Volume 22 No. 1 (2026)

BUANA PENDIDIKAN

Jurnal Fakultas Keguruan Dan Ilmu Pendidikan Unipa Surabaya

http://jurnal.unipasby.ac.id/index.php/jurnal_buana_pendidikan/index

Developing HTML5-Based Interactive Media to Improve Writing Letter Capital Skills in Narrative Texts

Aisyah Nurul Isnaeni*, Arif Widagdo

Universitas Negeri Semarang, Semarang, Indonesia

*Email: nurisnaisyah@gmail.com

Articles Information

Keywords:

HTML5-based interactive media;

Writing skills;

Capital Letter;

Submitted:

26-07-2026

Accepted:

24-02-2026

Published:

25-02-2026

Abstrak

Tujuan dari peneliti yaitu mengembangkan media interaktif berbasis HTML5 untuk mengatasi permasalahan keterampilan menulis siswa kelas IV. Penelitian ini menggunakan metode Research and Development (R&D), model Borg and Gall yang terdiri dari tahap observasi, pengembangan, validasi, ujicoba dan evaluasi. Metode pengumpulan data meliputi observasi, wawancara, angket, tes evaluasi dan dokumentasi. Analisis data dilakukan melalui uji validitas, reliabilitas, normalitas, uji wilcoxon dan uji N-gain. Hasil uji validitas media dan materi menunjukkan rata-rata 96.25% dengan katogori sangat layak. Hasil uji wilcoxon menunjukkan bahwa Asymp. Sig (2-tailed) bernilai 0.000 bahwa "Ha diterima". Uji N-gain menghasilkan persentase 70,43% menunjukkan bahwa media cukup efektif. Angket respon siswa dan guru pada akhir pembelajaran menunjukkan media layak digunakan dalam pembelajaran. Implikasi dari penelitian ini bahwa penggunaan media interaktif berbasis HTML5 efektif meningkatkan keterampilan menulis huruf kapital pada teks narasi siswa.

Abstact

This research's aims to develop HTML5-based interactive media to overcome students' writing skills problems for grade IV. This research uses the Research and Development method, Borg and Gall model which consists of observation, development, validation, trial and evaluation stages. Data analysis was done through validity, reliability, normality, wilcoxon, and N-gain tests. The media and material validity test results showed an average of 96.25%, which is a very feasible category. The results of the wilcoxon test show that Asymp. Sig (2-tailed) is worth 0.000 that "Ha is accepted". The N-gain test yielded 70.43% indicating that the medium was quite effective. The student and teacher responses questionnaire at the end of learning showed that the media was worthy for use in learning. This study implies that using HTML5-based interactive media effectively improves capital letter writing skills in students' narrative texts.

P-ISSN: 1693-8585
E-ISSN: 2622-9218

INTRODUCTION

Technological advances have influenced in education (Syifa Miasari et al., 2022). However, the integration of technology in classrooms should not merely follow digital trends but must address specific pedagogical problems faced by students. In elementary language learning, one persistent issue is students' limited mastery of basic writing conventions, particularly the correct use of capital letters in narrative texts. The availability of digital teaching media, both online and offline, can support the success of learning (Marlina et al., 2022). This indicates that the conventional model is starting to shift and usher in the era of digitalization (Purnasari & Sadewo, 2021). The development of learning components can be done in collaboration with the sophistication of today's technology. Learning media is a essential element that acts as a mediator in the learning process. (Ichsan Mahardika et al., 2021). Digital-based learning media is able to present refreshing materials and teaching materials as well as foster the character of students who are more active and create a variety of innovations.

Indonesian learning aims to improve students' communication skills, correctly and precisely, through speaking and writing activities and fostering appreciation for literary works (Asih et al., 2020). Writing skills come after speaking, reading and listening skills (Purnamawati et al., 2024). These skills do not necessarily come automatically, but must go through a process of practice that is numerous and regular (Hidayatullah, 2022). Writing is not only about scribbling ink on paper, but also about conveying meaning and important information (Yunita et al., 2020). Writing is an activity of expressing ideas or feelings in linguistic symbols that involve punctuation, spelling, diction, vocabulary, sentence structuring, paragraph development, idea processing, and essay model development (Sukirman, 2020). Capitalization is a foundational writing skill that affects clarity, readability, and adherence to Indonesian language standards (PUEBI). Despite being introduced from early grades, many students continue to demonstrate inconsistent application of capital letter rules in structured writing tasks. This indicates that the challenge lies not only in rule comprehension but also in reinforcement and meaningful practice.

