

INTEGRATING ELSA INTO ENGLISH LEARNING: BOOSTING LITERACY AMONG FIFTH GRADERS

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Abstract: This research aims to develop and implement the ELSA (English Learning for Student Activities) application to enhance English reading and writing skills among fifth-grade students at Sadeng 03 Public Elementary School. In line with the Indonesian Ministry of Education's initiative to strengthen English language instruction in elementary education, the study employed a Research and Development (R&D) method using the Thiagarajan 4D model: Define, Design, Develop, and Disseminate. Preliminary assessments showed that most students struggled with basic English literacy. To address this, the ELSA application was designed as an interactive and engaging learning tool featuring Augmented Reality (AR), Virtual Reality (VR), quizzes, and digital comics. The application was validated by media and material experts, achieving high validity scores of 88.9% and 87%, respectively. A small-scale trial involving 28 students demonstrated high levels of user satisfaction and practicality, with an average score of 95.5%. The implementation of ELSA led to significant improvements in students' reading and writing abilities, while also fostering a more positive and enjoyable learning environment. Following its successful trial, the application was disseminated to eight other schools. The study concludes that ELSA is a valid, practical, and innovative digital tool for enhancing English literacy among elementary students, highlighting the potential of technology to support language learning and close educational gaps.

Keywords: *ELSA, English literacy, elementary education, educational technology, reading and writing skills*

INTRODUCTION

English language proficiency is a crucial skill that students need to acquire from an early age, especially in the era of global information openness. In Indonesia, the rapid development of technology and globalisation has created an increasing demand for English mastery as a key international language. This urgency is reflected in the policy of the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) through Regulation Number 12 of 2024. According to the regulation, English will remain an elective subject at the elementary level until the 2026/2027 academic year and will become a compulsory subject starting in 2027/2028. This policy signals the government's commitment

to strengthening national education through the development of international language competencies, which are essential for the advancement of human resources in Indonesia.

Globally, English serves as a lingua franca, playing a central role in communication, commerce, technology, and cultural exchange (Raja et al., 2022). To fully participate in international spheres, future generations must develop strong English skills. Chairina (2019) emphasises that early English education, particularly at the elementary level, is a strategic entry point for improving the overall quality of national education.

English language mastery encompasses four fundamental skills: listening, speaking, reading, and writing. These competencies support students in communicating effectively both orally and in written form (Melli, 2016). Listening and speaking facilitate interaction, while reading and writing are essential for understanding, analysing, and expressing ideas. Kaur (2024) notes that reading and writing in English also play a critical role in fostering students' critical thinking skills, as they involve interpreting texts and constructing logical responses.

Maria Clay (2021) highlights the importance of early reading in children's language and cognitive development. Strong reading abilities enhance language acquisition and contribute to success in other academic areas. Similarly, Smith and Miller (2023) found that students who engage in regular reading activities demonstrate greater language proficiency and comprehension. Writing, on the other hand, is vital for articulating ideas clearly and logically. Haswell (2020) emphasises that writing instruction should be based on structured feedback and targeted skill development, while Carter and Robinson (2023) link strong writing abilities with academic success across subjects.

Initial assessments at SDN Sadeng 03 revealed that 23 out of 28 fifth-grade students struggled with basic English reading and writing. These challenges stem from several factors, including monotonous teaching approaches, a lack of student-centred learning materials, and limited support at home. In addition, many teachers are still unprepared to deliver effective and engaging English lessons, despite the urgency brought by the new curriculum policy. Teachers must be equipped with both pedagogical and technological competencies to deliver meaningful English instruction.

Today's students, often referred to as "digital natives" (Prensky, 2001), belong to Generation Alpha, born between 2010 and 2025. They are highly familiar with digital tools and naturally interact with technology in daily life (McCrindle, 2019). This affinity for digital media presents an opportunity to develop more engaging and effective learning experiences that align with their characteristics.

In their research, Li and Huang explored the use of digital games to support English learning among fourth graders, finding that such tools can enhance motivation and language acquisition. Inspired by this approach, the present study "Integrating ELSA into English Learning: Boosting Literacy Among Fifth Graders" proposes the development of ELSA (English Learning for Student Activities), a digital learning application designed to enhance reading and writing skills in English through interactive and student-friendly features.

