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RECONTEXTUALIZING LEARNING: AN ANALYSIS OF LANGUAGE ERRORS IN MANUSCRIPT EDITING IN THE DIGITAL LITERACY ERA

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ABSTRACT

This study was motivated by the need to recontextualize the teaching of language error analysis to make it relevant to the competency requirements of aspiring manuscript editors in the era of digital literacy. Conventional teaching methods that emphasize linguistic theory are considered insufficient for fostering critical thinking skills in editing digital manuscripts. This study was conducted to design a model for the recontextualization of language error analysis learning through a digital textbook that not only emphasizes the theoretical aspects of error analysis but also integrates them into the field of digital context-based editing and 21st-century competencies, particularly critical thinking. The approach used in this study was research and development (R&D) using the adapted Borg & Gall model up to the operational field trial stage. Data were collected through observation, questionnaires, interviews, document analysis, and tests, and were then analyzed using descriptive qualitative and quantitative methods. The research results indicate that the developed digital textbook was deemed highly suitable by subject matter experts, language experts, and users based on aspects of content suitability, language, presentation, and graphic design, with an average validation score of 92.87%. The results of the effectiveness test of the digital textbook on Language Error Analysis indicated that it is effective in improving critical thinking skills in editing digital manuscripts. Therefore, it can be concluded that the recontextualization of learning through digital textbooks is effective in strengthening the professional competencies of aspiring manuscript editors and is relevant to today's digital literacy needs through interactive, contextual, and technology-adaptive learning.

KEYWORDS: Aspiring manuscript editors, digital textbooks, language error analysis, digital literacy, recontextualization.

1. INTRODUCTION

Advances in technology, information, and communication have had a significant impact on people's lives in various fields worldwide. This phenomenon is known as openness or globalization, evidenced by fundamental changes in the way of life compared to the period before the 21st century. The 21st century is an era that demands excellence based on human effort and work outcomes through professionally managed institutions, thereby producing outstanding results (Oakland, 2005). One implication of the 21st century is the need to enhance digital literacy practices in society. Digital literacy does not merely mean the ability to use digital tools but encompasses the ability to think critically and ethically when using technology for professional and academic purposes (Martínez-Bravo et al., 2022; Nagle, 2018)

In the era of digital literacy, students are required to master the skills of understanding, editing, and effectively communicating information. Today, students are confronted with various digital products, whether in the form of images, videos, text, or combinations of these types. The creation of these digital products, particularly in the form of text, cannot be separated from the involvement of a copy editor. However, even after undergoing the editing process by an editor, these texts often still contain language errors. The language errors found in these texts can diminish their quality.

A copyeditor is a professional whose role is to ensure the linguistic quality of a text. Copyeditors are expected to possess the skills to identify linguistic errors so that the language used in digital communication is linguistically accurate and relevant. Therefore, Sugihastuti (2020) states that editors must possess qualifications in the form of specialized skills and expertise, which must be demonstrated through certification from the Professional Writers and Editors Association (PEP) and the National Professional Certification Agency (BNSP), ensuring that not just anyone can become a manuscript editor.

In addition to the teaching profession, the manuscript editing profession can also be pursued by students from the Indonesian Language and Literature Education Program in accordance with the graduate profile, namely becoming entrepreneurs in the language field. Through the Language Error Analysis course, students learn about various types, causes, and factors influencing the occurrence of language errors. Based on these types of language errors, students can apply this knowledge to analyze language errors in various types of texts. This analysis process follows the standard procedure for language error analysis, starting from identifying the error, determining its type, and correcting it. Thus, students are equipped with the skills to become manuscript editors.

However, the teaching of language error analysis in higher education institutions is still limited to the use of textbooks with a theoretical approach, without presenting practical applications of the material on language error analysis. This is consistent with the research conducted by (Ghufron & Saleh, 2016).

In the context of language learning, the development of digital technology has brought significant changes to the way languages are taught, particularly in the analysis of language errors—a critical foundation for aspiring manuscript editors in the era of digital literacy. Conventional teaching often focuses solely on the understanding of linguistic theories, without incorporating the use of cutting-edge technologies relevant to the current needs of the digital publishing industry. As a result, graduates lack practical competencies in identifying and revising language errors in digital texts (Long, 2022). On the other hand, students' ability to analyze language errors when applying linguistic rules in academic writing remains insufficient (Gildore et al., 2023).

A number of recent studies highlight the importance of integrating digital tools and contextual teaching approaches in language learning, including the development of digital textbooks to enhance 4C skills (critical thinking, communication, collaboration, creativity) among students. However, specific research on the recontextualization of language error analysis learning through digital textbooks focused on aspiring manuscript editors remains very limited. Recent studies tend to focus only on the development of spelling error detection applications or digital module-based instruction in other fields, such as the implementation of an automatic spelling filter application (U-TAPIS) by (Mediyawati et al., 2021) and the development of an Information and Communication Technology (ICT)-based curriculum by (Oktaviani et al., 2022).

Most existing research on the development of textbooks or modern learning applications has generally focused only on error detection or the enhancement of 21st-century skills in general. However, such textbook development has not yet integrated the practice of language error analysis with contextual assignments related to the digital publishing world. Therefore, there is a need to develop digital textbooks that specifically

recontextualize language error analysis learning for the purpose of digital text editing by prospective editors.

Consequently, this study was conducted with the aim of recontextualizing language error analysis learning through the development of a digital textbook relevant to aspiring manuscript editors in the era of digital literacy. Additionally, this study evaluates the effectiveness of the digital textbook in enhancing critical thinking competencies for aspiring editors in editing digital manuscripts. Based on this, this study presents a digital-based recontextualized learning model in the realm of language error analysis and offers an innovative textbook that can strengthen the digital competencies of aspiring manuscript editors. These findings are expected to serve as a reference for the development of similar teaching tools and enrich the literature on language education in the realm of technology.

