



# DEVELOPMENT STRATEGY FOR THE USE OF "GEO EXPLORER BLOGSPOT" BASED ON LOCAL WISDOM IN HIGH SCHOOL GEOGRAPHY LEARNING IN TOBA DISTRICT TO ENHANCE TEACHERS' TEACHING IMPROVISATION SKILLS TOWARDS SOCIETY 5.0 ERA

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## ABSTRACT

*This study examines the use of technology in the digitalization era of education towards Society 5.0 within the framework of local cultural wisdom in Geography Education subjects, which is expected to strengthen students' understanding of local wisdom to prepare them to face future challenges. This study aims to analyse the knowledge, understanding, and skills of teachers in using "Geo Explorer Blogspot". This type of research is descriptive quantitative conducted in the Geography Teachers Association of Toba District High Schools, North Sumatra, with a sample of 9 Geography subject teachers. Data collection used questionnaires and analysis was conducted using descriptive statistics. The results showed that 44% of teachers using Blogspot were in the category of underutilized by teachers in their teaching. However, as much as 56% understand well the use of Geo Explorer Blogspot. In addition, 44% of teachers also have good skills in operating and using features in Blogspot. 44% of teachers also realize that Geo Explorer Blogspot can improve student learning outcomes and motivation. However, teachers need to integrate more local wisdom in learning using the Geo Explorer Blogspot teaching media because there are still teachers who never raise Toba's local wisdom in Geography learning even though the related material is about local wisdom. Alternative strategies are recommended to improve the professional competence of Geography teachers in developing Geo Explorer Blogspot using the ADDIE training model.*

**Keywords:** *Geo Explorer Blogspot, Local Wisdom, Teacher Professional Competence.*

## 1. INTRODUCTION

Educational digitalization is a revolutionary transformation in the education world that involves the integration of information and communication technology in all aspects of learning and teaching. In the current era of globalization and digital transformation, education has undergone significant development towards a society that is increasingly connected and technology-oriented, often referred to as Society 5.0. One important aspect of improving the quality of learning is the integration of technology into the learning process. One innovative technology to improve Geography learning at the High School level is "Geo Explorer Blogspot". This platform offers great potential to bring a more interactive, up-to-date, and relevant learning experience to the local context.

Toba District, North Sumatra, as one of the regions with rich cultural and local wisdom, has great potential to utilize technology such as "Geo Explorer Blogspot" in enhancing Geography learning in high schools. However, challenges in integrating local wisdom with technology in the learning process are still experienced by teachers hindered by several factors such as the lack of awareness to integrate local wisdom into the curriculum and limited access to technology, resulting in Geography subject learning being less relevant and impacting the lack of student interest. In responding to these challenges, the development of the use of "Geo Explorer Blogspot" based on local wisdom in Geography learning



becomes an alternative solution to improve the quality of Geography learning. The utilization of digital technology combined with the local wisdom of Toba District in a platform is expected to be an effective tool in improving students' understanding of Geography and strengthening their connection with the environment.

The perspective of Society 5.0 which facilitates technology and humanism to be integrated, drives teachers to play a more important role as creative and adaptive learning facilitators. Therefore, the development strategy of using "Geo Explorer Blogspot" is expected to enhance teachers' improvisation skills in presenting relevant lesson materials in the local context and preparing students to face an increasingly developing and complex future. The success of the learning process is influenced by several factors, such as teacher, student, media, and environment (Sanjaya, 2009). Learning media can also attract children's attention, motivate learning, and help students learn independently according to their abilities and interests (Azwandi, 2007). The position of media that has become an integral part of learning is greatly influenced by the teacher's ability to choose and design appropriate media. Teacher pedagogic competence as professionals is indicated by their creativity in utilizing learning resources to create learning media so that the material is more easily understood by students. Media has also been proven to optimize learning (Nurdyansyah & Andiek, 2015).