ELSA is intended to serve as an innovative response to the learning challenges faced by fifth-grade students. The application will integrate elements such as educational games,

reading tasks, and writing exercises, complemented by real-time feedback. This approach aims to improve students' English literacy while creating an enjoyable and relevant learning experience.

In conclusion, the ability to communicate in English must be nurtured from an early age to prepare students for the demands of globalisation and the digital era. Government policies have shown a growing awareness of the importance of English in national education. While challenges in implementation remain, the use of appropriate digital tools like ELSA, combined with teacher readiness and well-designed content, can significantly improve students' language outcomes. Through innovations such as the ELSA application, English learning can become more effective, enjoyable, and meaningful equipping students with the skills needed to thrive in the future.

METHODS

This study, titled *"Integrating ELSA into English Learning: Boosting Literacy Among Fifth Graders,"* employs a Research and Development (R&D) approach aimed at developing the ELSA (English Learning for Student Activities) application to improve English reading and writing skills among fifth-grade students at SDN Sadeng 03. The application was developed using the Google Sites platform, accessed through the belajar.id account provided by the Indonesian Ministry of Education, Culture, Research, and Technology (Kemendikbudristek RI). The use of Google Sites allows for flexible, accessible, and user-friendly design features tailored to young learners' needs.

According to Sukmadinata (2022), Research and Development (R&D) is an essential method for enhancing educational quality. Through this approach, educators can design and produce instructional materials that are more effective and responsive to students' diverse learning needs. In line with this, Borg and Gall (2020) describe R&D as a systematic process for creating new educational products and evaluating their impact within learning environments. In the context of this study, the product developed is the ELSA application, designed specifically to support the improvement of English reading and writing competencies.

The research follows the 4D development model by Thiagarajan (1974), which consists of four stages: Define, Design, Develop, and Disseminate. In the Define stage, researchers identified key problems faced by students in learning English, particularly low proficiency in reading and writing. Based on these findings, research objectives were formulated to address the issues through a targeted digital solution.

During the Design stage, the structure and features of the ELSA application were developed, taking into account the students' learning characteristics, engagement strategies, and pedagogical principles. The application was designed to include interactive elements such as quizzes, digital stories, and visual-rich learning content aimed at fostering literacy skills.

The Development stage involved the actual creation of the ELSA application using Google Sites. This stage also included expert validation and limited user testing. A Likert-scale questionnaire was employed to collect data from content experts, media experts, students, and teachers. This instrument measured both the validity and feasibility of the application, including aspects such as content accuracy, user interface design, and pedagogical relevance.

To assess validity, the application was reviewed by content and media experts, ensuring that the material aligns with educational standards and is appropriate for fifth-grade learners. To evaluate feasibility, student and teacher feedback was gathered on aspects such as ease of use, visual appeal, interactivity, and the effectiveness of the materials in improving reading and writing skills.

The final stage involved data analysis, where both quantitative and qualitative data were examined. Quantitative data from the Likert-scale responses were used to determine user satisfaction and overall effectiveness. Qualitative data from open-ended feedback provided insights into strengths, weaknesses, and suggestions for improving the ELSA application.

Through this structured approach, the ELSA application is expected to serve as a valid, practical, and engaging digital learning tool that can significantly enhance English literacy among fifth-grade students at SDN Sadeng 03.

FINDINGS AND DISCUSSION

The research titled *“Integrating ELSA into English Learning: Boosting Literacy Among Fifth Graders”* was conducted from January to March 2025, targeting fifth-grade students at SDN Sadeng 03. This study applies a developmental research approach using the Thiagarajan 4D model, which consists of four key stages: Definition, Design, Development, and Dissemination. The model is intended to produce high-quality educational products that address students’ learning needs effectively.

At the Definition stage, the researcher carried out a comprehensive analysis of three core aspects: theme analysis, indicator analysis, and student characteristic analysis. The theme analysis identified the challenges students face in acquiring English language skills, particularly in reading and writing. The indicator analysis aligned the application’s goals with the competencies outlined in the curriculum, while the analysis of student characteristics provided insights into learners’ backgrounds, preferences, and learning styles. This foundational step ensured that the design of the ELSA application would be relevant and responsive to the students’ actual needs.