This indicates a significant research gap: the lack of a pedagogically grounded, digitally mediated model that recontextualizes error analysis learning specifically for prospective editors operating in digital literacy environments. Existing studies have not sufficiently integrated (1) authentic editorial practices, (2) critical language analysis, and (3) digital literacy competencies into a cohesive instructional framework. Moreover, empirical investigations into the effectiveness of such integrated approaches in enhancing students' critical thinking and problem-solving abilities remain limited.

Based on these considerations, this study aims to recontextualize error analysis learning through the development of a digital teaching material specifically designed for prospective manuscript editors. The study further seeks to evaluate the effectiveness of this digital instructional model in enhancing students' critical thinking skills in editing digital texts.

The contributions of this research are threefold. First, it proposes a theoretically grounded and empirically tested model of recontextualized learning that integrates linguistic error analysis with digital editorial practices. Second, it develops an innovative digital teaching resource that aligns academic learning with industry demands. Third, it provides empirical evidence on the role of contextualized digital learning in strengthening higher-order thinking skills among language students. These contributions are expected to advance the field of language education, particularly in the intersection of applied linguistics, digital pedagogy, and professional training in the era of digital literacy, but it also contributed to the continuous professional development of the teachers in the long run (Nugroho et al., 2024).

2. METHOD

Based on the research objectives, the research design employed is research and development (R&D). The development model used is a modified version of the (Borg, 1983) research model, comprising 1) the needs analysis stage, 2) product design, 3) prototype development, 4) expert validation, 5) field testing, and 6) final revision. These stages can be described as follows.

Data Collection Techniques

The data in this study were obtained from observations, interviews, questionnaires, and effectiveness tests. The data sources used were students, course instructors, and expert lecturers. The research procedures designed by the researcher are presented below.

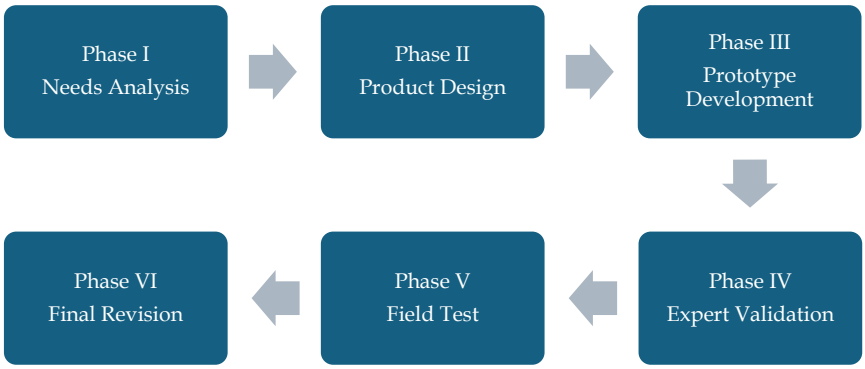

Fig. 1 Research and Development Procedure

All stages of the research procedure were carried out sequentially to obtain valid data. These stages can be explained as follows.

1. Stage I: The researcher analyzed the need to develop a digital textbook on Language Error Analysis to strengthen critical thinking and problem-solving skills among aspiring manuscript editors in the era of digital literacy. The techniques used include observation, interviews, and the administration of questionnaires to students and lecturers teaching the "Analysis of Language Errors" course in the PBSI program at several different universities, namely Unissula, UGJ, and IKIP Bojonegoro.
2. Phase II: The researcher designed a digital textbook prototype for "Language Error Analysis" for aspiring manuscript editors in the digital literacy era, based on the results of the needs analysis conducted with students and faculty members.
3. Phase III: The researcher developed the digital textbook prototype for "Language Error Analysis" according to the design derived from the needs analysis.
4. Phase IV: The researcher conducted a validation test of the developed digital textbook prototype with expert faculty members serving as validators to assess the material, identify shortcomings, and gather suggestions. The results of this validation test were used by the researcher as a reference for revising the prototype before field testing.
5. In Phase V, the researcher conducted a pilot study of the teaching process in the program selected as the research sample, namely the PBSI program at UNISSULA. Through this phase, the effectiveness of the digital teaching material on Language Error Analysis as a tool for strengthening critical thinking and problem-solving skills among manuscript editors was assessed.
6. Phase VI: The researcher revises the product based on the results of the limited field trial regarding the completeness of the content, the appeal of the presentation, readability, and the attractiveness of the graphic design. After revision, the textbook is disseminated.

Data Analysis Techniques

Validation of Digital Textbooks

The validation data for digital textbooks is derived from the validation data of the "Language Error Analysis" digital textbook prototype. The validation results are analyzed using a Likert scale with a rating range of 1–5 and calculated using the following formula.

Validation Score = $\frac{\sum \text{scores obtained} \times 100}{\sum \text{maximum scores}}$.....(1)

The results of the validation calculations for the developed product by the experts will be categorized according to the criteria in the following table.

Table 1 Validation Criteria for the Digital Textbook on Language Error Analysis

Score	Aspect	Criteria	Notes
20-35	Content	Invalid	Revising nearly the entire content of the digital textbook
36-51	Presentation	Less valid	Revising the content by carefully addressing several product shortcomings
52-67	Language	Fairly valid	May be used with some improvements to address areas that are still deemed inadequate
68-83	Graphics/Digital Design	Valid	Can be used with minor revisions
84-100	Innovation and Technology	Very valid	Ready for use with very minor revisions

The Effectiveness of a Digital Textbook on Language Error Analysis

The effectiveness of the textbook was assessed based on learning outcomes from editing digital texts using Normalized Gain. This was done to eliminate the influence of the highest scores, thereby avoiding ambiguous conclusions. The evaluation of students' learning progress was measured using the Normalized Gain (N-Gain) score, calculated using the following formula.

