



## Development of Lumi Education Learning Media in Learning Expository Text Writing Skills for Grade X Senior High School

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### ABSTRACT

This study aims to develop valid and practical Lumi Education-based learning media for expository text material for grade X of Senior High School. The study was conducted at Al-Huda School, Pekanbaru, in the odd semester of the 2025/2026 academic year. This study used a research and development method with a 4D development model that includes the define, design, development, and disseminate stages. The research subjects consisted of media expert validators, language experts, material experts, and grade X students of Senior High School. Data collection techniques were carried out through validation sheets and student response questionnaires. The validation results showed that the Lumi Education learning media obtained an average percentage of 89.01% with very valid criteria. Furthermore, the results of small group trials showed an average percentage of student responses of 86.88% with a very good category, which indicates that the developed media is practical and easy to use in learning. The dissemination stage was carried out through presentation activities to Indonesian Language teachers at Al-Huda School, Pekanbaru at the SMA and SMK levels. Based on the research results, it can be concluded that Lumi Education learning media is suitable for use as an alternative digital learning media to support students' understanding of the structure and language of expository texts.

*Keywords: learning media, Lumi education, expository text, writing skills*

## Pengembangan Media Pembelajaran Lumi Education dalam Pembelajaran Keterampilan Menulis Teks Eksposisi Kelas X Sekolah Menengah Atas

### ABSTRAK

Penelitian ini bertujuan untuk mengembangkan media pembelajaran berbasis Lumi Education pada materi teks eksposisi untuk mendukung kemampuan siswa dalam menulis teks eksposisi yang sesuai dengan struktur dan kaidah kebahasaan yang tepat pada kelas X Sekolah Menengah Atas yang valid dan praktis. Penelitian dilaksanakan di Sekolah Al-Huda Pekanbaru pada semester ganjil tahun ajaran 2025/2026. Penelitian ini menggunakan metode penelitian dan pengembangan (research and development) dengan model pengembangan 4D yang meliputi tahap define (pendefinisian), design (perancangan), development (pengembangan), dan disseminate (penyebaran). Subjek penelitian terdiri atas validator ahli media, ahli bahasa, ahli materi, serta peserta didik kelas X SMA. Teknik pengumpulan data dilakukan melalui lembar validasi dan angket respon siswa. Hasil validasi menunjukkan bahwa media pembelajaran Lumi Education memperoleh rata-rata persentase sebesar 89,01% dengan kriteria sangat valid. Selanjutnya, hasil uji coba kelompok kecil menunjukkan rata-rata persentase respon siswa sebesar 86,88% dengan kategori sangat baik, yang menandakan bahwa media yang dikembangkan bersifat praktis dan mudah digunakan dalam pembelajaran. Tahap penyebaran dilakukan melalui kegiatan presentasi kepada guru Bahasa Indonesia di Sekolah Al-Huda Pekanbaru pada jenjang SMA dan SMK. Berdasarkan hasil penelitian, dapat disimpulkan bahwa media pembelajaran Lumi Education layak digunakan sebagai alternatif media pembelajaran digital untuk mendukung pemahaman siswa terhadap struktur dan kebahasaan teks eksposisi.

*Kata kunci: media pembelajaran, Lumi education, keterampilan menulis, teks eksposisi*

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## INTRODUCTION

Indonesian language learning in schools typically uses a text-based approach (Putri & Yuhdi, 2021). According to Agustina (2017), text is a means of understanding language because it is a form of language that functions according to context or situation. Therefore, text is the center of learning, containing linguistic content that students can learn contextually. Thus, students in today's era are more critical and possess strong digital literacy skills while still prioritizing language use (Syam et al., 2024). According to Dinamaryati (2021), text-based learning is crucial because it positions language as a means of thinking or communicating in correct and effective Indonesian. This allows text to develop the ability to understand and express opinions clearly and purposefully.

