Virtual Reality Therapy (VRT) Intervention In Guidance And Counseling Services To Create Violence-Free Schools

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Abstract.

School violence, such as bullying and intimidation, remains a crucial issue with a serious impact on student well-being, despite various preventative measures. Conventional guidance and counseling services, which often employ methods such as lectures and group discussions, are considered ineffective in fostering empathy and providing a deeper understanding of the impact of violence. To address this gap, an innovative intervention called Virtual Reality Therapy (VRT) was proposed and implemented. VRT uses realistic simulations, allowing students to experience violent scenarios from multiple perspectives: as victims, perpetrators, and witnesses. The program includes training for guidance and counseling teachers, VR content creation workshops, and implementation support, aimed at improving their technical skills and readiness to adopt the technology. Evaluations using pretests and posttests showed significant improvement. This improvement demonstrates that VRT is an effective and transformative tool for creating safer and more violence-free school environments.

Keywords: *Virtual Reality Therapy (VRT); Guidance and Counseling and Violence-Free Schools.*

I. INTRODUCTION

Violence in schools, in its various forms, such as bullying, verbal abuse, and intimidation, has become a crucial issue that continues to threaten the education ecosystem. This problem not only disrupts the teaching and learning process but also has serious long-term impacts on students' mental health, social well-being, and academic achievement [1], [2], [3]. Ironically, despite various efforts, incidents of school violence continue to be reported, indicating a gap between prevention policies and the effectiveness of their implementation on the ground.Guidance and counseling services in schools are essentially the first line of defense in preventing and addressing this issue. However, as acknowledged in this program summary, the methods commonly used remain conventional, such as lectures and group discussions. These approaches, while valuable, are often considered inadequate in providing students with a deep and immersive experience of the real-world impacts of violence. School violence is a complex global education problem that requires a comprehensive response [4]. As a result, students' understanding of empathy for victims and awareness of the dangers of bullying are suboptimal, ultimately making violent behavior difficult to eradicate.This situation demands innovation in guidance and counseling services. The current era of technological disruption offers various alternatives that have not been fully utilized in education, particularly in the context of guidance and counseling. It is crucial to integrate tools and media that are not only engaging for students but also able to facilitate emotional and cognitive understanding more effectively [5]. This approach is expected to bridge the limitations of conventional methods and create a more transformative learning experience.

In response to these challenges, this community service research proposes a breakthrough through Virtual Reality Therapy (VRT) Intervention in Guidance and Counseling Services to Achieve Violence-Free Schools. VRT is a virtual reality-based technology that allows users to experience and interact in a realistic simulated environment. In a therapeutic context, this technology has been proven effective in addressing various psychological conditions [6].The VRT approach in this program is designed to overcome the weaknesses of conventional methods by providing a unique immersive experience. Using VR devices, students can be directly placed in different violent scenarios. Beyond simply witnessing, they can experience the situation from multiple perspectives, including those of victims, perpetrators, and witnesses. This aligns

with research showing that virtual environments can be used to enhance user learning and understanding [7], [8].Specifically, this VRT intervention aims to raise students' awareness of the psychological and social impacts of violence and build empathy for victims. The simulations replicate violent situations that frequently occur in schools, allowing students to experience the emotions and consequences of each action. This experience is expected to serve as a catalyst for more positive and constructive behavioral changes in the real world.Numerous previous studies have demonstrated the potential of immersive technology in education and psychology.

For example, VRT has been used in exposure therapy to address phobias and anxiety, demonstrating that controlled virtual environments can be a powerful tool for psychological intervention [9], [10], [11], [12], [13]. By adapting these principles to the context of school violence prevention, VRT can be a highly effective tool for developing students' social skills and empathy. Furthermore, this program is supported by relevant previous research on student character development and social skills. Research by Aryani & Farozin [14] shows that sociodrama techniques can improve students' social skills in schools. In line with this, VRT can be considered an evolution of sociodrama techniques, utilizing technology to create far more realistic and immersive simulations, thus potentially having a stronger impact on developing caring and proactive student character. VRT can be used to train social skills, demonstrating that this technology is an effective tool for the same purposes as sociodrama, but in a more sophisticated manner [15], [16].This innovative approach also makes significant practical contributions. By involving guidance counselors as facilitators and university students as mentors, the program not only applies technology but also builds human resource capacity in partner schools. This active involvement ensures that the VRT-based intervention model is not just a one-time project but can be replicated and sustained in the future as an innovative solution to addressing violence in educational settings. Overall, this community service project details how a VRT intervention was designed, implemented, and evaluated within a guidance and counseling service. The project presents findings demonstrating the program's effectiveness in increasing student awareness, empathy, and participation, and provides concrete evidence that VR technology can be a transformative tool for creating safer, violence-free school environments.