G = $\frac{\text{Posttest Score – Pretest Score}}{\text{100 – Pretest Score}}$..... .....(2)

The results obtained from the N-Gain data are described in the following table.

Table 2 N-Gain Criteria

N-gain	Criteria
0,7 ≤ g	High
0,3 ≤ g < 0,7	Medium
g < 0,3	Low

Source: Hake (2002)

The percentage results for critical thinking will be converted into qualitative data and described using several criteria in the following table.

Table 3. Criteria for Critical Thinking Scores

Critical Thinking Indicator Score (%)	Criteria
20-35	Not critical
36-51	Less critical
52-67	Somewhat critical
68-83	Critical
84 -100	Very critical

Source: Arikunto (2009)

3. RESULTS AND DISCUSSION

The Need for Developing a Digital Textbook on Language Error Analysis for Prospective Manuscript Editors in the Digital Literacy Era

Based on the results of a needs analysis conducted through a questionnaire at three universities in the research sample, involving 93 respondents, it was found that the teaching materials used in the Language Error Analysis course are still in the form of printed books or simple PDFs. These printed teaching materials have not been able to facilitate students in analyzing errors reflectively and independently. These materials are also not interactive and have not been contextualized to the real-life context of students as they enter the workforce. Furthermore, the teaching materials do not facilitate students in meeting the needs of digital literacy and self-directed learning. On the other hand, students still have a low level of proficiency in spelling, word choice, the accuracy of effective sentence structure, and understanding the institutional style in academic writing.

Table 4: Requirements for Developing a Digital Textbook on Language Error Analysis for Prospective Manuscript Editors in the Digital Literacy Era

Aspect	Indicators
Content	Covers types of language errors and their application in manuscript editing and digital literacy needs.
Language	The language used is appropriate for students' intellectual and social-emotional development levels.
Presentation	Easy to understand, bridging theory and practice, and suitable for self-directed learning.
Graphics	An engaging digital textbook that utilizes interactive features.
Innovation and Technology	Easily accessible on mobile devices and laptops to support digital literacy.

Based on the results of this needs analysis, several conclusions can be drawn. Regarding content, first, there is a need for a digital textbook on Language Error Analysis that specifically addresses the types of errors in the Indonesian language from various aspects (diction, spelling, sentence structure, and terminology) and their application in manuscript editing. As future manuscript editors, students require specific instructional materials for analyzing language errors in the field of manuscript editing. This aligns with the findings of, who noted that numerous language errors (at the phonological/orthographic level) in self-development books remain a significant issue in Indonesian language instruction. Second, there is a need for instructional materials focused on language error analysis in the field of manuscript editing to ensure greater contextual relevance. From a linguistic perspective, there is a need for a digital textbook on Language Error Analysis written in language that is easy to understand, aligned with students' intellectual and socio-emotional developmental levels. From a presentation perspective, there is a need for a digital textbook where the material is presented in a logical sequence from theory to practice, is easy to understand, and can be used for self-directed learning. From a graphic or visual design perspective, there is a need for a digital textbook that is visually appealing in terms of color composition and image design, utilizing interactive features. In terms of innovation and technology, there is a need for digital textbooks that utilize digital features (such as interactivity, multimedia, and automated quizzes) and are easily accessible from various devices, such as smartphones and laptops, to facilitate students' digital literacy.

From a digital literacy perspective, (Susanti & Nurhayati, 2024) indicate that although students hold a positive view of digital literacy, there are still barriers to implementing self-directed learning. This supports the finding that digital textbooks need to be designed not only to be "digital" in format but also to support self-directed learning and digital literacy. According to digital learning theory, for example, the concept of an interactive digital textbook proposed by (Herlambang et al., 2022) suggests that digital textbooks contribute positively to learning when equipped with interactive and multimedia features. Thus, the identified need is highly relevant: it is not merely a digital version of a printed book, but a digital textbook designed with pedagogical elements that support the competency goals of aspiring editors through the process of language error analysis. The digital textbook Analysis of Language Errors for aspiring manuscript editors in the digital literacy era addresses these instructional material needs. This digital textbook is designed and developed in accordance with the needs of students as aspiring manuscript editors in the digital literacy era.

Recontextualizing the Teaching of Language Error Analysis Through Digital Textbooks for Aspiring Editors in the Digital Literacy Era

1. Recontextualizing the Teaching of Language Error Analysis

Etymologically, the word "recontextualization" derives from the prefix "re-," meaning "back," and "context," meaning "a situation or environment of

meaning." Conceptually, recontextualization refers to the process of transferring and adapting meaning, knowledge, or practices from one context to another so that they remain relevant and meaningful. Thus, the term recontextualization can be defined as the process of adapting, transferring, and reinterpreting knowledge, concepts, or practices to make them relevant to new contexts—whether social, professional, or digital—without losing their core meaning.

The concept of recontextualization was first proposed by (Bernstein, 2000) in pedagogic discourse theory, which explains that scientific knowledge must be transformed into pedagogical knowledge to be used in learning contexts. Bernstein emphasizes that this process involves the selection, adaptation, and transformation of knowledge to align with the social, cultural, and professional contexts of learners. In the context of language learning, recontextualization means transforming theoretical linguistic content into practical and applicable content. This process enables students to understand the theory of language error analysis through the context of their professional lives, namely as aspiring manuscript editors

This theory aligns with (Vygotsky, 1978), who emphasized that knowledge is constructed through social interaction and cultural context, so that learning is effective when linked to real-life contexts. According to (Hordern, 2014), in the context of vocational and digital education, recontextualization serves as a bridge between academic knowledge and professional work practices. This is highly relevant for the Indonesian Language and Literature Education Program, which prepares students to become language practitioners in the digital age. Thus, recontextualizing the learning of language error analysis means transforming linguistic theory into contextual, profession-based, and digital learning experiences. In language learning, this means that linguistic material or language errors are no longer taught theoretically but are recontextualized within specific communicative or professional situations such as manuscript editing, journalism, or digital media.

