time. MilleaLab, for example, could be adopted by educational institutions, especially for the needs of different students including those who suffer from attention disorders. Studies should be conducted to investigate the effectiveness of VR in other areas of teaching and learning to support the results and enhance the ways of utilizing VR to increase education achievements in students with various learning needs.

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