II. RESULT AND DISCUSSION

A. Result

Teacher Counseling and Training

The two-day teacher counseling and training focused on the use of VR technology in guidance and counseling. The material was presented by Putri Taqwa Prasetyaningrum, Eka Aryani, Abdul Hadi, and Prof. Saleh. This activity represents an innovative step that can improve the effectiveness of counseling services in schools. The use of VR technology in counseling allows for a more interactive and personalized approach to addressing various student issues, such as bullying, anxiety, stress, trauma, and behavioral issues. The focus of this counseling includes:

1) Introduction to VR concepts: Teachers are introduced to virtual reality technology, including the hardware and software used.
2) Benefits of VR for counseling: How VR can be used to create safe and controlled simulation environments for students, such as social simulations or stress management, is explained.
3) Opportunities and challenges: Teachers are provided with insight into the potential benefits of VR, such as addressing bullying or social anxiety, as well as potential challenges, such as access to technology or student mental readiness.

The main focus of this training is to equip teachers with practical skills to integrate Virtual Reality (VR) into guidance and counseling services. Teachers are technically trained to operate VR devices such as headsets, controllers, and applications. They are also taught how to develop and use relevant virtual counseling scenarios, such as simulations of bullying behavior and its impact, anxiety management, or social interaction simulations. The training also covers the use of VR for psychological interventions such as exposure therapy, which allows students to face situations that trigger anxiety or fear in a safe and controlled environment. Finally, ethical and safety aspects are important concerns; teachers are equipped with an

understanding of student privacy, psychological safety, and technological limitations that must be considered when using VR in counseling.

Fig 1. Teacher Counseling and Training

Figure 1 depicts a two-day teacher outreach and training program. During this activity, guidance and counseling teachers were introduced to Virtual Reality (VR) technology and its application in counseling services. The training included an introduction to VR hardware and software, as well as how to use them in interactive counseling scenarios. Participants were also given the opportunity to try out the VR device firsthand and practice simulations designed to address student issues such as bullying and anxiety. This training aimed to improve teachers' technical competency in utilizing VR to enrich their counseling methods.

VR Content Creation Workshop

This three-day workshop focused on creating interactive VR-based content for teachers and students. The workshop, led by the Community Service Team and students, focused on the use of VR technology in counseling and mental health practices. The workshop included:

1) Introduction to VR in Counseling. The workshop focused on the use of VR technology in counseling and mental health practices. The workshop began with an introduction to VR, where participants were taught its definition, how it works, and its potential in counseling. The benefits of VR were also discussed, such as creating a safe simulated environment for practicing coping skills, dealing with bullying, or overcoming trauma. This allows counselors to take control of the situation and help clients gradually face real-world challenges.
2) The Role of VR in Mental Health. Participants were invited to explore the role of VR in mental health, including its use for exposure therapy for individuals with anxiety disorders, PTSD, or trauma. The use of immersive environments to address depression or stress was also discussed by creating an interactive and calming environment. VR can help clients improve their social skills through simulations of real-world scenarios such as job interviews.
3) Creating Effective VR Content for Counseling. The workshop discussed creating effective VR content for counseling, starting with the design and development of scenarios that align with therapeutic goals. Participants were introduced to the necessary hardware (headsets, controllers) and software. Integration of client interaction with VR content, including voice, movement, and emotional interaction, was also taught.
4) Ethics and Privacy Considerations. Ethics and privacy aspects were crucial, discussing how to maintain client data security and privacy when using VR. Participants were also trained to ensure VR-based interventions comply with ethical standards, including providing clear explanations to clients about how VR works.
5) Implementing VR in Counseling. The workshop discussed implementing VR in counseling sessions, including setting up conducive physical and virtual spaces. Counselors were trained in using the technology, including client preparation and technical troubleshooting. Case studies were also discussed to demonstrate the implementation of VR in counseling sessions and its outcomes.
6) Challenges and Limitations of VR in Counseling. The workshop discussed the challenges and limitations of VR in counseling, including technological limitations, discomfort for some clients, and

potential side effects such as motion sickness. The discussion also includes how to measure the effectiveness of VR-based therapy, both short-term and long-term.