Following the analysis, the research progressed to the Design stage, where the structure and learning flow of the ELSA application were mapped out. The design process included the creation of flowcharts to visualise the learning sequence, storyboards for content layout, and engaging visual and audio elements to promote interactivity. These components were carefully crafted to ensure the application would be both pedagogically effective and engaging for fifth-grade learners.

The primary aim of developing the ELSA (English Learning for Student Activities) application is to enhance students’ reading and writing abilities through enjoyable, independent learning experiences. With interactive exercises, multimedia content, and vocabulary-building features, the application is designed to encourage student motivation and improve understanding of core English language concepts.

In alignment with the Curriculum (Phase C) learning outcomes, fifth-grade students are expected to comprehend frequently used words through supporting images or visual cues in reading, and to write simple English vocabulary related to school and home environments.

The ELSA application is tailored to meet these expectations by providing activities that are both accessible and meaningful to students' everyday experiences.

The developed product, ELSA, aims to create a technology-enhanced learning environment for English instruction, particularly in early reading and writing. Key features include illustrated reading exercises and writing tasks that support vocabulary acquisition in a fun and interactive way. The application also allows learners to explore language independently, promoting both confidence and skill development.

To ensure the quality of the application, validity testing was conducted by content and media experts. Their feedback ensured the educational content, interface design, and usability aligned with pedagogical standards. Furthermore, feasibility testing involved input from teachers and students, who evaluated the application's ease of use, attractiveness, and effectiveness in supporting literacy skills.

The overall goal of this research is to deliver a valid, practical, and impactful digital tool that contributes to improved English literacy among elementary school students. By applying a structured development model and involving stakeholders in the validation process, the ELSA application is expected to make a significant contribution to addressing learning gaps and enhancing language instruction in primary education, particularly at SDN Sadeng 03. The development of the ELSA application product is carried out in four stages

Definition Stage

In the initial stage of the study titled *"Integrating ELSA into English Learning: Boosting Literacy Among Fifth Graders"*, the researcher conducted an in-depth analysis of three essential components related to English language learning among fifth-grade students at SDN Sadeng 03. These components included material analysis, learning media analysis, and student characteristic analysis. To obtain a comprehensive picture of the challenges encountered in the classroom, interviews were carried out with both students and English teachers.

Based on the interview results, it was found that a significant number of fifth-grade students faced difficulties in reading English vocabulary related to everyday objects. One of the most prominent challenges was in pronunciation, particularly in distinguishing between similar vowel sounds such as "a" and "e," which often led to confusion and misinterpretation of word meanings. This finding indicated a lack of sufficient phonics-based instruction and highlighted the need for repetitive, guided practice to improve students' pronunciation accuracy.

The interviews also revealed that students' English writing skills were still underdeveloped, with many students demonstrating limited interest in writing tasks. A lack of enthusiasm toward English lessons appeared to stem from traditional and monotonous teaching methods, as well as learning materials that lacked visual and interactive appeal. Current media, such as static images in textbooks, were reported as insufficient to stimulate curiosity and engagement, further affirming the need for innovation in teaching aids and delivery.

In analysing student characteristics, the researcher observed that most fifth-grade students at SDN Sadeng 03 already possessed and were capable of using digital devices, such as

smartphones or laptops. This access to technology represents a valuable opportunity to introduce digital-based learning media tailored to their needs and preferences. By utilising familiar tools, students could engage in learning experiences that are both modern and interactive.

To address these challenges, the researcher proposed the development of ELSA (English Learning for Student Activities)—a digital learning application designed to enhance reading and writing skills in English through engaging content. The application is envisioned to incorporate interactive features such as educational games, exercises with instant feedback, and multimedia materials that support active learning. This approach is expected to foster greater motivation and independent learning among students.

Through the development of such innovative digital media, the research aims to significantly improve the English literacy skills of fifth-grade students at SDN Sadeng 03, while also nurturing their interest and confidence in learning a foreign language. By making learning enjoyable and relevant to students' lives, the researcher hopes to contribute to the creation of a supportive and effective English learning environment at the elementary level.