One type of text taught in Indonesian language learning is expository text. Expository text is a type of text that aims to explain a topic, accompanied by supporting facts and arguments. Expository text is presented through a series of structures that include conveying an opinion or thesis, developing the argument, and reaffirming the opinion already expressed (Prasiti et al., 2025). Learning expository text is a material to develop students' ability to think critically, broaden their horizons, and provide information based on their own opinions (Putri et al., 2022). Expository text has different characteristics from other types of text. Understanding expository text, it is important to have a broad understanding in order to grasp the meaning of the text well. Students have difficulty learning expository text material due to a lack of interest in reading in students. This was conveyed by Harahap & Amir (2023) who stated that the lack of reading activities makes students less understanding the structure of expository text and linguistic elements. The selection of expository text has been considered in the results of interviews with Indonesian language teachers of grade X. The problem is that grade X students tend to have difficulty understanding expository text because students have difficulty understanding the structure,

ideas and use of appropriate language in expository text due to the lack of variation in learning media so that it is less effective in arousing student involvement and interest in reading. The minimal use of learning media in the teaching and learning process shows the limited creativity of teachers in managing and presenting learning to students (Permatasari et al., 2023). This problem requires the use of technology, such as learning media. This aligns with Rahmawati et al.'s (2023) opinion that the use of learning media is expected to create enjoyable learning and provide meaningful learning experiences through active student involvement. The use of learning media aims to maintain student interest in the learning material, thus making the learning process more optimal and meaningful (Puspita et al., 2023).

Furthermore, the learning process becomes more engaging and less monotonous because students can directly engage in interactions with the learning media used (Damaiyanti et al., 2024). Attractively designed learning media can help students better understand learning materials (Armanda et al., 2025). Learning media designed in harmony with students' abilities and conditions can support the achievement of an optimal learning process (Marbella et al., 2024). According to Bakara (2023), the criteria that need to be considered when selecting learning media include media that aligns with learning objectives, media that is flexible, practical, and durable. One interactive learning media that can be developed to address learning problems in expository text material is Lumi Education.

Based on this background, the research problem is formulated as follows: How can we develop valid and practical Lumi Education learning media for learning expository text in grade 10 of high school? The purpose of this study is to describe the development of valid and practical Lumi Education learning media for learning expository text in grade 10 of high school. The benefits of this research include theoretical and practical benefits: the theoretical benefits are expected to contribute to the development of



studies, particularly in Indonesian language learning, specifically in digital media-based expository text material. Furthermore, the results of this study serve as a reference for future researchers and can enrich research and development (R&D) studies in the field of education. Practical benefits for students include facilitating the understanding of expository text. For teachers, it can provide variations in learning media and motivate teachers to be more creative in designing learning media. For researchers, it can broaden their insight into developing Lumi Education. Relevant research includes the article on the development of H5P-based Lumi Education learning media for geography, atmospheric dynamics, for grade X at SMA Negeri 1 Gorontalo in 2023, and the research on the development of flipbook learning media for expository text for grade X at SMK Al-Huda Grogol in 2023.

This research uses the 4D model stages from Thiagarajan (1974), consisting of the define, design, development, and disseminate stages used in developing various types of learning media (Arkadiantika et al., 2020). The term learning media is composed of two words: media and learning (Husna & Supriyadi, 2023; Abdillah et al., 2026). Learning media is understood as a means or intermediary used to convey learning messages so as to create learning conditions that encourage student engagement. Media not only functions as a channel of information but also plays a role in stimulating student motivation, willingness, and enthusiasm for learning. Lumi Education learning media is a free platform that can be used to create, design, and present interactive learning media based on H5P or HTML formats. According to Barmansyah and Musaddat (2025), expository text is defined as a type of text that aims to explain a main problem supported by arguments or ideas, so that readers gain understanding and confidence in the information conveyed by the author. Furthermore, Hikmah (2021) classifies expository text into several types, namely definition exposition, process exposition, classification exposition, illustration exposition, comparison

exposition, analysis exposition, and conflict exposition.