In this study, recontextualization refers to transforming the teaching of language error analysis—which is typically academic and theoretical into contextual, practical, and digital learning, tailored to the needs of aspiring manuscript editors in the era of digital literacy. Recontextualization here means shifting the teaching of language error analysis from traditional contexts (such as general grammar exercises or student-centered activities) into the professional context of manuscript editing and delivering it through digital media. Recontextualization is achieved by transferring linguistic concepts into the context of professional manuscript editing while considering the students' objectives, characteristics, and socio-cultural contexts. Knowledge of language error analysis, which students typically learn in academic linguistics, is recontextualized into practice in the field of editing for aspiring manuscript editors to make it relevant to their professional work.

In this regard, language error theory is linked to real-world text examples, such as academic manuscripts (journal articles, news) and non-academic texts (literary works). This supports (Bernstein, 2000) theory, which asserts that recontextualization involves transforming academic knowledge into a contextual pedagogical form. Furthermore, (Fairclough, 2003) defines recontextualization as the process of transferring elements of knowledge from one context to another for learning purposes. In this study, linguistic elements were transferred into the context of the editing profession to support the graduate profile of students in the Indonesian Language and Literature Education Program as entrepreneurs in the language field, specifically as manuscript editors.

The digital textbook on Language Error Analysis for aspiring manuscript editors in this study was developed based on the principles of Life-Based Learning (LBL), which involves linking learning to students' real-life situations (Ikhsan, 2020; Ningsih et al., 2018). The material is presented through case studies, editing simulations, and critical reflection. This approach has been shown to enhance critical thinking skills, as evidenced by the research of (Akhmetzhanova, 2025; Brata et al., 2021), which found that digital learning improves independence and reflective abilities.

2. Digital Textbook on Language Error Analysis for Prospective Manuscript Editors as a Medium for Recontextualization

Digital textbooks are technology-based learning media that integrate text, audio, video, hyperlinks, and other interactive features to enrich the learning experience. Digital textbooks serve not only as learning resources but also as tools for recontextualizing learning, as they can present authentic situations, case studies, and professional simulations. According to Binkley (2012), life-based learning places personal and social experiences as the primary sources of learning. This means that digital textbooks designed with the principles of life-based

learning can bridge theory with real-world practice through text-editing scenarios, error-correction simulations, or reflections on work outcomes.

Research by found that digital features such as annotation, backtracking, and hyperlinking in digital textbooks enhance learners' analytical and reflective abilities. This supports the assumption that interactive digital textbooks can facilitate the process of recontextualizing linguistic knowledge within the context of editorial practice. Furthermore, shows that students who use interactive digital textbooks demonstrate a significant improvement in independence and learning outcomes. Thus, the development of a digital textbook on Language Error Analysis for aspiring manuscript editors is a strategic step toward recontextualizing the teaching of language error analysis.

3. Digital Literacy and Independent Learning

The era of digital literacy requires students to possess digital competencies—that is, the ability to use technology to access, evaluate, and create information in a critical and ethical manner (Ng, 2012). According to Fathoni (2023), digital literacy plays a crucial role in enhancing self-directed learning or academic independence among vocational students. In this context, the digital textbook *Analysis of Language Errors* for aspiring manuscript editors in the digital literacy era serves as a digital literacy medium that enables students to develop critical thinking skills through content exploration, reflection, and self-evaluation. Emphasizes that students' ability for self-directed learning in online education is positively correlated with academic success and independent thinking. Therefore, the development of digital textbooks containing elements of recontextualization not only enhances linguistic analysis skills but also fosters the profile of critical and independent learners in the digital age.

4. Analysis of Language Errors in the Context of the Manuscript Editor Profession

Error analysis is a branch of applied linguistics that examines deviations from standard language norms to understand the sources of errors and learners' strategies (James, 1998). In the context of the editing profession, this skill is crucial because it relates to the accuracy, effectiveness, and clarity of a text. According to (Harefa & Sibarani, 2023; Mertosono & Erniwati, 2023), error analysis is not merely about identifying errors but also understanding their causes to improve the communicative competence of language users.

Meanwhile, research by (Fajriyani et al., 2020; Hussin et al., 2022) indicates that linguistic errors in self-help books remain high, particularly in the areas of morphology and spelling. This reinforces the urgency of contextual and practical error analysis training for aspiring editors. Thus, recontextualizing language error analysis learning through digital textbooks will help students master linguistic theory while applying it in the practice of digital text editing.

Conceptually, the relationship between variables can be explained as follows. The recontextualization of learning serves as a pedagogical approach that transforms theoretical learning into profession-based contextual learning (Bernstein, 2000). Digital textbooks are the primary medium facilitating recontextualization, offering interactive and reflective learning grounded in digital literacy (Sigarchian et al., 2018). Digital literacy serves as a foundational skill for students to independently and critically access, manage, and utilize digital textbooks. The ability to analyze language errors is a target competency developed through the real-world context of digital manuscript editing (Setiawan & Purbandini, 2021). Visually, this relationship can be illustrated as follows.