Design Stage

This stage involves the creation of the product through several systematic steps, including designing a flowchart, developing graphics, creating a storyboard, analysing learning materials, integrating the storyboard with the selected materials, and building the application using the Google Sites feature from Google Workspace for Education. The application, named ELSA (English Learning for Student Activities), is designed to make English reading and writing more enjoyable and engaging, ultimately aiming to strengthen students' language skills.

The ELSA application consists of 10 interactive menus specifically tailored for fifth-grade students at SDN Sadeng 03, which include:

1. Reading Skill
Provides English reading materials aligned with the cognitive and language development level of fifth-grade students. The reading texts use simple sentence structures and familiar vocabulary, making them easier to understand.
2. Writing Skill
Presents a collection of images that serve as prompts for students to write descriptive sentences or short paragraphs in English. This encourages creativity and vocabulary usage in written form.
3. Augmented Reality (AR)
Utilises AR technology to merge digital elements with the real world. By using smartphones or tablets, students can view objects or scenarios enhanced with English vocabulary and narratives, providing a rich, contextual experience to improve reading and writing comprehension.
4. Virtual Reality (VR)
Offers an immersive virtual environment where students can explore different scenes while listening to and interacting with English audio. VR experiences are designed to stimulate curiosity and provide realistic contexts for language use.
5. Product Gallery

A showcase of student-created educational products and teacher-designed learning tools that support English learning. This menu highlights interactive content that fosters engagement and deeper understanding.

6. Digital Comics

Features educational comics created for young learners, combining text and visuals in a digital format. These comics tell stories in simple English and aim to improve reading comprehension in a fun and relatable way. One example includes “Superhero Adventures: The Power of Teamwork,” which teaches the value of collaboration while introducing key English phrases.

7. Children’s Songs

Includes classic and modern English songs for children such as *"Twinkle, Twinkle, Little Star," "The Wheels on the Bus," "If You're Happy and You Know It,"* and *"Old MacDonald Had a Farm."* These songs help reinforce vocabulary, pronunciation, and rhythm in language learning, while also promoting listening and speaking skills.

8. Quizzes

Provides interactive assessments in the form of games or exercises to evaluate students’ understanding of vocabulary, grammar, and sentence structure. Formats include multiple-choice questions, fill-in-the-blank, and short answers, fostering fun and competitive learning.

9. Discussion Forum

A collaborative space where students can share ideas, ask questions, and participate in discussions related to English learning. This forum promotes peer interaction and allows students to express their opinions and build communication confidence.

10. Teacher and Student Meeting Schedule

A digital scheduler to facilitate coordination between teachers and students. It outlines consultation times, feedback sessions, and additional learning support, ensuring consistent interaction and guidance throughout the learning process.

These ten menus represent the core structure of the ELSA application, developed with the goal of enhancing English literacy particularly reading and writing among fifth-grade students at SDN Sadeng 03. The integration of technology and interactive content is expected to create a more dynamic and student-centered English learning experience.

Development Stage

The validation of the ELSA (English Learning for Student Activities) application as a learning medium to improve English reading and writing skills was carried out by both media and material experts. The evaluation from media experts produced an overall score of 88.9%, which indicates a high level of product validity. Meanwhile, the assessment by material experts resulted in a score of 87%, also reflecting strong content validity. These results confirm that the ELSA application is highly suitable for use in supporting English literacy learning for fifth-grade students at SDN Sadeng 03.

Validation

Validation by the media expert was conducted by lecturer at Ivet University, as shown in Table 1.

Table 1. Results of Media Expert Validation

Aspect	Percentage	Description
Accessibility	87%	Very Valid
Navigation	88.6%	Very Valid
Media Integration	86%	Very Valid
Text	91%	Very Valid
Media Presentation	87.6%	Valid
Total	88.9%	

Validation by the material expert was conducted by Professor at the Faculty of Education and Psychology at Semarang State University, as shown in Table 2.

Table 2. Results of Material Expert Validation

Aspect	Percentage	Description
Content	85%	Very Valid
Appearance	89%	Very Valid
Total	87%	

Product Trial Results

The product was trialled with 28 fifth-grade students at Sadeng 03 Elementary School. Their assessments indicated a high level of practical effectiveness, with an overall score of 95.5%. Using the Kirkpatrick evaluation model at levels 1 to 3, the results showed high student satisfaction, improved knowledge, and positive behavioural changes, particularly in the application of English reading and writing skills.