The rules that need to be considered in a variety of writing include the writing of capital letters and punctuation. Both are skills in writing that are taught from elementary school to college levels. Researchers found several problems in learning Indonesian. The problem seen by the researcher is that fourth-grade students of SD Negeri Tambakaji 02 Semarang City are less responsive and less focused on learning. In addition, there are still students who have difficulty using capital letters when writing narrative texts due to the low interest of students in reading PUEBI, so they lack knowledge about the proper use of capital letters. Preliminary classroom analysis showed that more than half of the students inconsistently applied capital letters at the beginning of sentences, in proper nouns, and in dialogue writing. Additionally, teacher interviews indicated that students often relied on guessing rather than understanding formal rules. Learning was predominantly textbook-centered, with limited interactive reinforcement activities. These findings demonstrate a clear instructional gap that requires targeted intervention.

P-ISSN: 1693-8585
E-ISSN: 2622-9218

Writing requires an understanding of the standard rules of language, not only done without practice, including the use of capital letters and punctuation, especially for elementary school students (Rusanti et al., 2023). Based on the presentation of these problems, to enhance the quality of learning, an innovative approach to using learning media is essential to increase students' interest. (Isnaeni & Hildayah, 2020). In reality, in the field, it was found that educators do not understand how to make audio-visual designs that attract students' attention. The researcher wants to take advantage of technological advances in an effort to produce web-based interactive learning media products, to improve skills in writing teaching. This was developed by implementing HTML5-based interactive learning media which contains learning materials and quizzes, and is integrated with *liveworksheets*.

The selection of HTML5 as the development platform was not solely based on technical considerations, but on its pedagogical affordances for elementary learning contexts. HTML5 enables cross-device accessibility without requiring additional installations, allowing students to access learning materials via computers or mobile devices both online and offline. This flexibility supports continuity of learning beyond classroom boundaries. Pedagogically, HTML5 supports interactive elements such as embedded quizzes, immediate feedback, animation, and multimedia integration, which are aligned with constructivist learning principles. These features facilitate active engagement, repeated practice, and self-paced exploration—key factors in strengthening procedural writing skills such as capitalization.

Interactive learning media is a medium that produces dynamic and interactive displays that combine graphics, text, animation, video and audio (Manurung, 2020). The web using HTML format, has undergone a shift in functionality and evolved into hypermedia. The hypermedia approach is used so that the web display not only consists of text, but can also be connected to visuals equally images, audio, video and graphics (Alfian et al., 2023). HTML5 (*Hypertext Markup Language version 5*) is a revised product. The update contained in HTML5 is to improve the previous parts of the web in the previous version by adding new parts that are of better quality and support the existence of new, more advanced features to support a more viable web application (M, Muthohir 2021). The advantage of HTML5-based media is that it can present information, process, and multimedia. If HTML5-based learning media is designed well and appropriately, it can foster a fun, interactive learning atmosphere and enhance students' motivation to learn (Lelilita & Zuhdi, 2020).

Previous research on the role of interactive media has great potential to be an effective and innovative learning medium in supporting letter recognition for elementary school students (Putriana & Yuniati, 2025). However, limited studies specifically address the development of HTML5-based interactive media for improving capital letter writing skills in elementary narrative texts. Most prior research focuses on general literacy improvement or subject-based multimedia learning. Therefore, this study contributes by targeting a specific micro-skill in writing—capitalization accuracy—through a structured interactive web-based approach. The interactive quiz feature contained in the media can also build a learning atmosphere to be more enthusiastic and fun (Jong & Tacoh, 2024). An interactive web not only presents learning

P-ISSN: 1693-8585
E-ISSN: 2622-9218
http://jurnal.unipasby.ac.id/index.php/jurnal_buana_pendidik

materials in a more interesting and fun way but also creates a mutual interaction between teachers and students (Kurniawati et al., 2023). From this interaction, students will not feel bored when learning takes place (Waluyo Hadi et al., 2024). This research offers media innovations that are integrated with HTML5 web to make capital letter writing materials more attractive and varied. In addition, this research does not only focus on media development but also tests the feasibility and effectiveness of the developed learning media. Furthermore, the results of this research and development are predicted to make a real contribution to creating Indonesian language learning on the material of using capital letters that are more optimal.