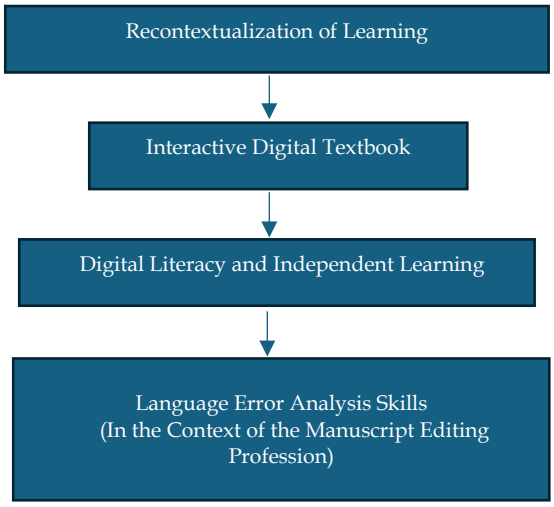

Figure 2: Conceptual Relationships Among Variables

5. A Design for the Recontextualization of Language Error Analysis Instruction

Through the Language Error Analysis course, students are equipped with the ability to analyze errors in the Indonesian language using a learning recontextualization approach, namely the adaptation of linguistic theory within the context of the manuscript editing profession. Through an interactive digital textbook, students are trained to think critically, independently, and reflectively when facing the challenges of text editing in the era of

digital literacy. The Language Error Analysis course for aspiring manuscript editors is designed as a learning platform that integrates linguistic theory with the professional needs of text editing in the era of digital literacy. Through the approach of learning recontextualization, linguistic theories are not merely studied conceptually but transformed into the real-world work contexts faced by manuscript editors. This recontextualization process enables students to understand the relevance of linguistics in addressing the complexities of digital texts, whether academic, media, or creative. This course utilizes an interactive digital textbook as the primary learning resource, allowing students to develop independent, reflective, and adaptive skills in response to changes in information technology.

The Graduate Learning Outcomes (GLOs) for this course are as follows: GLOs-1 (Attitude) demonstrates academic ethics, responsibility, and integrity in scientific and professional activities; LLO-2 (Knowledge) demonstrates mastery of linguistic concepts, principles, and theories, particularly in the analysis of language errors; LLO-3 (General Skills) demonstrates the ability to think critically and solve linguistic problems using digital technology; and LLO-4 (Specific Skills) demonstrates the ability to apply theories of language error analysis in the context of professional manuscript editing. Through these CPLs, students are expected to demonstrate academic integrity and professional ethics in manuscript editing practice. In terms of knowledge, students master linguistic principles related to errors in phonology, morphology, syntax, semantics, and pragmatics. In the realm of general skills, students are trained to think critically and solve linguistic problems using digital tools. Meanwhile, The specific skill targeted is students' ability to analyze language errors and apply this knowledge in editing manuscripts in accordance with professional editorial standards. All of these learning outcomes are articulated into CPMKs and concrete, measurable, and continuously evaluable achievement indicators, including CPMK-1: students understand the basic concepts of learning recontextualization and language error analysis; CPMK-2: students are able to identify and classify various types of language errors; CPMK-3: Students are able to apply contextual analysis of language errors in the editing of digital manuscripts; CPMK-4: Students demonstrate critical and independent thinking skills through the use of interactive digital textbooks; and CPMK-5: Students are able to produce editing projects that meet professional standards for manuscript editors.

To achieve the specified CPL and CPMK, the learning strategy employed utilizes a learning recontextualization approach and Life-Based Learning (LBL), while the learning method used is Problem-Based Learning (PBL). The instructional materials and learning media used include an interactive digital textbook titled *Analysis of Language Errors*, designed to strengthen critical thinking and problem-solving skills for aspiring manuscript editors in the era of digital literacy. Through this digital textbook, students are provided with various activities such as linguistic case analysis, digital text editing, editor role-playing simulations, and hands-on practice using the KBBI, PUEBI, and digital editing tools. The interactive digital textbook serves as the primary medium facilitating exercises, quizzes, automated feedback, and learning reflection spaces. Assessment is conducted comprehensively through digital attendance and participation, weekly assignments, phased editing projects, a case-based midterm exam, and a final exam in the form of a digital portfolio. All forms of assessment are designed to measure students' abilities authentically and in line with the context of professional manuscript editing work.

The course consists of 16 sessions, covering an introduction to the concept of recontextualization, theories of language error analysis, error classification, editing practice, language validation, and simulations of the work environment of a copy editor. The initial sessions emphasized theoretical foundations, followed by the analysis and identification of errors in various types of digital texts, such as social media posts, articles, academic papers, and creative works. The middle to final sessions focused on strengthening professional skills through comprehensive editing projects, presentation of results, and self-directed learning reflections. By the end of the semester, students are expected to be able to apply theories of language error analysis critically, systematically, and contextually in the editing of digital texts, as well as possess the digital literacy and self-directed learning skills necessary to become competent manuscript editors in the era of digital literacy for both academic and non-academic texts (Lee et al., 2018; Shayo & Kwon, 2025).

Digital media offers flexible access, allows for backtracking, and integrates multimedia, thereby enhancing engagement and the effectiveness of learning. This aligns with the research which demonstrates that interactive digital textbooks are effective as learning resources (Jang et al., 2025; Nengsih et al., 2022; Walline, 2023).

6. Concomitant Effects of the Recontextualization of Language Error Analysis Learning Through Digital Textbooks for Prospective Manuscript Editors in the Digital Literacy Era

Based on the research findings, the recontextualization of language error analysis learning through digital textbooks for prospective manuscript editors yielded the following results.

1) More Contextual and Relevant Learning

The recontextualization of learning through digital textbooks successfully links the theory of language error analysis with the practical application of digital manuscript editing, ensuring that students not only understand the concepts but are also able to apply them directly within the context of the creative industry and modern publishing. The sample texts presented ranging from academic works like scholarly articles to non-academic pieces like popular articles make the material more relevant and motivate students because "this is exactly what I do as an editor."

2) Enhanced Critical Thinking and Problem-Solving Skills

Aspiring editor students demonstrate improved critical thinking skills, such as analyzing, evaluating, and correcting language errors in digital manuscripts. Case-based learning and digital revision tasks help students become more meticulous and reflective in detecting errors and writing justifications for the corrections made. The interactive exercises provided require participants to identify types of errors, explain their causes, and propose corrections, so that they not only mark errors but also solve and reflect on them.

