
Development of Geography Teaching Material Supplements on Land Water Materials Based on Longalo Natural Tourism

Puspita Rahmat

Universitas Negeri Gorontalo
puspitarahmat2002@gmail.com

Nurfaika

Universitas Negeri Gorontalo
nurfaika@ung.ac.id

M.Iqbal Liayong Pratama

Universitas Negeri Gorontalo
m.iqbal@ung.ac.id

Abstract

This research aims to develop supplementary geography teaching materials based on Longalo natural tourism to increase understanding of inland water material among high school students. The ADDIE development model is used in developing this teaching material, which involves the stages of analysis, design, development, implementation, and evaluation. The research results show that the developed supplement book received a decent assessment from geography experts and teachers. The integration of Longalo natural tourism in learning materials enriches students' learning experiences and activates local potential as a valuable learning resource, per the concept of locally based education. These findings are essential to developing relevant geography teaching materials oriented toward using local resources to support environmental sustainability.

Keywords: Teaching Material Supplements, Nature Tourism, Geography

Introduction

Teaching materials are learning packages relating to a unit of learning material. Teaching materials are prepared systematically and interestingly and include content, methods, and evaluations that can be used independently (Merta Sari et al., 2022). According to regulations in National Education Ministerial Decree No. 22 of 2006, content standards are the minimum material scope and level of competency to achieve minimum graduate competency at a certain level and type of education. Schools or educational units are asked to describe the material as contained in the content standards according to school and environmental conditions. Developing learning materials that are contextual and relevant to life will make it easier for students to achieve learning goals (IB Herliani, NB Atmadja, 2020).

Teaching materials act as tools that help teachers carry out the learning process (Khairani

et al., 2017), become a learning resource to support classroom learning (Asrizal et al., 2018), a means to facilitate, influence or encourage the achievement of student competency (Asrizal et al., 2019). Suppose the teaching materials used in the learning process are developed according to the needs of teachers and students and used correctly. In that case, they will be one of the critical factors that can improve the quality of learning (Sadjati, 2012).

Initially, the teacher was considered the only source of learning in the classroom. However, with teaching materials, the role becomes more of a facilitator who helps and directs students in the teaching and learning process (Pinahayu, 2016). Using teaching materials correctly and effectively can also direct students to become independent and active learners because they can read or study the material in the teaching materials first before participating in class learning (Pratama & Maryati, 2021).

Based on the observations at SMA Negeri 2 Gorontalo, information was obtained that students needed help understanding the subject matter at school; the development of nature tourism-based material had never been used in classroom learning. One of the efforts to overcome this problem is the need to develop natural tourism-based materials in Longalo village, one of which is by adopting the research title: Development of Longalo natural tourism-based geographic material supplements integrated into subjects at SMA Negeri 2 Gorontalo class X.

In this research, researchers developed material by linking Longalo's natural tourism. Contextual learning is a learning and teaching concept that helps teachers link the material they teach with students' real-world situations and encourages students to connect their knowledge and its application in their lives. The material developed is Geography material, including hydrosphere dynamics on life (Choirunnisa et al., 2019).

Geography subjects contain knowledge that can encourage and support a more prosperous life in harmony with nature (Syafira et al., 2023). Contextual geographic material can help students learn more about and recognize tourism potential outside the student's environment. Many materials in student textbooks need to address the actual conditions of the students' environment, especially those related to natural phenomena. Therefore, it is necessary to develop teaching materials that can package the tourism potential that exists in the students' environment, especially in Longalo natural tourism. This aims to make learning the material easier by giving examples of the potential for natural tourism in the student's environment.

METHOD

This type of research is development research or Research and Development (R&D). This type of research focuses on developing natural tourism-based teaching materials with the ADDIE development model, which consists of five stages, namely: analysis stage, design stage, development stage, implementation stage, and testing or evaluation stage (Sugiyono, 2015). Research and development are used to produce geography learning materials based on Longalo nature tourism on geography material.

