



ANALYSIS OF CHALLENGES AND STRATEGIES FOR HISTORY TEACHERS IN INTEGRATING INFORMATION TECHNOLOGY TO SUPPORT LEARNING AT SMAN 14 MEDAN

Arifin Silaban¹, Arfan Diansyah², Imelda Megawati Gultom³
Program Studi PPG, Universitas Islam Sumatera Utara, Medan, Indonesia¹²
SMA Negeri 14 Medan³

**silabanarifin@gmail.com¹, arfandiansyah@unimed.ac.id²,
imeldagultom411@gmail.com³**

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Abstract

This research aims to analyze the challenges faced by history teachers in integrating information technology into the history teaching process, as well as identify effective strategies to overcome these challenges. The research method used is interviews and observations of a number of history teachers who have actively used information technology in their teaching. The research results show that some of the main challenges faced by history teachers include limited access to technology, uncertainty in selecting appropriate digital content, and a lack of adequate training in the application of technology. However, the research also identified several effective strategies that history teachers have used to overcome these challenges, including ongoing training and professional development, collaboration between teachers to share resources and experiences, and adapting curricula to account for technology integration. The implication of this research is the need for greater support from schools and the government in providing adequate access to technology and contextual training for history teachers so that they can effectively integrate information technology into history learning. The implementation of the strategies adopted by history teachers at SMA 14 shows their commitment to overcoming the challenges of integrating technology in history learning. In the face of limited access to technology, teachers have been active in utilizing training and professional development to improve their skills in using technology. Collaboration between teachers also provides a platform for sharing experiences and ideas for facing common challenges. Curriculum adjustments are the main basis for ensuring that history learning remains relevant and interesting for students in this digital era. By utilizing technology in lesson plans and developing interactive learning materials, teachers have created a dynamic and student-oriented learning environment. The impact of this strategy can be seen in increasing students' understanding of historical material and their skills in using technology.

Key words: *History Teacher, Information Technology, Learning Integration*

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*Corresponding author:
silabanarifin@gmail.com

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INTRODUCTION

The world has entered the time of modern upset 4.0 and society 5.0. All parts of human existence are totally reliant upon the web and advanced innovation (Ahmadi & Ibda, 2019). This period has impacted numerous parts of life in the fields of financial aspects, governmental issues, culture, expressions, and, surprisingly, the universe of training. This implies that training in Indonesia is confronting these difficulties. Training and learning in schools are firmly connected with the time of globalization (Pewangi, 2016). To move towards the period of globalization, Indonesian culture is supposed to make changes in the realm of schooling with the goal that it can propel the universe of training. As times progress and requests for better change, the Indonesian government keeps on making upgrades in different areas, particularly in the schooling area (Nasution, 2016).

All making the existence of the country canny is one of Indonesia's standards; this is expressed in the Preface to the 1945 Constitution, passage 4, which peruses: Then, to shape an Indonesian state government that safeguards the whole Indonesian country and Indonesia's government, to advance general government assistance, intelligentize the existence of the country, and partake in executing world requests. In light of freedom, everlasting harmony and civil rights, Indonesian public autonomy was planned in the Constitution of the Territory of Indonesia, which was shaped by the design of the Republic of Indonesia.

Composing showing materials in schools is done independently by educators in light of the educational program, schedule and example plans. Everything taught by educators in the educational experience depends on the educational plan and schedule rules at school. In this manner, the improvement of the materials should be connected with the learning (Darma et al., 2024). The instructional work force is entrusted with organizing, the board, advancement, management and specialized administrations to help the instructional cycle in instructive units (Zahidah et al., 2022). Teachers are proficient staff who are entrusted with arranging and carrying out the growing experience, surveying learning results, giving direction and preparing, as well as leading examinations and local area administration, particularly for instructors in

advanced education (Lailatussaadah, 2015). As recently made sense of, different endeavors to work on the nature of instruction have been done by the Indonesian government in confronting Modern Upheaval 4.0 and Society 5.0 (Society 5.0), which incorporates different preparation and capabilities for educators and speakers, working on the nature of training the board, and getting and further developing apparatuses and learning media in instructive organizations like schools and universities (Hermawan et al., 2020). Be that as it may, these endeavors have not shown agreeable outcomes, and there has been no critical improvement in different areas.