The feasibility test of the ELSA educational application was also conducted randomly with the same group of 28 fifth-grade students at Sadeng 03 Elementary School, further confirming its practicality and engagement in real. The results of the feasibility test can be seen in Table 3.

Table 3. Feasibility Test/Student Responses

Aspect	Percentage	Description
Use Of Elsa Application	93.5%	Very Valid
Content Material	97%	Very Valid
Evaluation And Questions	97%	Very Valid
Appearance	93%	Very Valid
Total	95.5%	

The feasibility test of the ELSA educational application was also evaluated by a peer teacher from the sixth grade, who provided feedback and assessment to ensure the application's alignment with classroom needs and its effectiveness in supporting English literacy development. The results of the educational game feasibility assessment can be seen in Table 4.

Table 4. Teacher Assessment/Teacher Responses

Aspect	Percentage	Description
Use Of ELSA Application	91%	Very Valid
Content Material	91%	Very Valid
Evaluation And Questions	92%	Very Valid
Appearance	93%	Very Valid
Total	92.75%	

The feasibility test of the ELSA educational application was also evaluated by the Principal of SDN Sadeng 03, who provided constructive feedback to ensure the application's relevance, usability, and potential impact on improving students' English reading and writing skills. The results of the educational game feasibility assessment can be seen in Table 5.

Table 5. Principal Assessment/Principal Responses

Aspect	Percentage	Description
Use Of ELSA Application	95%	Very Valid
Content Material	93%	Very Valid
Evaluation And Questions	93%	Very Valid
Appearance	97%	Very Valid
Total	94.75%	

Testing and Assessment with Fifth Grade Students

After being validated by experts, the ELSA application was trialed with 28 fifth-grade students from Sadeng 03 Elementary School. This testing phase aimed to evaluate the application's usability, user experience, and educational impact in an authentic classroom setting. The results revealed high usability, with a total overall score of 94.75%. Usability indicators included ease of navigation, accessibility, and alignment with the existing curriculum. This high score indicates that ELSA was well accepted by students and can be effectively integrated into daily learning.

The Kirkpatrick evaluation model (Levels 1 to 3) was used to assess the impact of the ELSA application on students as follows.

1. Level 1 (Reaction)
Students reported high satisfaction, citing the engaging storyline, appealing visuals, and interactive features of ELSA as factors that enhanced their learning experience
2. Level 2 (Learning)
There was a noticeable improvement in students' English reading and writing skills, as well as increased fluency. ELSA's interactive elements encouraged deeper engagement and understanding of the learning materials.
3. Level 3 (Behavior)
Students began applying their newly acquired reading and writing skills in real-life contexts. ELSA successfully promoted knowledge transfer beyond the digital space, with students demonstrating greater confidence and enthusiasm in participating in English language activities.

Continuous Improvement

Based on the positive outcomes from the testing phase of the ELSA application, the researchers plan to expand its implementation across broader educational settings. This initiative includes potential collaboration with other educational institutions, schools, and educational technology platforms to reach a wider audience particularly fifth grade students in various regions. By extending the reach of ELSA, the researchers aim to provide wider access to students who need support in mastering English reading and writing skills.

To support this broader implementation, teacher training programs will be designed to equip educators with the knowledge and skills needed to integrate ELSA effectively into classroom instruction. Through this training, teachers at Sadeng 03 Elementary School and beyond will be empowered to utilise ELSA as a daily teaching tool, helping students make the most of its features. The training will also foster teacher competence in using educational technology, aligning instructional practices with the evolving digital needs of students.

Continuous development and refinement of the ELSA application will remain a key focus at every stage of its broader adoption. Input and feedback from students, teachers, and stakeholders will be collected and analysed systematically. This feedback process is essential for understanding user experiences and evaluating the effectiveness of the application in improving English literacy. It allows developers to make targeted improvements that enhance usability and educational impact.

Planned updates to the ELSA application may include new reading and writing content, interactive activities, and more advanced features such as personalised learning paths and adaptive feedback systems to meet students' individual learning needs. These enhancements will ensure ELSA remains an engaging, responsive, and effective tool that evolves alongside advancements in education and technology.