3) Interactivity and Collaboration

The digital textbook developed features interactive elements and online application-based exercises that have been proven to enhance student engagement, initiative, and collaboration during discussions and peer reviews of text editing. The learning experience becomes more dynamic, engaging, and aligned with current advancements in digital literacy technology. Reflection modules and self-assessment rubrics encourage participants to evaluate themselves, build metacognitive awareness, and strengthen personal strategies in editing.

4) Relevance and Effectiveness

This recontextualized learning has proven effective through improved test results in language error analysis, as well as positive feedback from students regarding the benefits and ease of use of the digital textbook in supporting the role of today's editors**.**

Based on this, overall, the recontextualization of learning produces prospective editors who are better prepared to face the challenges of digital literacy and who are critical thinkers, adaptable, and professional. Thus, the recontextualization of learning through digital textbooks has proven to be relevant and capable of enhancing prospective editors' competencies in analyzing language errors in the era of digital literacy.

7. The Feasibility of Digital Textbooks on Language Error Analysis for Prospective Manuscript Editors in the Digital Literacy Era

Kelayakan buku ajar digital Analisis Kesalahan Berbahasa bagi calon editor naskah di era literasi digital dapat dilihat pada tabel berikut ini.

Tabel 5 Hasil Validasi Buku Ajar Digital Analisis Kesalahan Berbahasa

Number	Aspect	**Rata-Rata Skor**	Category
1	Content	94,20	Highly Valid
2	Presentation	93,80	Highly Valid
3	Language	92,60	Highly Valid
4	Graphics/Digital Design	94,00	Highly Valid
5	Innovation and Technology	93,10	Highly Valid
Total Score		93,55	Highly Valid

Source: Data from the Validation of Materials and Language Experts (2025)

Based on a score of 93.55, the digital textbook *Analysis of Language Errors for Aspiring Editors in the Digital Literacy Era* is deemed valid and ready for use with only minor revisions. This validation test

8. The Effectiveness of the Digital Textbook *Analysis of Language Errors for Aspiring Editors in the Digital Literacy Era

Effectiveness was assessed based on the improvement of students' critical thinking skills in editing digital manuscripts, calculated using the Normalized Gain (N-Gain) formula as proposed by (Hake, 2002)

The findings confirm that the recontextualization of language error analysis learning through digital textbooks is not only valid in terms of content design but also proven effective in improving learning outcomes. This is consistent with the research of (O'Bannon et al., 2017) which demonstrates that students using interactive digital textbooks show significant improvements in learning independence and outcomes compared to those using conventional printed materials.

The effectiveness of this digital textbook can be attributed to several interconnected factors. First, the interactive features embedded in the textbook such as automated quizzes, annotation tools, and reflective modules allowed students to engage actively with the material rather than passively receiving information. Research using problem-based learning with digital simulation tools found that interactive digital learning environments were effective in improving critical thinking skills, outperforming expository teaching approaches in measurable gains (Mulawarman, 2024). This supports the argument that the contextual, case-based design of the digital textbook fosters deeper analytical engagement.

Second, the recontextualization of linguistic theory into the professional context of manuscript editing played a central role in improving students' critical thinking. By situating language error analysis within authentic editorial scenarios such as proofreading digital news articles, academic manuscripts, and social media content students were prompted to apply linguistic rules critically rather than memorize them abstractly. This aligns with (Bernstein, 2000) pedagogic discourse theory, which emphasizes that knowledge must be transformed from its original academic context into a pedagogical context that is relevant to learners' social and professional realities. In this study, the recontextualization process successfully shifted students from passive knowledge receivers to active critical analysts of digital texts.

Third, the digital literacy dimension of the textbook contributed to learner autonomy and self-directed engagement. Studies on digital literacy and academic performance among Indonesian students confirm that digital informal learning significantly mediates the relationship between digital competence and academic achievement, underscoring the importance of designing learning tools that actively cultivate digital skills alongside subject knowledge (Zakir et al., 2025). The digital textbook Analysis of Language Errors was designed with this principle in mind, enabling students to access materials across devices, self-evaluate through automated feedback, and engage in reflective activities that fostered metacognitive awareness.

Furthermore, the effectiveness of this textbook aligns with broader findings on the impact of digital tools on critical thinking development in language education. A systematic review covering studies from 2015 to 2024 found that ICT tools including digital mapping, WebQuest-based platforms, and interactive online tools consistently supported the development of critical thinking skills in language learners, particularly when integrated into structured pedagogical frameworks (Wei, 2024). The digital textbook developed in this study applies a similarly structured approach, embedding critical thinking indicators such as analysis, evaluation, inference, and self-correction into every chapter's learning activities.

This result is also consistent with the findings of (Julisa et al., 2023), who demonstrated that digital teaching materials for 21st-century competencies in higher education are both feasible and effective, particularly when they present actual contemporary issues in an engaging and interactive manner. In the context of this study, the sample texts used in the textbook drawn from real digital publications including online news articles, academic journals, and literary works provided the authentic editorial challenges necessary to develop professional-level critical thinking.

Beyond improvements in test scores, the effectiveness of the digital textbook also manifested in qualitative gains observed during the field trial. Student reflections and instructor observations indicated increased engagement, greater initiative in identifying errors, and stronger confidence in justifying editorial corrections. digital learning environments can cultivate reflection, self-directed learning behaviors, and digital literacy competencies that are highly relevant for roles like manuscript editing in a digital publishing context (Kim et al., 2023; Liu et al., 2023; Morris-Eyton & Pretorius, 2023).

In sum, the digital textbook Analysis of Language Errors for Aspiring Editors in the Digital Literacy Era has been proven effective in improving critical thinking skills through a recontextualized, interactive, and digitally adaptive learning approach, supporting its role as a strategic and innovative tool for the professional preparation of aspiring manuscript editors in Indonesia's evolving digital publishing landscape.