Teaching history is an integral part of the educational curriculum in various countries, where history teachers have a big responsibility for conveying knowledge about the past to their students. However, with the development of information and communication technology (ICT), traditional teaching approaches in history are starting to be debated because they are considered less relevant and interesting for today's digital generation. History teaching has a crucial role in shaping students' understanding of the past, its relationship to the present, and its implications for the future. However, amidst the rapid development of information and communication technology (ICT), the paradigm of teaching history is changing. History teachers are faced with demands to integrate technology into learning to create more interesting, interactive and relevant learning experiences for students (Susilo & Sarkowi, 2018).

The biggest challenge faced by history teachers is how they can integrate information technology effectively into their learning process. Although the potential for technology to improve history learning is enormous, its implementation is often hampered by several factors. One of the main challenges is access to technology in the learning environment (Lathifah et al., 2023). Even though technological infrastructure has developed, there are still many schools, especially those in rural areas or areas with economic limitations, that are not yet fully equipped with adequate facilities and internet access. This is an obstacle for history teachers when implementing technology-based learning (Syamsuar & Reflianto, 2019).

One of the main problems is limited access to technology in schools, especially in rural areas or developing countries. Many

history teachers do not have adequate access to the hardware and software needed to integrate technology into their teaching. In addition, the use of technology in history learning raises challenges related to selecting appropriate digital content. History teachers need to carefully select digital resources that not only fit the curriculum but are also capable of enriching students' understanding of various historical events. This process requires time and special skills in evaluating and adapting appropriate digital resources (Salu & Pt, n.d.).

In the development of this teaching material, the guidelines for developing teaching materials are considered (Hasibuan et al., 2022). Another challenge is uncertainty in the selection and use of relevant, high-quality digital content. In involving technology in history teaching, teachers must carefully select digital resources that fit the curriculum, are interesting to students, and can enhance their understanding of historical material. Uncertainty in the application of technology is also a problem often faced by history teachers. Many of them may not be familiar with the various digital tools and platforms that can be used in learning or even feel unsure about integrating them into their teaching practice (Paramansyah & SE, 2020).

Lack of adequate training is also an obstacle to adopting information technology in history learning. Many history teachers are unfamiliar with the use of digital tools or do not have enough knowledge to integrate them effectively in their teaching. In the midst of the complexity of these challenges, effective strategies are needed to help history teachers overcome these obstacles (Ariani et al., 2023). This strategy includes ongoing training and professional development in the use of technology, collaboration between teachers to share the best resources and experiences, and curriculum adjustments to account for relevant technology integration. By identifying and implementing appropriate strategies, it is hoped that history teachers can bridge the gap between tradition and technology in history learning, creating interesting and meaningful learning experiences for students (Septianingsih & Safitri, 2023).

In facing these challenges, effective strategies are needed to help history teachers overcome obstacles in integrating information technology into history teaching. Identifying

appropriate strategies can help create a learning environment that is dynamic and relevant to student needs in this digital era.

METHODOLOGY

This research uses a qualitative approach, with a focus on case studies. This approach was chosen because it allows researchers to understand in depth the challenges and strategies faced by history teachers in integrating information technology into learning (Sugiyono, 2017).

Researchers will conduct in-depth interviews with a number of history teachers who have actively used information technology in their teaching. The interviews will focus on the experiences, challenges and strategies they face in integrating technology into history learning. Apart from interviews, researchers will make direct observations of the history learning process using information technology. These observations will help researchers gain a deeper understanding of the implementation of technology in history learning in real-world environments.