In conclusion, the development journey of ELSA from identifying literacy challenges among fifth-grade students to testing its impact demonstrates the power of technology in closing educational gaps. The collaborative effort behind ELSA has resulted in a product that not only meets technical and pedagogical standards but also shows promising results in fostering students' English language skills.

With continuous innovation and a commitment to student-centered learning, ELSA is poised to become a powerful educational bridge connecting students at Sadeng 03 Elementary School and beyond to a broader world of knowledge and opportunity in today's globalised era.

Dissemination Stage

At this stage, the researcher conducted dissemination activities to fifth grade teachers from other schools. Dissemination refers to the process of sharing information, knowledge, or research findings with the public or targeted groups. Its main purpose is to ensure that relevant and beneficial information reaches those who can use it for decision-making, improving instructional practices, or enhancing professional knowledge.

Eight schools were selected for the dissemination process, particularly those within the Larasati cluster, including Sumurrejo 01 Elementary School, Sumurrejo 02 Elementary School, Plalangan 01 Elementary School, Plalangan 02 Elementary School, Pakintelan 01 Elementary School, Pakintelan 03 Elementary School, Mangunsari Elementary School, and Gaussian Kamil Elementary School. This dissemination event took place during the KKG (Teacher Working Group) session on Wednesday, March 19, 2025, at the hall of Sadeng 03 Elementary School.

Through this dissemination, the ELSA developed and implemented for fifth-grade students at Sadeng 03 Elementary School is expected to offer a practical and engaging solution for English learning. It is hoped that ELSA can serve as an inspiring educational tool that can be adopted and adapted by other schools to enhance English literacy in a fun and meaningful way.

CONCLUSION

The ELSA (English Learning for Student Activities) is an innovative educational solution developed to improve reading and writing skills in English, specifically designed for fifth-grade students at Sadeng 03 Elementary School. By leveraging modern technology, ELSA offers an engaging and interactive learning platform that makes the English learning process more enjoyable, accessible, and effective.

One of the key strengths of the ELSA application is its high accessibility. It can be accessed anytime and anywhere, whether through Android devices or via a web platform. This flexibility enables students to learn at their own pace and based on their individual schedules, thereby enhancing the effectiveness and efficiency of the learning process. Furthermore, ELSA is designed with a user-friendly interface that allows students to easily explore its various features.

The application incorporates appealing visual elements such as images, videos, and animations that not only attract students' attention but also help deepen their understanding of the material. The learning content is thoughtfully structured to align with students' developmental levels, ensuring that it is easy to grasp and remember. Its interactive features such as reading and writing tasks encourage active participation and offer immediate feedback to support students' progress.

Based on research findings, the ELSA application has proven to be both valid and practical as a learning medium. The study revealed significant improvements in students' reading and writing abilities in English after using ELSA. This indicates that the application not only meets educational standards but also delivers a meaningful and productive learning experience for students.

Moving forward, it is hoped that ELSA can continue to be refined and expanded for use in more educational settings, thereby making a greater contribution to English literacy development among elementary school students.

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It is sincerely hoped that this research will make a meaningful contribution to the field of education, especially in improving English reading and writing proficiency among elementary school students through the effective use of the ELSA application.

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APPENDICES

Appendix 1

ELSA (ENGLISH LEARNING FOR STUDENT ACTIVITIES) APPLICATION



BIO STATEMENT

Puput Alfrianti, Slamet Hari Pambudi, and Fitrianita Utami are primary school teachers in Semarang City who are actively involved in a professional community called *Komunitas Pengembang Digitalisasi Pembelajaran* (KPDP), or the Learning Digitalisation Developers Community. This community is dedicated to developing digital tools to support and enhance classroom learning.

Currently, they are developing a digital application called ELSA, specifically designed for fifth-grade students. The application is intended for use by teachers throughout Semarang City. The development of ELSA follows a Research and Development (R&D) approach based on the Thiagarajan 4D model (Define, Design, Develop, and Disseminate).

ELSA aims to improve young learners' English reading and writing skills through engaging, interactive features such as Augmented Reality (AR) and Virtual Reality (VR). After undergoing expert validation and classroom trials, the application has demonstrated a significant increase in pupil engagement and learning outcomes, reinforcing the transformative role of technology in modern education.