4. CONCLUSION

This study demonstrates that the recontextualization of language error analysis learning through a digital textbook is both valid and effective in strengthening the professional competencies of aspiring manuscript editors in the digital literacy era. With an average validation score of 92.87% across content, language, presentation, graphic design, and innovation aspects, the digital textbook Analysis of Language Errors was deemed highly suitable by subject matter and language experts. Furthermore, the effectiveness test confirmed significant improvement in students'

critical thinking skills in editing digital manuscripts. This recontextualized, interactive, and technology-adaptive learning model offers a strategic innovation for Indonesian Language and Literature Education programs in preparing competent, critically-minded editors for today's digital publishing landscape.

REFERENCES

Akhmetzhanova, G. (2025). The Impact of Digital Technologies on the Students' Independent Learning Development. *International Journal of Information and Education Technology*. https://doi.org/10.18178/ijiet.2025.15.9.2386

Bernstein, B. (2000). *Pedagogy, Symbolic Control, and Identity*. https://doi.org/10.5771/9781461636205

Binkley, M., E. O., H. J., R. S., R. M., M.-R. M., & R. M. (2012). Defining Twenty-First-Century Skills. In P. Griffin, B. McGaw, & E. Care (Eds.), Assessment and Teaching of 21st Century Skills. *Springer.*, 17–66.

Borg, W. (1983). *Educational research : an introduction / by Walter R. Borg, Gall, Meredith Damien*. *1983*, 1–99.

Brata, W., Wibowo, F., & Rahmadina, N. (2021). Implementation of discovery learning in a digital class and its effect on student learning outcomes and learning independence level. *F1000Research*, *10*, 386. https://doi.org/10.12688/f1000research.51763.1

Fairclough, N. (2003). *Analysing Discourse: Textual Analysis for Social Research*. https://doi.org/10.4324/9780203697078

Fajriyani, N., Ridho, M. R., & Laili, Q. (2020). ANALISIS KESALAHAN BERBAHASA DI BIDANG DIKSI DALAM BUKU PANDUAN UPT PERPUSTAKAAN IAIN SURAKARTA EDISI 2018. *Humaniora*, *21*, 55–68. https://doi.org/10.23917/humaniora.v21i1.8151

Fathoni, A. (2023). Developing digital-based teaching materials to improve students' critical thinking. *International Journal of Instruction, 16*(2), 321–338.

Ghufron, M., & Saleh, M. (2016). Designing A Model Of Research Paper Writing Instructional Materials For Academic Writing Course: Textbook Evaluation. *Language Circle: Journal of Language and Literature*, *10*, 113–123. https://doi.org/10.15294/lc.v10i2.5618

Gildore, P., Uka, A. H., & Yting, J. (2023). Error Analysis of Academic Essays of Senior High School Students. *Journal Corner of Education, Linguistics, and Literature*. https://doi.org/10.54012/jcell.v3i2.224

Hake, R. R. (2002). Relationship of individual student normalized learning gains in mechanics with gender, high-school physics, and pretest scores on mathematics and spatial visualization. *Physics Education Research Conference*, *8*(1), 1–14.

Harefa, A., & Sibarani, B. (2023). An Error Analysis of Communicative Effect Taxonomy in Students' Writing Descriptive Text at the Tenth Grader Students. *International Journal of English Literature and Social Sciences*. https://doi.org/10.22161/ijels.86.22

Herlambang, A. D., Budiman, B., & Wardhono, W. S. (2022). Interactive Procedural Knowledge Learning Resources Development in The Context of Competency-Based Training Instructional Approach and Interactive Media Design Subjects for Information Technology Vocational High School. *Elinvo (Electronics, Informatics, and Vocational Education)*. https://doi.org/10.21831/elinvo.v7i1.48215

Hordern, J. (2014). How is vocational knowledge recontextualised? *Journal of Vocational Education & Training*, *66*, 22–38. https://doi.org/10.1080/13636820.2013.867524

Hussin, M., Ismail, Z., & Naimah. (2022). Error Analysis of Form Four KSSM Arabic Language Text Book in Malaysia. *Theory and Practice in Language Studies*. https://doi.org/10.17507/tpls.1301.20

Ikhsan, M. (2020). A Life-Based Citizenship Education Textbook for Vocational High Schools. *Jurnal Ilmiah Pendidikan Pancasila Dan Kewarganegaraan*, *4*, 242–249. https://doi.org/10.17977/um019v4i2p242-249

James, C. (1998). *Errors in Language Learning and Use: Exploring Error Analysis*. https://doi.org/10.2307/3588202

Jang, A., Park, H., & Moon, J. E. (2025). Future direction of digital textbooks in undergraduate nursing education: A scoping review. *PLOS One*, *20*. https://doi.org/10.1371/journal.pone.0326109

Julisa, T. C., Legiani, W. H., & Juwandi, R. (2023). Pengembangan kompetensi abad 21 melalui bahan ajar digital pada pembelajaran pendidikan pancasila dan kewarganegaraan. *Jurnal Dimensi Pendidikan Dan Pembelajaran*, *11*(2), 234–246.