The role of media in learning is said to be very important because learning media can clarify the presentation of informational messages, thereby facilitating the learning process and improving learning outcomes including digital media such as Geo Explorer Blogspot (Hasanah and Nulhakim, 2015). The benefits of blogs for teachers are (1) Online storage space for teachers; (2) Becoming an online learning media; (3) proving the professionalism of teachers; and (4) Building online communication. Based on the usefulness opinions of blogspot in learning according to the experts above, it can be concluded that the advantages of online learning using blogspot are: (1) blogspot media in learning knows no time or can be accessed fully 24 hours; (2) economical, because there are free blogspot; (3) through blogspot, positive interaction can be established; (4) easy and fast as well as simple creation because the steps are easy (Panjaitan, 2013). Blog media has been confirmed to be effectively used as alternative learning media in schools because it can improve student achievement and motivation (Sartono, 2016).

"Geo Explorer Blogspot" as a learning media is a digital platform designed to present Geography education content with a web-based or blogspot-based approach. A blog is a web-based application, software, or software created by an individual (blogger or blog user) intentionally for certain purposes and reasons designed in such a way in the form of text, images, and videos that can be used to present learning material online.

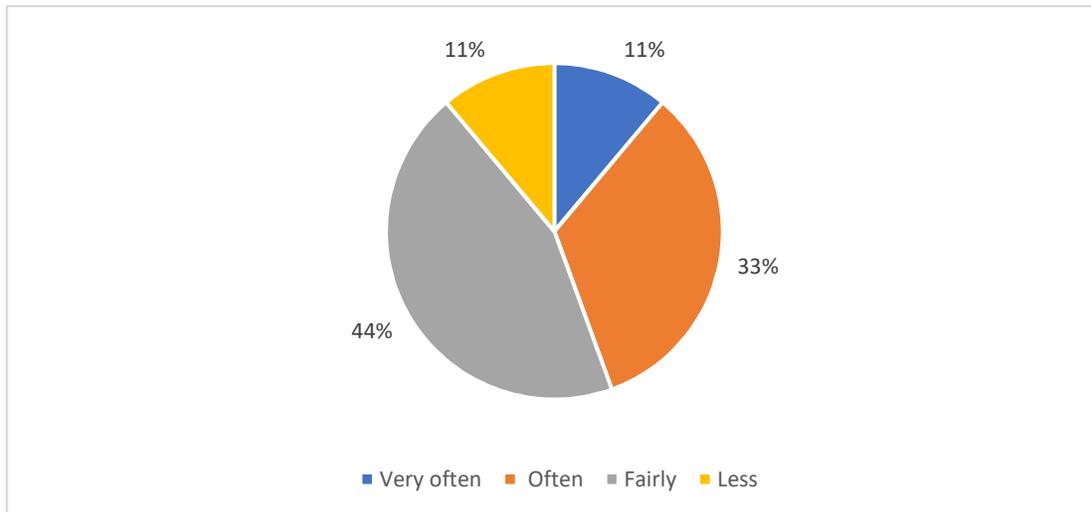
## 2. METHOD

This quantitative descriptive study aims to analyse the knowledge, understanding, insight, and skills of teachers in using "Geo Explorer Blogspot" based on local wisdom by optimizing the utilization of blogspot technology as an alternative strategy to improve the quality of learning in Geography subjects in high schools. The research sample consisted of high school Geography teachers who are members of the Geography Teachers Association in Toba District, North Sumatra. Data collection used Likert scale questionnaires. Data were analysed using descriptive statistics (Sugiyono, 2009).