The activities carried out at each development stage can be explained as follows:

1. Analysis: The analysis stage is a process of defining what students will learn. So, to know or determine what to study, we have to carry out several activities.
 2. Design stage: This design stage is carried out to create teaching materials using the content framework resulting from curriculum and material analysis.
 3. Development stage: A team of experts will validate Longalo natural tourism-based teaching materials integrated into geography subjects produced at the design stage. Furthermore, it is validated by a team of experts; validation consists of material validation carried out by geography teachers and geography teachers, media expert validation carried out by lecturers, and language validation carried out by language expert lecturers. The resulting teaching materials will be revised again, followed by an overall assessment of the teaching materials from the material, language, and media aspects.
 4. Implementation Stage: Longalo natural tourism-based teaching materials integrated into geography subjects produced at the development stage will be revised again. Next, a trial consisting of two limited trials and a general trial will be carried out.
 5. Evaluation stage: Longalo natural tourism-based teaching materials integrated into high school geography subjects produced at the implementation stage will be subjected to a final assessment from the questionnaire given to students to produce teaching materials that students need.
- 1) Data analysis technique
 - a. Validation Sheet Analysis

In order to determine the presentation of the results from this data, use the following formula:

$$p = \frac{\sum x}{\sum x^1} \times 100\%$$

Information :

P = percentage

$\sum x$ = total number of validator answer scores (real value)

$\sum x^1$ = total number of highest answer scores (expected value)

100 % = constant number

b. Analysis of Student Responses

Student response data from the questionnaire is then analyzed for percentages and qualifications to create and draw conclusions. The formula used to calculate student responses is:

$$\text{Student Response Percentage} = \frac{\text{number of student responses}}{\text{number of students}} \times 100\%$$

Student responses can be said to be positive if 80% or more are in the positive category for each aspect addressed.

RESULT AND DISCUSSION

This research was conducted using research and development research that adapted the ADDIE model. Each stage is carried out systematically and effectively to produce good products and detailed explanations.

1. Analysis Stage

- (a) Curriculum analysis. At the curriculum analysis stage, based on the results of observations and interviews at SMA Negeri 2 Gorontalo using the independent learning curriculum in class.
- (b) Analysis of students. Based on the results of observations and interviews at SMA Negeri 2 Gorontalo, students have limited learning resources.
- (c) Material analysis. At this stage, the researcher carried out an analysis of the Longalo River's natural tourism potential, which can be included in class X inland water material.

2. Design

Researchers' initial product development involved preparing a draft supplement book for geographic material based on Longalo natural tourism as a support for inland water material for class X SMA. Supplement books generally consist of three parts: the beginning, contents, and end.

1) Initial Part

- a. Initial part contains Foreword, List of contents, List of Figures, Supplemental Book Description, Concept maps, Learning Achievements and Goals