The data collected from interviews and observations will be analyzed qualitatively. The analysis steps include:

- **Transcription:** Interviews will be recorded and transcribed in detail to facilitate analysis.
- **Categorization:** Data will be categorized based on key themes that emerge, such as challenges faced, strategies used, and factors influencing technology integration.
- **Thematic Analysis:** Researchers will conduct thematic analysis to identify patterns, similarities, and differences in the data collected. This will help in exploring the challenges and relevant strategies in depth.

The results of the analysis will be interpreted to find the meaning and implications of the research findings. The findings will be compared with related literature to strengthen the validity and relevance of the research. In addition, researchers will discuss the implications of the findings for history teaching practice and provide recommendations for further development.

RESULT AND DISCUSSION

1. Limited Access to Technology

Many schools, especially in rural areas or with economic limitations, are not yet fully equipped with adequate technological

infrastructure, such as stable internet access, sufficient hardware and relevant software. This causes history teachers to have difficulty implementing technology-based learning. Some schools may have the technology infrastructure, but the cost of acquiring or updating the necessary hardware and software can be prohibitive. History teachers often have to rely on limited school budgets or seek additional funding to meet their technology needs. In addition to the infrastructure in schools, many history teachers also face limitations in personal access to technology. They may not have enough devices or stable internet access at home, which makes preparing and developing learning materials more difficult. Managing and maintaining hardware and software is also a challenge for history teachers. They need to allocate additional time and resources to ensure that all technology equipment functions properly and can be used in daily learning. This limited access to technology not only affects history teachers' ability to integrate technology into learning but can also reduce student learning opportunities and increase gaps in access to digital education. Therefore, holistic and integrated solutions are needed to address these challenges, including investment in better technology infrastructure, subsidies for hardware and software, and better training for teachers in the use of technology.

2. Strategies Used by History Teachers in SMA 14

History teachers at SMA 14 hold regular workshops and training on the integration of technology in history learning. This training includes the use of interactive learning software, the utilization of online learning platforms, and other technology-based teaching strategies. Schools provide special training for teachers on the use of certain hardware and software owned by the school, such as interactive whiteboards, multimedia applications, or learning devices based on augmented reality (AR) or virtual reality (VR). History teachers at SMA 14 hold regular collaborative meetings to share experiences, ideas and resources regarding the integration of technology in history learning. These meetings allow them to learn from each other and discuss effective strategies. Teachers at SMA 14 formed a

collaborative team to develop a technology integration project in history learning. They work together to design and implement projects that involve the use of technology, such as creating historical documentary videos, building virtual exhibitions, or creating interactive simulations. History teachers at SMA 14 actively integrate technology into their lesson plans. They design learning activities that include the use of technology to enrich students' learning experiences, for example, by including links to digital resources, using online educational games, or holding online discussions. Teachers design interactive and interesting learning materials using technology. They create multimedia presentations, online learning modules, and other digital resources that students can access outside of the classroom. These strategies help history teachers at SMA 14 overcome the challenges of integrating technology into history learning and creating a learning environment that is dynamic and relevant to students' needs in this digital era. With support from the school and colleagues, teachers at SMA 14 can continue to improve their teaching practices to prepare students for an ever-changing and diverse future.

3. Analysis

The challenges faced by history teachers in integrating information technology into history learning influence the effectiveness of teaching and learning. Limited access to technology can hinder student participation in technology-based learning, while uncertainty in selecting digital content can reduce the relevance and quality of learning materials.

The strategies used by history teachers, such as training and professional development, collaboration between teachers, and curriculum adjustments, have the potential to overcome the challenges faced and increase the integration of technology in history teaching. However, implementing these strategies requires strong support from schools and the government in providing adequate resources and training for history teachers.

Overall, this research shows the importance of developing the capacity of history teachers to face challenges related to the integration of technology in learning. With the right support, history teachers can improve the quality of their teaching and prepare students to meet the demands of the ever-

evolving digital age.

The strategy implemented by history teachers at SMA 14 is a progressive step in overcoming the challenges faced in integrating technology into history learning. In the in-depth discussion, several aspects of discussion emerged to evaluate the effectiveness of the strategy.