Kim, J., Park, Y., & Hyun, J.-E. (2023). Exploring Learning Analytics Data for Supporting Self-Directed Learning in Smart Learning Environment. *Korean Association For Learner-Centered Curriculum And Instruction*. https://doi.org/10.22251/jlcci.2023.23.11.787

Lee, S., Lee, J.-H., & Jeong, Y. (2018). The Effects of Digital Textbooks on Students' Academic Performance, Academic Interest, and Learning Skills. *Journal of Marketing Research*, *60*, 792–811.

https://doi.org/10.1177/00222437221130712
Liu, B., Gui, W., Gao, T., Wu, Y., & Zuo, M. (2023). Understanding self-directed learning behaviors in a computer-aided 3D design context. *Comput. Educ.*, *205*, 104882. https://doi.org/10.1016/j.compedu.2023.104882
Long, R. (2022). Online Grammar Checkers Versus Self-Editing: An Investigation Of Error Correction Rates And Writing Quality. *Journal of Nusantara Studies (JONUS)*. https://doi.org/10.24200/jonus.vol7iss1pp441-458
Martínez-Bravo, M.-C., Chalezquer, C. S., & Serrano-Puche, J. (2022). Dimensions of Digital Literacy in the 21st Century Competency Frameworks. *Sustainability*. https://doi.org/10.3390/su14031867
Mediyawati, N., Young, J. C., & Nusantara, S. B. (2021). U-TAPIS: AUTOMATIC SPELLING FILTER AS AN EFFORT TO IMPROVE INDONESIAN LANGUAGE COMPETENCIES OF JOURNALISTIC STUDENTS. *Jurnal Cakrawala Pendidikan*. https://doi.org/10.21831/cp.v40i2.34546
Mertosono, S., & Erniwati, E. (2023). Error Analysis: Types and Causes of EFL Learners' Errors in Writing Analytical Exposition Text. *Eralingua: Jurnal Pendidikan Bahasa Asing Dan Sastra*. https://doi.org/10.26858/eralingua.v7i1.37875
Morris-Eyton, H., & Pretorius, E. (2023). Cultivating a Digital Promise: Promoting Reflective and Reflexive Activities to Enhance Self-Directed Learning for the 21st Century. *Student Success*. https://doi.org/10.5204/ssj.2659
Mulawarman, A. V. (2024). Evaluation of digital project based blended learning model to improve students' critical thinking and problem solving skills. *Journal of Ecohumanism*, *3*(8), 1875–1895.
Nagle, J. (2018). Twitter, cyber-violence, and the need for a critical social media literacy in teacher education: A review of the literature. *Teaching and Teacher Education*. https://doi.org/10.1016/j.tate.2018.08.014
Nengsih, Y. K., Handrianto, C., Nurrizalia, M., Waty, E. R. K., & Shomedran, S. (2022). Media and Resources Development of Android Based Interactive Digital Textbook in Nonformal Education. *Journal of Nonformal Education*. https://doi.org/10.15294/jne.v8i2.34914
Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, *59*(3), 1065–1078.
Ningsih, F., Suratno, S., & Narulita, E. (2018). The Development of Student's Book Based on STEM (Science Technology Engineering and Mathematics) with LBL (Life Based Learning) Integration on The Subject of Biotechnology in Class XII Senior High School. *Pancaran Pendidikan*. https://doi.org/10.25037/pancaran.v7i3.185
Nugroho, K. Y., Anwar, C., & Hartono, H. (2024). Social constructivist mentoring program to support teacher professional development: An action research approach. *The Qualitative Report*, *29*(5), 1416–1436.
Oakland, J. (2005). From quality to excellence in the 21st century. *Total Quality Management and Business Excellence*, *16*(8–9), 1053–1060.
O'Bannon, B. W., Skolits, G. J., & Lubke, J. K. (2017). The influence of digital interactive textbook instruction on student learning preferences, outcomes, and motivation. *Journal of Research on Technology in Education*, *49*(3–4), 103–116.
Oktaviani, R., Ansoriyah, S., & Purbarani, E. (2022). Syllabus Development of Language Editing Courses Indonesia Based on Information and Communication Technology Integrated XXI Century. *Aksis : Jurnal Pendidikan Bahasa Dan Sastra Indonesia*. https://doi.org/10.21009/aksis.060105
Setiawan, D., & Purbandini, W. (2021). Language Errors in Editing a Manuscript in Indonesian Language. *International Journal of Linguistics, Literature and Translation*. https://doi.org/10.32996/ijllt.2021.4.8.21
Shayo, J. D., & Kwon, Y.-J. (2025). Effect of An Interactive Digital Textbook for Academic Achievement and Learning Satisfaction in Lower School Biology. *Brain, Digital, & Learning*. https://doi.org/10.31216/bdl.2025.15.3.11
Sigarchian, H. G., Logghe, S., Verborgh, R., Neve, W., Salliau, F., Mannens, E., Walle, R., & Schuurman, D. (2018). Hybrid e-TextBooks as comprehensive interactive learning environments. *Interactive Learning Environments*, *26*, 486–505. https://doi.org/10.1080/10494820.2017.1343191
Sugihastuti, S. (2020). Penulis Karya Ilmiah dan Copyediting. *Deskripsi Bahasa*, *3*(1), 30–36.
Susanti, M., & Nurhayati, S. (2024). EXPLORING DIGITAL LITERACY USAGE FOR SELF-DIRECTED LEARNING: RURAL ADOLESCENTS' PERSPECTIVES. *Jurnal Visi Ilmu Pendidikan*. https://doi.org/10.26418/jvip.v16i1.67216
Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (Vol. 86). Harvard university press.

Walline, C. (2023). Smart textbooks and LMS-integrated digital tools incentivize student engagement and facilitate learning in an undergraduate immunology course. *The Journal of Immunology*. https://doi.org/10.4049/jimmunol.210.supp.231.11

Wei, J. (2024). *REVIEW A Systematic Review of Critical Thinking Development in Information and Communication Technology-Supported English as a Foreign Language Teaching from 2015 to 2024*. *06*(06), 990–1006.

Zakir, S., Hoque, M. E., Susanto, P., Nisaa, V., Alam, M. K., Khatimah, H., & Mulyani, E. (2025). Digital literacy and academic performance: the mediating roles of digital informal learning, self-efficacy, and students' digital competence. *Frontiers in Education*, *10*, 1590274.