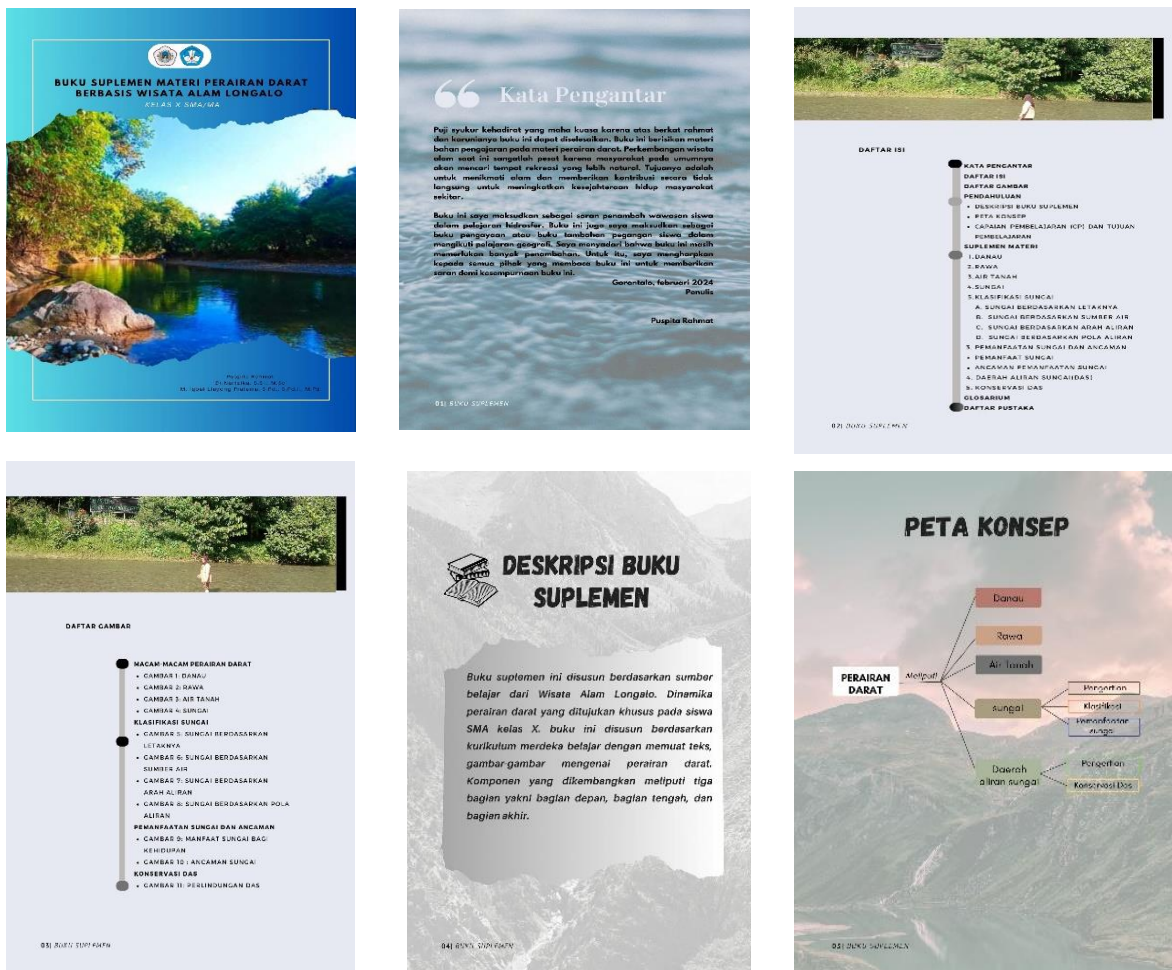


Figure 1. Initial Part

2) Contents

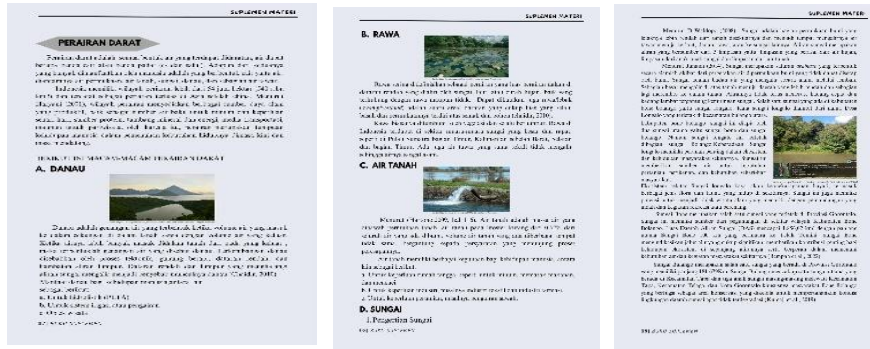


Figure 2. Content

3) Final Part

The final section contains a glossary and references.