## METHOD

This study employed a research and development (R&D) approach. This research was conducted with the aim of producing a learning product and testing its feasibility before use (Sisiliaudra et al., 2025; Razak, 2017; Balaka, 2012). The subjects were 30 students from one 10th grade of high school. This study employed the Thiagarajan development model, which includes the development and research steps, abbreviated as 4D. 4D stands for define, design, development, and disseminate.

The definition stage was conducted to identify learning needs and gather various information related to the development of learning media. This stage aimed to determine the initial learning conditions so that the developed media would be appropriate to students' needs (Zamsiswaya et al., 2024). The analysis included student analysis, learning objectives, content analysis, assignments, and facilities and infrastructure. This stage was conducted to identify learning needs and gather various information related to the development of learning media. This stage aimed to determine the initial learning conditions so that the developed media would be appropriate to students' needs.

The design stage is the process of preparing the instrument, selecting the format and media, and developing the initial design of a media (Adoe et al., 2022). This design stage also includes the preparation of the expository text writing test instrument. The instrument is prepared in several steps: 1) determining the objectives of the expository text writing assessment, 2) determining indicators for expository text writing skills, 3) compiling a test outline based on the established indicators, and 4) compiling expository text writing test questions. The indicators for expository text writing skills used include the ability to write an opinion statement or thesis, construct a logical and factually supported argument, and write a reaffirmation of an opinion. The test outline is

prepared to ensure that the questions given are in accordance with the indicators to be measured. Furthermore, the assessment of expository text writing skills is carried out using a scoring rubric with several aspects, namely the idea or content aspect, structure, language use, and writing technique. The idea aspect is assessed based on the suitability of the idea to the topic discussed. The structure aspect is assessed based on the completeness of the expository text section consisting of the thesis, argumentation, and reaffirmation. Aspects of language use include the use of effective sentences, vocabulary, and the accuracy of linguistic rules. Technical aspects of writing include punctuation, spelling, and neatness. The development stage is carried out to produce revised learning media based on suggestions and input from experts. At this stage, the completed media is designed and validated by material experts, media experts, and language experts to determine its suitability. After the validation process is complete, the media is then tested through limited trials (one-to-one) and small group trials to determine the practicality of using Lumi Education media in learning. The final stage is the dissemination stage.

In this dissemination stage, the developed media is then socialized to teachers, particularly Indonesian language teachers at the high school level, through presentations and publications. This stage aims to introduce the developed learning media so that it can be used as an alternative digital learning medium for teaching expository text.

## RESULTS

### 1. Definition Procedure

The definition procedure was conducted to analyze needs, including student analysis, learning objectives, content, assignments, and facilities and infrastructure. This procedure began with a student analysis aimed at analyzing student characteristics, background, knowledge, and skills (Lase et al., 2025). The results of the student analysis indicated that 10th-grade students have diverse learning styles—visual, auditory, and kinesthetic—and are

accustomed to using digital devices, but their utilization of these devices in their learning is still suboptimal. Students also still experience difficulties understanding the structure of expository texts, distinguishing main ideas from supporting ideas, and structuring paragraphs coherently and logically.

Furthermore, from a linguistic perspective, particularly in writing skills, students still struggle to express ideas in expository texts that adhere to the structure and appropriate language rules. The analysis of learning objectives, based on the ATP (Attacker) curriculum for independent students, focuses on understanding the concepts and structure of expository texts, identifying linguistic features, writing coherent expository texts, and reflecting on the learning process. Content analysis indicates that the main material includes the definition and purpose of expository texts, text structure, linguistic rules, text content, and the steps for writing expository texts, which are then mapped in a concept map to support the design of Lumi Education media.

The results of the task analysis based on learning outcomes in Phase E emphasize text analysis, discussions, and expository text writing assignments integrated with interactive exercises. The analysis of facilities and infrastructure indicates that digital learning facilities at the school are available and adequate, although internet access is not yet fully stable. This situation supports the development and implementation of Lumi Education media with efficient content management.