## 3. RESULTS AND DISCUSSION

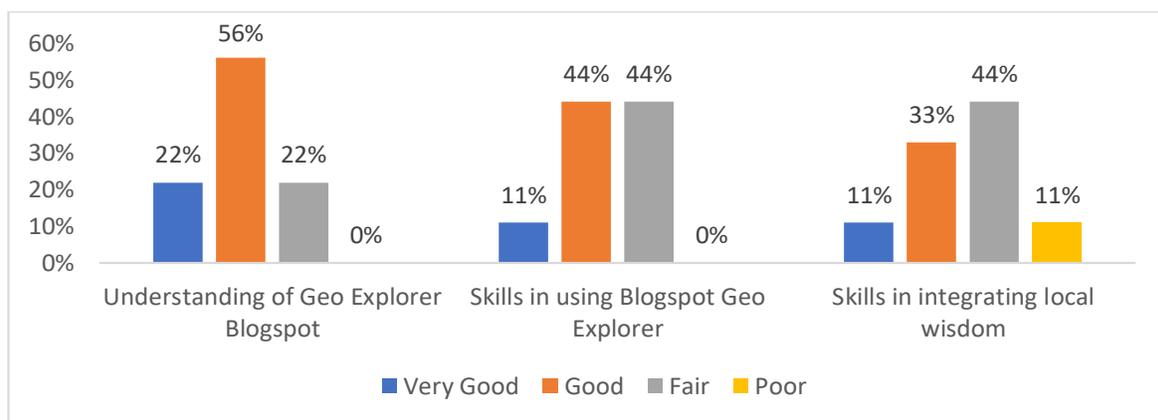
### *3.1. Profile of Usage, Understanding, and Skills of Teachers in Utilizing Geo Explorer Blogspot*

The results of data collection regarding the usage, understanding, and skills of teachers in utilizing Geo Explorer Blogspot are presented in Figure 1 to Figure 3 as follows:



**Figure 1. Profile of Geo Explorer Blogspot Usage**

After conducting research by providing questionnaires to respondents, the results obtained that 11% of respondents answered that they rarely or never use blogspot in learning and 33% often use blogspot. However, 44% rarely use it with sufficient frequency. It means that teachers are at the stage of getting to know blogspot but rarely use it in learning. This is caused by several factors such as lack of time in teaching and learning activities and supporting media, as well as relatively insufficient mastery of teachers. Many teachers often use and have a good understanding of using geo explore blogspot. The highest value of respondents answered that they use blogspot well/often. It can be concluded that geo explore blogspot is favoured by teachers and students for use in learning, but further training is needed to explore more interesting features of blogspot.



**Figure 2. Understanding and Skills in using Geo Explorer Blogspot and Skills in integrating local wisdom**



### - Understanding

Based on the graph above, teachers have a good understanding of using Geo Explorer Blogspot. This is supported by the digital facilities they have such as laptops and wifi in schools. So, most teachers are familiar with and understand the use of blogspot. The majority of geography teachers' understanding is at a good level. It means that the introduction, use, and development of blogs have been mastered by teachers. However, their usage has not been optimized. Yet, much geographic information is presented in certain blogs, enriching the learning references for teachers and students.

**Innovation:** there is a need for training and sharing sessions among subject teacher's in-depth introduction regarding the features of blogspot.

### - Skills

Geography teachers who have good skills in using Geo Explorer Blogspot usually excel in several key aspects. They can smoothly operate the platform, and utilize various features and tools available to design engaging and informative learning experiences for students. These teachers also have high creativity in integrating technology into their teaching, presenting geography material in an interesting and relevant way, thus promoting deeper and sustainable understanding in students. Additionally, they have a strong understanding of the geography material they teach, and can effectively link it to the content presented through Geo Explorer Blogspot, providing rich and meaningful context for student learning.

On the other hand, geography teachers who are less skilled in using Geo Explorer Blogspot may face several challenges. They may feel uncomfortable or unsure about operating the platform and tend to rely on conventional teaching methods rather than trying new approaches involving technology. A lack of understanding about the features and potential uses of Geo Explorer Blogspot can also limit their ability to create engaging and meaningful learning experiences for students. Moreover, difficulty in connecting the geography material taught with the content presented through the platform can result in a lack of cohesion in teaching and shallow understanding in students.

In addressing these differences, the approach applied to improve the skills of geography teachers in using Geo Explorer Blogspot needs to involve appropriate training, continuous technical support, and the creation of relevant and easily understandable resources. Additionally, efforts to encourage collaboration among teachers and sharing best practices can be an effective step to strengthen the use of this technology in the context of geography learning.