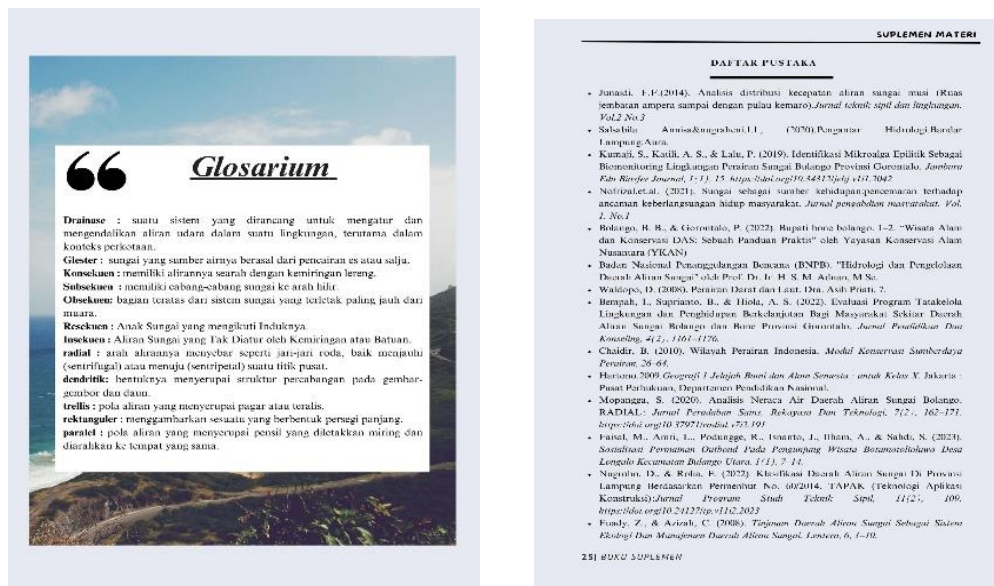


Figure 3. Glossary and References

3. Development

The results of making a natural tourism-based supplement book are listed below. Together with the validation results from material experts, teaching materials experts, language experts, and geography teachers, they are converted into five categories of feasibility: very feasible, feasible, quite feasible, less feasible, and very not feasible.

Table 1. Assessment of Geography Experts and Teachers

Assessment Of Feasibility Of Supplement Books				Average	Category
Materials Expert	Teaching Materials Expert	Language Expert	Geography Teacher		
95.00	81.33	86.67	84.67	86.92%	Sangat Layak

4. Implementation

The supplement book was tested on students in two stages: a small-scale trial and a large-scale trial carried out in several classes X at Sma Negeri 2 Gorontalo. A small-scale trial was carried out on 1 class consisting of 28 students to determine the readability results of the supplement book. In contrast, a large-scale trial was carried out on three classes consisting of 84 students to determine the attractiveness results of the supplement book itself. The following are the results of testing supplement books on a small scale and a large scale.

