Short Communication

Digital Learning of the Simalungun Script for Students of SMP Negeri 2 Pematang Raya

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ABSTRACT

This community service program aims to preserve the Simalungun script as an element of intangible cultural heritage through an innovative digital learning approach. The program was implemented at SMP Negeri 2 Pematang Raya, Simalungun Regency, which faces low local cultural literacy, particularly concerning traditional scripts. Activities included cultural outreach, digital-based writing training, and the creation of student-produced creative works using the Simalungun script. The results showed a significant improvement in students' script mastery and engagement. The learning module and digital products created by students represent outcomes ready for replication. This program proves effective in rebuilding young people's cultural identity through contextual, technology-based education. It also supports the Merdeka Curriculum and the Pancasila Student Profile, especially in the dimension of local wisdom.

Keywords: Simalungun script, digital learning, local cultural literacy, intangible cultural heritage, Merdeka Curriculum

INTRODUCTION

Scripts are written manifestations of a civilization. In the history of Indonesian culture, the existence of regional scripts demonstrates that Indonesian communities developed autonomous systems of knowledge and communication, rich in value and meaning. One of these is the Simalungun script, a variant of the Batak script family that developed in North Sumatra. It has historically functioned not only as a documentation tool but also as a symbol of identity and cultural expression among the Simalungun people (Pane, 2020). However, the current state of the Simalungun script is in alarming decline. Modernization, globalization, and the dominance of the Latin alphabet in education and administration have contributed to the marginalization of local scripts from public spaces. Ironically, as awareness about cultural preservation increases, a generational disconnect in script mastery persists. This is evident from the lack of Simalungun script materials in formal curricula and the low interest among young people to learn it (Simanjuntak, 2020).

In the national education context, the preservation of local culture has been emphasized through the Merdeka Curriculum. This policy encourages schools to implement project-based learning aligned with students' socio-cultural contexts (Kemendikbudristek, 2022). However, its field implementation faces challenges such as limited human resources, teaching materials, and media support. SMP Negeri 2

Pematang Raya, a school located in the heart of Simalungun culture, reflects this broader issue. Preliminary observations revealed that most students were unfamiliar with the Simalungun script, let alone using it in writing. Teachers, too, admitted they had never received formal training on teaching the script. This gap between the ideal of national cultural education and actual classroom practice underscores the urgency for strategic intervention (Nainggolan, 2018).

A promising solution lies in the digitalization of script learning. In this context, digitalization involves not merely digitizing content, but designing an interactive, visual, and participatory learning experience. Pasaribu (2023) showed that digital media significantly enhances student engagement and accelerates phonetic comprehension in Batak Toba script learning. UNESCO (2017) also highlights the potential of digital technology in revitalizing endangered languages and scripts. Technology allows for widespread, flexible, and sustainable documentation, distribution, and teaching of local scripts. Therefore, digitalization is not merely an educational tool but a strategy for community-based cultural preservation.

Effective cultural learning also depends on contextual, participatory, and meaningful pedagogical approaches. Students must be immersed in experiences that engage them cognitively, affectively, and kinesthetically. Project-based learning is ideal for this purpose, enabling students to produce tangible works such as posters, infographics, or videos using the Simalungun script. By integrating technology with culturally rooted pedagogy, this program aims to address the challenges of Simalungun script preservation among youth. It is expected not only to improve cultural literacy but also to foster pride and a sense of responsibility toward local identity.

Ultimately, this program could serve as a model for developing local wisdom-based education in other schools across Simalungun or regions facing similar cultural preservation challenges. Thus, cultural revitalization becomes not merely a symbolic agenda but an integral part of holistic, contextual, and transformative education (Hall, 1997).

METHODOLOGY

The implementation of this community service activity was structured into three main phases designed to address the issue of low Simalungun script literacy among junior high school students and to optimize the use of digital technology as an instructional medium. The stages included: (1) cultural outreach and historical education on the Simalungun script for students and teachers, (2) digital script training using devices such as laptops and graphic design applications, and (3) project-based application through the creation of creative student products utilizing the Simalungun script in the form of posters, short videos, or digital comics. The first phase involved cultural outreach and script history sessions, aimed at providing foundational knowledge and fostering awareness of the Simalungun script's historical, philosophical, and cultural significance. These sessions included interactive presentations, short cultural films, and open discussions between students, teachers, and local cultural figures. According to Hall (1997), the act of understanding symbolic systems such as writing is a crucial step in constructing cultural identity and meaning within a community.