**Innovation:** An interesting innovation in the use of Geo Explorer Blogspot in geography teaching is the development of web-based GIS research projects by teachers and students. In this project, teachers guide students to conduct geographic research on specific topics, such as environmental changes, population migration, or distribution of natural resources. Students use Geo Explorer Blogspot to access relevant spatial data, such as maps, satellite images, and other layers of geographic information, to analyse and visualize the phenomena they are studying. Additionally, they can use the collaborative features of Geo Explorer Blogspot to discuss and share their findings with fellow students and teachers. By conducting this research project, students not only develop a deeper understanding of geography concepts but also enhance their practical skills in using GIS technology and stimulate critical thinking and team collaboration.

Interestingly, the skills in using Geo Explorer Blogspot are still balanced between good and less skilled categories. This is due to the lack of time for teachers to develop themselves by using blogspot. Similarly, in integrating local wisdom, most teachers are less skilled in integrating it. However, it can be concluded that on average, teachers can use blogspot well and often. Because thereby, it can increase student motivation and learning outcomes. Unfortunately, the use of blogspot by teachers still rarely integrates local wisdom into learning, which needs to be improved in the future. Most teachers agree and realize that the use of geo explorer blogspot can improve the quality of teaching and learning as well as student motivation and learning outcomes. However, teachers rarely associate it with local wisdom



material that should serve as a means of introducing local culture. This is because teachers tend to forget and are pressed for time in using blogspot. Teachers often use blogs in teaching. However, this indicator also has the highest standard deviation, which means there are still teachers who have never used blogspot or even do not know about blogspot.

#### **- Integration of Local Wisdom in Geography Learning Using Geo Explorer Blogspot**

Data shows that the integration of local wisdom in geography learning using Geo Explorer is often overlooked by most teachers. Studies conducted in various secondary schools indicate that only a few teachers consistently incorporate local wisdom content into their geography curriculum using platforms like Geo Explorer. This is reflected in the lack of representation of relevant local information, such as history, culture, or ecological diversity, in the learning materials presented through Geo Explorer. Teachers tend to focus more on general geographic concepts or topics deemed more "universal", without considering the importance of connecting learning to students' local contexts. As a result, students may feel less connected to the taught material and may struggle to understand the relevance of geography to their everyday lives. Special attention and further efforts are needed to help teachers recognize and integrate local wisdom into geography teaching using the Geo Explorer platform, thus enhancing students' understanding and engagement in their learning.

#### **Innovation:**

An example of an interesting innovation in using Geo Explorer Blogspot is the development of student research projects on environmental changes guided by local wisdom, involving local cultural experts in the learning process. In this project, teachers collaborate with the local community and local cultural experts to gain a deeper understanding of the local environment, including traditional knowledge about spatial planning, land use, or conservation practices. Students then use Geo Explorer Blogspot to publish data and to map and analyse the collected data, as well as to compare it with the traditional knowledge conveyed by cultural experts. Additionally, teachers can invite local cultural experts to give seminars or conduct visits to schools, where they can introduce local wisdom existing in the students' environment. Through this approach, students not only develop a better understanding of geography concepts but also appreciate the important role of local wisdom in preserving the environment and understanding the impact of globalization on their regions. This project enhances their awareness of environmental and cultural issues relevant to their community.

Geo Explorer Blogspot has great potential as a means to introduce the local wisdom culture of Toba in the Society 5.0 era. Through Geo Explorer Blogspot, users can access rich information about the history, culture, traditions, and practices of Toba's local wisdom, presented in multimedia content. Users can explore important locations, cultural sites, and natural heritage sites that have significant value for the Toba community, while also understanding their relationship with the current social, economic, and environmental conditions. By utilizing Geo Explorer Blogspot as an educational and cultural promotion tool, the Toba community can strengthen its cultural identity, introduce its heritage to a wider audience, and preserve its local wisdom amidst the currents of globalization and modernization. This will not only help promote cultural pluralism but also support the vision of Society 5.0, which emphasizes harmony between technological advancements and traditional cultural values.