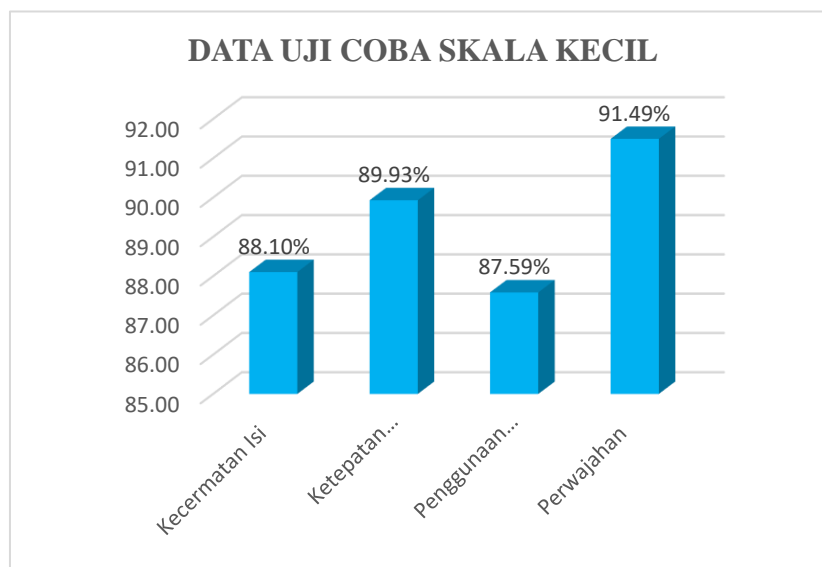


Figure 4. Graph of Student Response Test Results

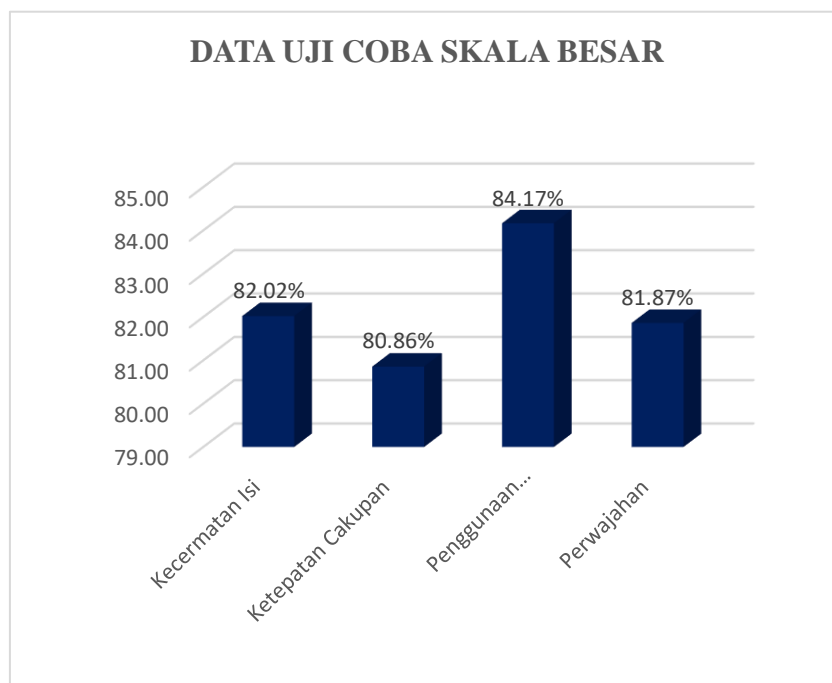


Figure 5. Graph of Student Response Results

Based on the assessment results, supplement books are assessed based on content, coverage, language use, and presentation accuracy. By giving assessment sheets (questionnaires) to students, the results of limited trials (small scale) obtained an assessment of content suitability of 88.10%, coverage accuracy of 89.93%, language suitability of 87.59%, and presentation suitability of 91.49% with very feasible category and the results of the general (large scale) trial obtained an assessment of content feasibility of 82.02%, accuracy of coverage 80.86%, language feasibility 84.17%, presentation feasibility 81.87% with the category very worthy.

5. Evaluation

If the natural tourism-based supplement book has been validated, improvements will be made based on the validator's suggestions. This improvement was carried out before the geography supplement book was given to geography teachers at SMA Negeri 2 Gorontalo.

Several relevant supporting theories exist for developing geography teaching materials based on Longalo natural tourism. One is the theory of contextualization of learning, which emphasizes linking learning material to students' real-world context to increase understanding

and motivation to learn (Brown, 2014). In this research, developing a geography supplement book that utilizes Longalo natural tourism as a learning context can be seen as implementing this contextualization concept.

In addition, the ADDIE model has been proven effective in designing, developing, and evaluating learning products (Morrison et al., 2006). Previous research also shows that the application of the ADDIE model can improve the quality of teaching materials and generate positive student responses (Hallahan et al., 2019).

The development of this supplement book is also consistent with the concept of locally based education, which encourages the use of local resources and potential in the learning process (García-González et al., 2020). By integrating Longalo natural tourism in geography material, this supplement book not only enriches students' learning experiences but also activates the potential of local tourism as a valuable learning resource. This aligns with efforts to strengthen ties between education and local communities and promote environmental sustainability.

In the context of previous research in teaching materials development, the results of this research can also provide additional contributions to the literature and practice of teaching materials development. By demonstrating success in developing a compelling geography supplement book based on Longalo nature tourism, this research provides a basis for further research and development in utilizing local resources in the context of geography learning and developing teaching materials in general.

Conclusion

The development of a geography supplement book based on Longalo natural tourism is considered very feasible by geography experts and teachers. The integration of natural tourism as a learning context enriches students' learning experiences and activates local potential as a valuable learning resource through the concept of locally based education. These findings provide an essential contribution to the development of geography teaching

materials that are relevant, contextual, and oriented towards the use of local resources, as well as strengthening the relationship between education and local communities to support environmental sustainability.