Professional training and development is the main basis for strengthening the capacity of history teachers. Through regular workshops and training, teachers have the opportunity to deepen their understanding of the use of technology in learning. A thorough evaluation of the results of this training is key to assessing the extent to which teachers are able to apply the knowledge and skills they have acquired in everyday teaching contexts.

Collaboration between teachers also plays an important role in enriching teaching practices. Through regular collaborative meetings and collaborative teams for technology integration projects, teachers can share experiences, ideas, and resources to create more engaging and meaningful learning experiences for students. This collaboration creates an environment that supports innovation and experimentation in the use of technology in history learning.

Curriculum adjustments are another strategic step to ensure the relevance of learning to the demands of the times. By integrating technology into lesson plans and developing interactive learning materials, history teachers at SMA 14 create a more dynamic and student-oriented learning experience. Evaluation of the impact of these curriculum adjustments on students' understanding and interest in learning is important to measure their effectiveness.

In the context of the impact on student learning outcomes, a comprehensive evaluation of students' understanding of historical material and their skills in using technology is a primary focus. By strengthening students' skills in using technology and increasing their understanding of history, the strategies implemented at SMA 14 are expected to have a positive impact on the learning process.

The challenges still faced, such as limited access to technology and the need for further development, indicate that continuous improvement efforts are needed. In facing these challenges, support and commitment

from all relevant parties, including schools, teachers and the government, will be the keys to creating a sustainable and innovative learning environment for students at SMA 14.

Through implementing these strategies, history teachers at SMA 14 are not only trying to overcome the challenges of integrating technology into history learning but also to change the learning paradigm to be more adaptive to current developments. Training and professional development provide a strong foundation for teachers to develop new skills and improve their ability to integrate technology. With support from schools and related parties, this training can be an effective means of increasing teacher capacity and improving the quality of learning.

Collaboration between teachers not only creates opportunities to share knowledge and experiences but also to build dynamic and inclusive learning communities. Through the exchange of ideas and mutual support, teachers can overcome challenges together and create more innovative solutions for integrating technology into history learning.

Curriculum adjustments are a major milestone in ensuring that history learning remains relevant and interesting for students. By integrating technology into lesson plans and developing interactive learning materials, teachers can create a more enjoyable and engaging learning experience for students. This allows students to be actively involved in learning and improves their understanding of historical material.

In terms of impact on student learning outcomes, a thorough evaluation of students' understanding of history material and their skills in using technology is key. By strengthening students' skills in using technology and increasing their understanding of history, the strategies implemented at SMA 14 are expected to have a positive impact on the learning process.

The challenges still faced, such as limited access to technology and the need for further development, indicate that continuous improvement efforts are needed. In facing these challenges, support and commitment from all relevant parties, including schools, teachers and the government, will be the keys to creating a sustainable and innovative learning environment for students at SMA 14. By continuing to develop and improve these strategies, SMA 14 can ensure that their

students are ready to face the ever-changing demands of the future.

CONCLUSION

The implementation of the strategies adopted by history teachers at SMA 14 shows their commitment to overcoming the challenges of integrating technology in history learning. In the face of limited access to technology, teachers have been active in utilizing training and professional development to improve their skills in using technology. Collaboration between teachers also provides a platform for sharing experiences and ideas for facing common challenges. Curriculum adjustments are the main basis for ensuring that history learning remains relevant and interesting for students in this digital era. By utilizing technology in lesson plans and developing interactive learning materials, teachers have created a dynamic and student-oriented learning environment. The impact of this strategy can be seen in increasing students' understanding of historical material and their skills in using technology. However, challenges such as limited access to technology and the need for further development still need to be overcome. Continuous support from all relevant parties, including schools, teachers and the government, is the key to creating an innovative and sustainable learning environment for students at SMA 14. By continuing to develop and refine these strategies, SMA 14 can ensure that their students are ready to face the ever-changing demands of the future. Through joint efforts in increasing teacher capacity, expanding access to technology, and developing a responsive curriculum, SMA 14 can become an example for other schools in facing the challenges of integrating technology into history learning.

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