#### **- Uniqueness of Geography Lessons and Toba District**

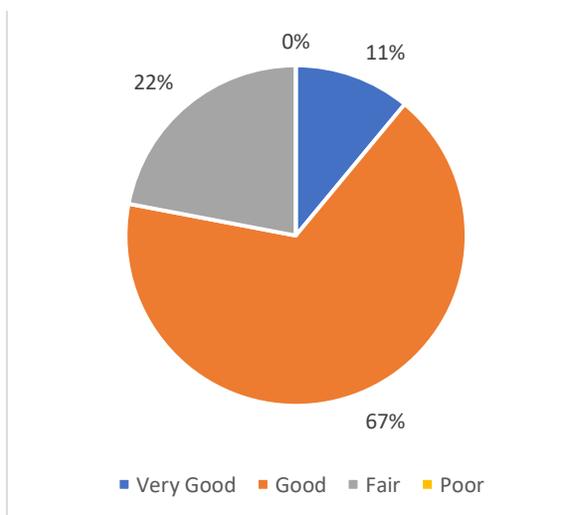
Some materials such as national culture, local wisdom, biosphere, natural resources, and Toba as a national tourism destination are excellent topics presented in the form of student project assignments in the form of blogs. It is noteworthy that Toba District is the venue for international events such as F1H20 which took place on March 1-3, 2024, recently. Therefore, the role of Geography Teachers is to document these events and present them in the form of blogs, which are a collection of geographic information about the Toba District. As a form of educational digitalization, Geo Explorer Blogspot has great potential as a means to introduce the local wisdom culture of Toba in the Society 5.0 era and to introduce



the cultural richness and local wisdom owned by the Toba community. Through Geo Explorer Blogspot, users can access rich information about the history, culture, traditions, and practices of Toba's local wisdom in the geography teacher's blogspot. Geo Explorer Blogspot can also serve as an educational and cultural promotion tool, enabling the Toba community to strengthen their cultural identity, introduce their heritage to a wider audience, and preserve their local wisdom amidst the currents of globalization and modernization.

### 3.2. Impact Study of Geo Explorer Blogspot Usage on Student Motivation and Learning Outcomes

Data shows that the use of Geo Explorer Blogspot significantly increases student motivation and learning outcomes in geography lessons (Figure 2). Studies conducted in several secondary schools indicate that students engaged in learning through Geo Explorer Blogspot tend to be more enthusiastic and actively participate in the learning process. They show greater interest in geography learning materials because this platform allows them to interact directly with geographic content through interactive maps, satellite images, and other geospatial resources. Not only that, but students' academic performance also significantly improves after implementing Geo Explorer Blogspot in geography learning. Research shows that the use of this technology helps students to understand geographic concepts more deeply and comprehensively. They can better connect theory with real-world contexts through the visual and interactive exploration provided by the platform. Additionally, students' ability to analyse geographic data and solve problems also improves as they are given opportunities to undertake challenging tasks through Geo Explorer Blogspot. Overall, the data confirms that the use of Geo Explorer Blogspot is effective in enhancing students' intrinsic motivation towards geography learning and their academic outcomes. This platform not only provides a more engaging and relevant learning experience for students but also facilitates a deeper and sustained understanding of complex geographic concepts.



**Figure 3. Impact of Geo Explorer Blogspot Usage on Student Motivation and Learning Outcomes**

One interesting innovation in the use of Geo Explorer Blogspot is the development of collaborative projects among students focused on participatory mapping of the school environment. In this project, teachers collaborate with students to use Geo Explorer Blogspot to conduct surveys of the school environment, documenting various aspects such as air quality, land cover, or water flow patterns. Students use mobile devices or tablets to collect field data, which is then uploaded to Geo Explorer Blogspot for real-time mapping. Through this platform, students can access data collected by their peers, collaborate in analysing school environmental patterns and trends, and develop recommendations to



improve environmental sustainability. This project not only enables students to develop a deeper understanding of practical geographic concepts but also encourages active engagement, collaborative skills, and environmental awareness among students.