References

- Asrizal, Amran, A., Ananda, A., & Festiyed. (2019). Effects of science student worksheet of motion in daily life theme in adaptive contextual teaching model on academic achievement of students. *Journal of Physics: Conference Series*. <https://doi.org/10.1088/1742-6596/1185/1/012093>
- Asrizal, Amran, A., Ananda, A., Festiyed, F., & Khairani, S. (2018). Effectiveness of integrated science instructional material on pressure in daily life theme to improve digital age literacy of students. *Journal of Physics: Conference Series*. <https://doi.org/10.1088/1742-6596/1006/1/012031>
- Brown, J. S. (2014). Learning In The Digital Age. *American Journal of Education*, 120(2), 120(2). <https://doi.org/10.1002/bjs.11440>
- Choirunnisa, C., Sunaryo, S., & Susanti, D. (2019). *E-Modul Ipa Terapan Berbasis Contextual Teaching and Learning (Ctl) Materi Penanganan Limbah Untuk Siswa Smk Pariwisata. VIII*, SNF2019-PE-375–380. <https://doi.org/10.21009/03.snf2019.01.pe.48>
- García-González, E., Jiménez-Fontana, R., & Azcárate, P. (2020). Education for sustainability and the sustainable development goals: Pre-service teachers' perceptions and knowledge. *Sustainability (Switzerland)*, 12(18). <https://doi.org/10.3390/su12187741>
- Hallahan, D., Kauffman, J., & Pullen, P. (2019). Exceptional Learners: An Introduction to Special Education, Fourteenth Edition. In *Exceptional Learners: An Introduction to Special Education*.
- IB Herliani, NB Atmadja, T. M. (2020). Pengembangan suplemen materi ips dengan pemanfaatan potensi budaya masyarakat berlandaskan tri hita karena. *Jurnal Pendidikan IPS Indonesia*, 4(2), 82–93. <https://doi.org/10.23887/pips.v4i2.3400>
- Khairani, S., Asrizal, & Amir, H. (2017). Pengembangan Bahan Ajar IPA Terpadu Berorientasi Pembelajaran Kontekstual Tema Pemanfaatan Tekanan Dalam Kehidupan Untuk Meningkatkan Literasi Siswa Kelas VIII SMP. *Pillar of Physics Education*.

- Merta Sari, N. Komang Inna, Widhiatni, N. K., & Anggendari, M. D. (2022). Pengembangan Bahan Ajar Embroidery Berbasis Merdeka Belajar Kampus Merdeka. *Jurnal BOSAPARIS: Pendidikan Kesejahteraan Keluarga*, 13(1), 28–36. <https://doi.org/10.23887/jppkk.v13i1.43939>
- Morrison, G. R. (Professor), Ross, S. M., & Kemp, J. E. (2006). *Designing Effective Instruction*. 5th Edition. In *Jossey-Bass, An Imprint of Wiley*.
- Pinahayu, E. A. R. (2016). Problematika Pembelajaran Matematika pada Pokok Bahasan Eksponen dan Alternatif Pemecahannya. *Formatif: Jurnal Ilmiah Pendidikan MIPA*. <https://doi.org/10.30998/formatif.v5i3.642>
- Pratama, M. I. L., & Maryati, S. (2021). Pengembangan Suplemen Bahan Ajar Geografi Pariwisata Pada Materi Potensi Ekowisata Di Kawasan Teluk Tomini. *Jurnal Darussalam; Jurnal Pendidikan, Komunikasi Dan Pemikiran Hukum Islam*, 13(1), 31–48. <https://doi.org/10.30739/darussalam.v13i1.1286>
- Sadjati, I. M. (2012). *Hakikat Bahan Ajar*. Jakarta : Universitas Terbuka.
- Sugiyono. (2015). *Metode Penelitian dan Pengembangan Pendekatan Kualitatif, Kuantitatif, dan R&D*. Bandung: Alfabeta.
- Syafira, N., Budijanto, & Wagistina, S. (2023). Pengembangan Bahan Ajar Potensi Wisata Budaya Di Kota Malang. *Al Qalam: Jurnal Ilmiah Keagamaan Dan Kemasyarakatan*, 17(4), 2253–2270.