This VR Content Creation Workshop aims to provide a comprehensive overview of how VR can be an innovative medium to enhance counseling sessions and support the healing process of clients in new and effective ways. The three-day Virtual Reality (VR) content creation workshop involved teachers and students creating interactive VR-based content. The workshop was led by a team of experts and students, focusing on introducing VR technology and creating content that supports guidance and counseling services in schools. During the workshop, participants were encouraged to actively participate in the development of a VR simulation designed to help students address psychosocial issues such as anxiety and bullying, as shown in Figure 2 below.

Fig 2. VR Content Creation Workshop

Figure 2 shows the VR content creation workshop attended by teachers and students. On the first day, participants were introduced to the basic concepts of VR and the tools used, while in subsequent days, the focus shifted to developing interactive content tailored to the needs of guidance and counseling in schools. The workshop resulted in significant improvements in the technical skills of teachers and students in utilizing VR as an interactive medium for counseling, with simulations specifically designed to address various psychosocial issues faced by students.

VR Therapy Implementation Assistance

VR Therapy implementation mentoring is provided by students involved in the PPL program. Students accompany teachers for four weeks in using VR therapy with students and collect data on student responses and engagement. Assisting with VR Therapy implementation in counseling involves various aspects, from planning and training to content development, to evaluation and ongoing development. With a structured and comprehensive approach, VR can be a highly effective tool in improving the quality and effectiveness of counseling services, as well as providing innovative and immersive therapy experiences for clients.

Evaluation anda Monitoring

Monitoring and evaluation of the implementation of virtual reality therapy was conducted using pretests and posttests. Given that the outcome measured in this activity was understanding, the pretest and posttest results were qualitative data, which were then converted into a scale based on the assessment indicators developed by the community service team. The improvement in average understanding of VR analysis and use can be seen in Table 2 below:

Table 1. Improvement Based on Pretest and Posttest Average

No	Competency	Pretest	Posttest	Peningkatan
1	Teachers' ability (hard skills) to use VR technology	10%	100%	90%
2	Student involvement (soft skills) in the guidance and counseling process	20%	90%	70%
3	Accessibility of counseling services	15%	100%	85%

Table 1 shows the average increase in pretest and posttest results related to the implementation of Virtual Reality (VR) technology in guidance and counseling services. In the first aspect, namely teachers' ability (hard skills) in using VR technology, there was a significant increase from 10% before the training to 100% after the training, reflecting a complete increase in the teachers' mastery of the technology. The second aspect, indicating student engagement (soft skills) in the counseling process, increased from 20% before implementation to 90% after, for a total increase of 70%. The third aspect, namely accessibility of counseling services, increased from 15% to 100%, for an 85% increase. These improvements demonstrate the positive impact of VR use in increasing participation and accessibility of guidance and counseling services in schools.

B. Discussion

The implementation of Virtual Reality Therapy (VRT) as an innovation in guidance and counseling services at SMK N 1 Kalasan has shown very promising results in addressing the issue of school violence. This program stems from the serious problem of violence in the school environment, such as bullying, verbal abuse, and intimidation, which negatively impact students' mental and academic health. Although guidance and counseling services already exist, dominant conventional methods such as lectures and group discussions are considered ineffective in fostering empathy and providing students with real-life experiences about the impact of violence. VRT presents a transformative solution that allows students to experience simulated violence from various perspectives, namely as victims, perpetrators, and witnesses, thereby significantly increasing their awareness and empathy. In line with research conducted by Kizhevska et al. [17] which proved that VR is proven to be more effective in increasing empathy than conventional methods. VR is the most effective medium for generating empathy. The immersive and interactive nature of VR allows viewers to feel as if they are actually in a virtual environment [18]. This helps VR users form stronger emotional bonds with the characters and situations depicted.The training and counseling for guidance and counseling teachers is a crucial stage in determining the success of this program. Over two days, teachers are introduced to the basic concepts of VR, its benefits in counseling, and the opportunities and challenges they may face. This training focuses not only on hardware and software familiarization but also on in-depth aspects such as developing relevant counseling scenarios, such as simulating bullying behavior and its impact, and using VR for exposure therapy to address anxiety or fear.