The second phase consisted of practical training in the digitalization of the Simalungun script. Students were introduced to basic characters of the script, phonetic structures, and digital writing techniques using graphic tools like Canva, PixelLab, or PowerPoint. The training employed a hands-on approach to engage students directly in script usage. As Gilster (1997) argues, digital literacy encompasses not only access to information but also the ability to produce culturally relevant and

meaningful content. The third phase implemented a project-based learning (PjBL) model, encouraging students to apply their skills by producing creative works incorporating the Simalungun script. These outputs included digital posters, infographics, short videos, greeting cards, and educational comics. This method supports the development of 21st-century competencies, particularly critical thinking, creativity, collaboration, and communication (Thomas, 2000). Students' works were showcased in a school exhibition as a means of recognition and cultural celebration.

Each phase was carried out using participatory and contextual pedagogical approaches. Teachers were engaged from the planning stage through implementation, serving as facilitators and collaborators in curriculum development. Students were positioned not only as learners but as co-creators of content, aligning with Vygotsky's sociocultural theory that emphasizes the importance of social interaction and cultural context in learning (Santrock, 2017). Evaluation was conducted through three complementary strategies:

1. Formative assessment: to measure improvements in students' knowledge and skills in reading and writing Simalungun script.
2. Observation checklists: to track student engagement and participation during training and production stages.
3. Reflective feedback: collected through group discussions and questionnaires to assess students' learning experiences, perceptions of local culture, and motivation for continued engagement.

This integrative methodology was designed not only to deliver conceptual knowledge but also to foster emotional connection and active participation in cultural preservation. As McTaggart (1991) notes, successful community-based programs are measured not only by individual outcomes but by their broader social and cultural impacts.

RESULTS AND DISCUSSION

The community service activity themed Learning Digitalization of Simalungun Script for Students of SMP Negeri 2 Pematang Raya has been carried out well and has a real impact on increasing local cultural literacy among students. This activity not only succeeded in reintroducing the Simalungun script to the younger generation, but also built cultural awareness through an innovative approach, namely the digitization of learning media. In general, the activity resulted in positive changes in the aspects of knowledge, skills, attitudes, and participation of students, teachers, and the school community towards the preservation of regional cultural heritage.

1. Simalungun Literacy Improvement

One of the main achievements of this activity was the improvement of students' ability to recognize, read, and write basic Simalungun script. Based on the initial and final evaluations conducted through written tests and direct observation, around 85% of the participating students were able to write their own names in Simalungun script, compose simple words such as place names, family members, and traditional greetings. These skills were particularly significant as the majority of participants had no prior knowledge of Simalungun script forms. Thus, this activity has created an initial foundation of regional script literacy that was previously not available in the school environment. It also shows that with appropriate methods and participatory approaches, students are able to learn even things that are considered complex, such as traditional scripts that are no longer used in everyday life.

Picture 1. Students observing Simalungun Script Writing

2. Strengthening Cultural Identity and Sense of Pride

In addition to technical mastery, this activity succeeded in regenerating a sense of belonging and pride in Simalungun culture among students. In reflection sessions and group discussions, students stated that learning the script made them feel closer to their cultural roots. Some students even expressed their intention to teach the script to family members or create content on social media with the theme of Simalungun script. This strengthening of cultural identity is very important in the context of Indonesia's multicultural society, where local identities are often marginalized by the dominance of global culture. In line with Stuart Hall's (1997) representation theory, this activity proves that cultural symbols such as the script can be a means of forming strong self-meanings, when understood and experienced directly by individuals.

3. Formation of Digital Creative Products Based on Simalungun Script

The real output of this activity is in the form of student work in the form of digital products, such as educational poster designs, digital greeting cards, and infographics in Simalungun language with writing using Simalungun script. These products not only serve as learning outcomes, but also as cultural campaign tools that can be disseminated through school social media. The use of simple graphic applications such as Canva or PowerPoint becomes a means of expression that is easily accessible to students. In the creation process, students are guided to combine text elements in Simalungun script with visual elements that reflect local culture. This proves that cultural learning can be packaged in an interesting and creative way, without having to abandon its traditional substance.

4. Students' Digital Skills in Cultural Learning

This activity also has an impact on improving students' digital skills, especially in the use of learning applications and graphic design. The integration of Simalungun script material with the use of digital media provides a fun learning experience that is relevant to the characteristics of today's generation. Observation results show that students are more active and engaged when cultural materials are taught through visual media and hands-on practice compared to conventional lectures.