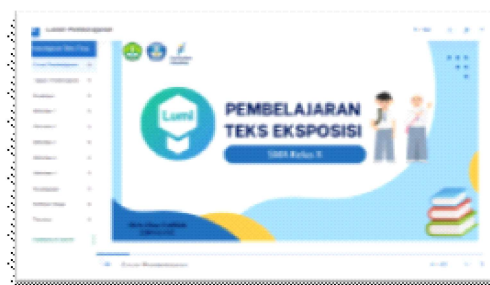


Figure-1  
Lumi Education Media



## 2. Design Procedure

The design procedure is the second step in the 4D development procedure. This stage is carried out for media selection and the initial design of Lumi Education media. Media selection is based on the results of material analysis based on student characteristics (Rajagukguk et al., 2021). The initial design is made based on the format and media selection.

## 3. Development Procedure

The development procedure is carried out to obtain advice and input from experts on the product results (Rahmi, 2021). At this stage, the media will be validated by three validators: media, language, and materials experts. Input from the validators will serve as a reference for revising the Lumi Education media. The media expert assessment includes several indicators: media appearance, ease of use, and media stability. The media validator analysis results scored 46, with an average score of 83.63%.

The language assessment consisted of several indicators: language accuracy, readability, contextual appropriateness, and communicativeness. The language validator analysis results scored 46, with an average score of 92%. The material assessment was divided into several indicators: quality of practice, evaluation, and appropriateness of the material for learning. The material validator analysis results scored 64, with an average score of 91.42%. The following are the final validation analysis results in Table 1.

Table 1  
Final Validation Analysis Results

Validator	Score	Percentage
Media Expert	46	83,63
Language Expert	46	92,00
Material Expert	64	91,42
Mean	52	89,02
Criteria		very high

Based on table, the results of the Lumi Education media validation analysis show that the average percentage was 89.02%, making it highly valid. Media experts scored 46 (83.63%), language experts scored 46 (92%), and material experts scored 91.42%.

After being declared highly valid, the Lumi Education media underwent a one-on-one evaluation. This trial was conducted to identify student challenges, ease of use, and readability of the material. This evaluation could serve as a basis for the media's suitability before conducting a small-group trial. The one-on-one evaluation was conducted with three 10th-grade high school students with heterogeneous abilities (low, medium, and high), and revealed several typos and errors in understanding the media's instructions. A small-group trial was then conducted to determine the practicality of the Lumi Education media. This trial was conducted in one session, explaining the learning objectives to be achieved.

The instrument indicators used in the small-group trial were as follows: indicators divided into media and language. The assessment aspects of statement 1 are: "I can easily open this media on my device." Statement 2: "This media is easy to use and not confusing." Statement 3: "The material is presented sequentially and is easy to follow." Statement 4: "I can easily complete quizzes and exercises in this media." Statement 5: "Buttons like 'continue' and 'finish' are easy to find and use." Statement 6: "I have no difficulty understanding the display of this media." Statement 7: "I feel more motivated to learn because the display is attractive." Statement 8: "I can understand the expository text material better through this media." Statement 9: "I immediately know whether the answer is right or wrong after working on the questions." Statement 10: "In general, this media is practical and helps me learn." Statement 11: "The terms used are not confusing and are relevant to the lesson." Statement 12: "The language used in this media is easy to understand." Observations showed positive responses from students. The

following is an analysis of student responses in the small group trial of using Lumi Education media.