#### 4. CONCLUSION AND RECOMENDATION

Most geography teachers have used and are familiar with Geo Explorer Blogspot in teaching. Furthermore, geography teachers also have good skills in using Blogspot and often use it. Unfortunately, teachers' skills are still minimal in exploring interesting features of using Blogspot. Additionally, teachers rarely, or even never, integrate local wisdom into teaching using Blogspot. However, Blogspot can be a medium to publish students' local wisdom. Therefore, teacher training is needed to explore the use of Blogspot. Moreover, most teachers agree that their experience using Blogspot can improve student motivation and learning outcomes. Further action from this research is needed, namely the creation of Geo Explorer Blogspot usage training, especially the introduction of interesting Blogspot features. The researcher proposes the ADDIE training method as an alternative to designing a Blogspot usage training.

The alternative improvement of teacher competence in creating, developing, and using Geo Explorer Blogspot can be done by applying the ADDIE training model, which stands for Analysis, Design, Development, Implementation, and Evaluation (Allen, 2006), as a guideline in designing effective and targeted training. Through this approach, it is hoped that teachers can be more prepared and skilled in integrating Geo Explorer Blogspot into their geography teaching, as well as utilizing the potential of the platform to enrich student learning experiences and strengthen the relationship between learning and their local context.

This is a framework commonly used in instructional development and learning design. Here's a brief explanation of each stage in the ADDIE framework:

- Analysis: The first stage in ADDIE is analysis. In this stage, an in-depth analysis of learning needs and student characteristics is necessary. The main goal is to identify learning problems to be solved and determine specific learning objectives.
- Design: After the analysis is done, the next step is to design the learning program. This involves developing a learning plan that includes organizing material, using appropriate learning methods, and developing instructional materials and resources.
- Development: The development stage involves creating learning materials according to the designed plan. This could include developing printed materials, video recordings, online modules, or developing learning software.
- Implementation: After the learning materials are developed, the next step is to implement them in the actual learning environment. This can be done through training sessions, regular classes, or through online learning platforms.
- Evaluation: The final stage in ADDIE is evaluation. In this stage, the effectiveness of the learning program is evaluated. Evaluation can be done through tests, questionnaires, observations, or other evaluation methods. The evaluation results are used to assess the success of the learning program and to identify areas for improvement.

The context of "Geo Explorer Blogspot" used as an alternative strategy to improve the quality of Geography learning in SMA at Toba district is carried out by integrating aspects of local wisdom. This platform can contain various types of content, such as articles, videos, images, and other interactive resources that support Geography learning. The use of this platform is expected to improve teachers' ability to improve teaching by utilizing content relevant to the local wisdom of Toba district, as well as preparing students to face changes in the Society 5.0 era. Examples of the types of content that may be available on the "Geo Explorer Blogspot" platform to support Geography learning in SMA at Toba district are as follows:



- (a) Articles: Articles on Geography topics relevant to Toba district, such as history, culture, geology, and ecology. These articles can provide an in-depth understanding of important aspects of the region.
- (b) Videos: Short videos explaining geographic concepts using examples from Toba district. Videos can include visits to important locations, interviews with experts, or documentation of environmental changes occurring in the region.
- (c) Images and Infographics: Images and infographics displaying important data and information about Kabupaten Toba, such as maps, diagrams, or graphs explaining relevant geographic or social phenomena.
- (d) Interactive Resources: Interactive resources, such as interactive maps, simulations, or educational games allow students to explore geographic concepts engagingly and interact with lesson materials.
- (e) Local Stories: Stories or narratives about daily life, culture, and traditions of the local community in Kabupaten Toba. These stories can help students understand the social and cultural context of where they live.
- (f) Assignments and Quizzes: Assignments or quizzes designed to test students' understanding of lesson materials and motivate them to actively engage in learning.
- (g) Discussion Forums: Discussion forums or comment sections where students can share opinions, ask questions, or discuss Geography topics covered on the platform.

By providing various types of content like this, "Geo Explorer Blogspot" can become a rich and diverse resource to support Geography learning in SMA Toba district with a local wisdom-based approach.

## 5. ACKNOWLEDGMENTS

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