Picture 2. Students Seriously Observing Simalungun Script Writing

This digital literacy ability is in line with the demands of the 21st century curriculum, where students are required to develop critical, creative, collaborative and communicative thinking skills (4C). In this context, learning Simalungun script through a digital approach not only functions as a means of cultural preservation, but also as a cross-disciplinary basic competency learning strategy.

5. Increased Teacher Participation and School Involvement

This activity also had a positive impact on increasing teacher capacity and involvement in local culture-based learning. Teachers involved, especially from the Indonesian Language and Cultural Arts subject areas, stated that the Simalungun script material is very relevant to be integrated into the learning of regional poetry, batik design, or the project to strengthen the Pancasila (P5) learner profile. In addition, the school showed high enthusiasm by providing room facilities, supporting devices, and coordinating students effectively. The involvement of the school as an active partner shows that this activity has the potential for sustainability if supported by internal school policies. Some teachers even proposed to develop this activity into a permanent extracurricular program at school.

6. The creation of a Digital Script Learning Module

As part of the output of the activity, the service team has compiled and submitted a digital Simalungun script learning module in the form of PDF and PowerPoint files containing script introduction guides, writing exercises, and practical applications. This module is designed according to the cognitive development level of junior high school students and can be used flexibly by teachers in various subjects or extracurricular activities.

The module has been tested in activities and received positive feedback from teachers and students. The preparation of the module refers to the principles of contextual and multimodal learning, which combines text, images and interactive activities. With this module, schools have an authentic and ready-to-use learning resource to be used in the sustainable preservation of Simalungun script.

7. Academic Publications and Strengthening Institutional Reputation

As part of the academic output, this activity also produces scientific articles that are ready to be submitted for publication in nationally accredited community service journals. This article contains the background of the problem, implementation methods, activity results, and theoretical reflections on the preservation of

Simalungun script through a digital approach. This publication not only strengthens the impact of the activity, but also supports the vision of higher education institutions in increasing scientific contributions to society. In addition to articles, documentation of activities in the form of photos, videos, and student testimonials have also been compiled as part of a visual report that can be used for the purposes of cultural promotion and reporting activities to stakeholders.

8. Increased Multiculturalism Awareness and Character Education

Another significant result is the growth of multiculturalism awareness and strengthening of character education. Through script learning, students not only learn written symbols, but also noble values contained in Simalungun culture, such as respect for ancestors, politeness in language, and the spirit of mutual cooperation. These values are part of character education that is relevant in building resilient, tolerant learners who love Indonesian culture. It also opens up a wider discussion on the importance of cultural preservation in the context of globalization. Students begin to understand that local identity is a strength that can be proud of and displayed, not something that should be hidden. This shows a paradigm shift from apathy towards local culture to appreciative and reflective attitudes.

9. Replication and Follow-up Plan

The success of this activity opens up opportunities for replication to other schools in Simalungun District. Several teachers from other schools who attended the activity expressed interest in adopting the modules and methods used. The service team is also committed to opening access to the digital modules that have been developed for free through online learning sites or platforms. As a follow-up, further training for teachers and students for the development of culture-based creative teaching media is planned. In addition, the school also expressed interest in holding a Simalungun script writing competition as part of the school's anniversary activities or end-of-year project. Thus, the sustainability of this program does not depend on a one-time activity, but becomes part of a sustainable learning culture at school.

CONCLUSION

The community service activity entitled Learning Digitalization of Simalungun Script for Students of SMP Negeri 2 Pematang Raya has made a real contribution to efforts to preserve local culture through an innovative approach based on educational technology. Through this activity, students are not only reintroduced to the Simalungun script as one of the intangible cultural heritages, but also equipped with basic skills in reading and writing the script through interesting and contextual digital media. This activity also succeeded in creating a fun, participatory and productive learning space. Students showed significant improvement in script mastery, creativity in developing cultural-based works, and increased pride in their cultural identity.

Teachers and school authorities also play an active role in supporting the sustainability of this program, showing that cultural preservation can be done collaboratively between educational institutions and local communities. Furthermore, this activity also contributes to the development of digital learning modules, strengthening the profile of Pancasila students in terms of local wisdom, as well as opening opportunities for replication and development of similar programs in other regions. By combining cultural literacy and digital literacy, this program proves that preserving traditions does not have to conflict with the progress of the times, but can run harmoniously and strengthen each other.

Conflict of Interest: No conflicts of interest declared.

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