Table 2  
 Student Responses in the Small Group Trial

Aspect	Statement	Score	Percentage
Media	Statement-1	128	85,33
	Statement-2	131	87,33
	Statement-3	135	90,00
	Statement-4	122	81,33
	Statement-5	127	84,66
	Statement-6	127	84,66
	Statement-7	133	88,66
	Statement-8	130	86,66
	Statement-9	128	85,33
	Statement-10	134	89,33
Language	Statement-11	132	88,00
	Statement-12	137	91,33
Mean		130,33	86,89
Category			very good

Based on table, student assessments were analyzed based on two indicators: language and media. The media indicator, which includes statements 1–10, had a percentage of students ranging from 81.33% to 90%. The highest score was obtained for statement 3 with a percentage of 90%, while the lowest score was for statement 4, at 81.33%. Nevertheless, all percentages were still included in the very good category, indicating that the Lumi Education media was considered interesting, easy to operate, and helped students understand the expository text material. Furthermore, the language indicator, which includes statements 11–12, had a percentage of students ranging from 88% to 91.33%. Statement 12 received the highest score of 91.33%, indicating that the language used in the learning media was considered clear, easy to understand, and appropriate for students' abilities. Overall, the average percentage of student responses reached 86.88%, categorized as very good, so the Lumi

Education media can be declared feasible and practical for use in expository text learning for grade 10 high school students.



Figure-2  
 Lumi Education Media Final Product Front Cover

#### 4. Dissemination Procedure

The dissemination procedure was carried out after the final product, a Lumi Education-based exposition text learning media, had undergone a development and revision process. This procedure aimed to introduce and disseminate the developed media to parties involved in learning activities, particularly teachers as users of the learning media (Johan et al., 2023). The dissemination of the Lumi Education media was carried out through publication activities for teachers at Al-Huda School in Pekanbaru, which covers three educational levels: MTs, SMA, and SMK, with the primary target being Indonesian language teachers.

#### DISCUSSION

This development research aimed to produce valid and practical Lumi Education learning media for exposition text for grade 10 high school students using the 4D development model. During the definition stage, the results of the student analysis indicated that student characteristics were quite diverse in terms of learning styles and digital literacy skills. Although students were accustomed to using digital devices, they still experienced difficulties in understanding the structure of exposition text, particularly in distinguishing between thesis, argumentation, and reiteration. This finding aligns with Masfufah et al. (2022)



stated that learning Indonesian is often perceived as difficult and boring, impacting student learning outcomes. Based on Piaget's cognitive development theory, tenth-grade students are at the formal operational stage, capable of abstract and logical thinking. However, they still require contextual and challenging learning stimuli to optimally develop analytical skills.

Based on this need, Lumi Education media was designed to present expository text interactively through videos, quizzes, and H5P-based exercises. Validation results by media, language, and materials experts showed an average percentage of 89.01%, categorized as very valid. This indicates that the media met the requirements for appearance, language, and appropriateness of the material. These results support the view of Purba et al. (2024) that learning media is considered suitable for use if it meets validity criteria. Furthermore, the results of practicality testing through small group trials showed an average student response of 86.88%, categorized as very good. Students assessed that the material was presented coherently.

The results of this study also align with text-based learning theory as proposed by Agustina (2017), who asserts that text is central to Indonesian language learning because it contains meaning, structure, and linguistic rules that must be fully understood. Furthermore, the use of Lumi Education supports constructivism theory, which emphasizes active student involvement in constructing knowledge through learning experiences. This medium allows students to independently analyze the structure and content of texts, thereby making learning more meaningful. This finding is reinforced by research by Permana and Setiawan (2024), who stated that interactive digital learning media can increase student engagement and interest in learning. Therefore, Lumi Education is considered valid and practical, providing a solution to the problems in learning

expository texts as outlined in the research background.

## CONCLUSION

Thus, the development of Lumi Education learning media for high school students in expository texts is deemed feasible and practical for use in the learning process. This medium provides an innovative alternative solution to overcome the limitations of conventional learning, particularly in increasing student interest, engagement, and understanding of the structure and language of expository texts through interactive and digital presentation. The application of Lumi Education media has the potential to support the improvement of the quality of Indonesian language learning, making it more dynamic and aligned with technological developments and the demands of the independent curriculum. The successful development and implementation of this media can also serve as a reference for the development of other digital learning media, while also encouraging student-centered pedagogical innovation and the optimal use of technology in text-based learning.

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