There was a drastic increase in teacher competency (hard skills) in using VR technology. Based on pretest and posttest evaluation data, teacher proficiency increased from 10% to 100% after the training. This indicates that the designed training method, which included counseling, workshops, and ongoing mentoring, was highly effective in transferring technical knowledge and skills. This improvement also reflects the readiness of guidance and counseling teachers to adopt technological innovations to enrich their services, which aligns with the demands of modern education. Studies show that technology adoption by guidance and counseling teachers can improve the effectiveness of counseling services [7]. In addition to technical training, a three-day VR content creation workshop served as a core activity, empowering teachers and students creatively. In this workshop, participants not only learned how to operate the device but also how to design scenarios aligned with therapeutic goals, such as a calming environment for trauma management or a simulation for social skills training. Active student involvement in this process was crucial as it fostered their sense of ownership of the program and ensured the resulting content was relevant to the issues they faced daily.Student participation in the program also increased significantly. Pretest and posttest data showed that student engagement (soft skills) in the guidance and counseling process increased by 70% (from 20% to 90%).

This increase demonstrated that VRT successfully created a more engaging and interactive experience compared to conventional methods. With VRT, students became more than passive listeners but also active participants, emotionally and cognitively engaged in the simulation, which in turn accelerated the process of understanding and character development [18]. This improvement is relevant to research showing that VR therapy can significantly improve social and emotional skills [6], [19].The program's impact extends beyond teacher competence and student engagement to the overall accessibility of counseling services. An 85% increase in accessibility (from 15% to 100%) indicates that VR has successfully reached more students

and made it easier for them to engage with guidance and counseling services. The use of engaging and innovative technology can reduce the stigma often associated with counseling services, making students more comfortable and motivated to seek help.While the program has achieved its objectives, several challenges remain. Technological limitations such as device availability, cost, and potential side effects (e.g., motion sickness) remain obstacles to overcome. Furthermore, it is crucial to ensure that teachers and students understand the ethical and privacy considerations involved in VR use, particularly regarding client data and psychological safety.

A structured and comprehensive approach is essential to address these challenges [20].As implementation assistance, the role of the PPL students was vital. For four weeks, they directly assisted teachers in using VR therapy with students and collected data on student responses. Student involvement not only enriched their practical experience but also ensured smooth implementation and accurate data collection. This demonstrates effective collaboration between lecturers, teachers, and students in ensuring the success of the community service program [21].Overall, the use of VRT as an intervention method in guidance and counseling services proved effective and successful. The program not only improved teacher skills and student engagement but also increased overall service accessibility. This success created an intervention model that can be replicated in other schools with similar challenges and serves as a foundation for further research on the long-term effectiveness of VRT on students' emotional and social development.This community service program makes a significant contribution to creating a safer and violence-free school environment in an innovative and relevant way for students in the digital age. By integrating technology into guidance and counseling services, schools can be more proactive and effective in developing students who are empathetic, caring, and able to resolve conflict healthily.

III. CONCLUSION

Virtual Reality (VR), an innovation in guidance and counseling services at SMK N 1 Kalasan to achieve a violence-free school, has successfully achieved its desired goal of improving the accessibility and quality of guidance and counseling services for students. This program has resulted in a significant increase in teachers' hard skills in using VR technology, with a 100% increase in competency. Furthermore, there has been a 70% increase in student engagement (soft skills) in the guidance and counseling process, demonstrating the effectiveness of VR technology in creating interactive and engaging experiences for students. Overall, the accessibility of counseling services has increased by 85%, enabling more students to benefit from this program.As a follow-up, further research is recommended on the long-term effectiveness of using VR therapy in guidance and counseling, including its impact on students' emotional and social development. Furthermore, this community service program can serve as a model for implementation in other schools facing similar challenges. Applied community service in other areas, such as training teachers in the use of digital technology in general or implementing VR for specific subjects, can also be undertaken to expand the benefits of technological innovation in education.

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