METHOD

The type of research used is research and development (R &D). Development research methods are scientific approaches used to research, design, produce, and test the validity of created products (Sugiyono, 2021). This study adopted the Borg and Gall development model; however, it was modified into five main stages to suit the scope, time limitations, and practical conditions of elementary classroom research. The original Borg and Gall model consists of ten stages, including research and information collecting, planning, developing preliminary form of product, preliminary field testing, main product revision, main field testing, operational product revision, operational field testing, final product revision, and dissemination. In this study, these stages were consolidated into five integrated phases: (1) needs analysis and preliminary study, (2) product design and development, (3) expert validation, (4) small- and large-scale field testing, and (5) evaluation and final revision. The adaptation was conducted to maintain methodological rigor while ensuring feasibility within the school context. The consolidation primarily combined overlapping evaluation and revision cycles into broader stages without eliminating essential validation and testing procedures.

The initial stage of the research is to observe and distribute questionnaires to teachers and students. From the results of the interviews supported by learning outcome data, it shows that students of SDN Tambakaji 02 Semarang City are still lacking in capital writing skills in narrative texts, As a solution to this problem, the researcher made a software design Coreldraw X7, Microsoft power point, iSpring suite 11, then changed to HTML5 and uploaded on itch.io. The design incorporated principles of multimedia learning, including clarity, segmentation, and integration of text and audio to reduce cognitive overload. Interactive quizzes were embedded to provide immediate feedback, supporting formative assessment and reinforcement learning. Visual elements were intentionally simplified to match students' cognitive development level (concrete operational stage), ensuring readability and usability. Although software tools such as CorelDRAW, PowerPoint, iSpring Suite, and HTML5 conversion platforms were used in the production process, these tools functioned merely as development media. The primary consideration remained pedagogical alignment, interactivity, and student engagement rather than technological sophistication.

The finished product is then evaluated by media and material validator to assess feasibility of the product. If the product is revised, the researcher corrects it according to the instructions. The next stage involves conducting product testing on a small scale and arger scale. In small and large scale field trials, the

P-ISSN: 1693-8585
E-ISSN: 2622-9218
http://jurnal.unipasby.ac.id/index.php/jurnal_buana_pendidik

weaknesses and shortcomings of the media will be known determined on responses from students and teachers, so that the media can be improved. The final stage is to collect student evaluations and response questionnaires to determine the media's effectiveness.

Research Participants

The research was carried out at SD Negeri Tambakaji 02, Ngaliyan District, Semarang City in the even semester of the 2023/2024. The research subjects in this research and development are grade IV students. In the small-scale trial, the sample used was 6 students, who were determined using the purposive sampling technique: the students with the 2nd best ranking, 2 in the middle, and the bottom 2. Although the number of participants in the preliminary trial was limited, the purpose of this stage was not to generalize findings but to identify usability issues, clarity of instructions, technical constraints, and initial learning responses. Including students from varied academic rankings aimed to ensure that the media could be accessed and understood by diverse learners.

Nevertheless, this sampling strategy may introduce potential bias, as academic ranking does not fully represent other relevant characteristics such as motivation, digital literacy, or learning styles. Therefore, findings from the small-scale trial were used primarily for formative improvement rather than effectiveness claims. The large-scale trial involving all 28 students functioned as the main effectiveness testing phase.

Instruments

There are two types of techniques, namely test and non-test. Data collection techniques include observation, questionnaires, interviews, evaluation tests, and documentation. In the initial stage, an interview and a questionnaire were conducted. There are three types of questionnaires: a questionnaire on the needs of teachers and students, a questionnaire for validation of HTML5-based interactive materials and media, and a questionnaire for teacher and student responses. The function of the needs questionnaire given to teachers and students is to determine the needs of interactive media to be researched and developed. The material and media validation questionnaire determines the assessments and suggestions from media experts and material experts regarding HTML5-based interactive media. Furthermore, the teacher and student response questionnaire is used to find out the responses of teachers and students to the media that has been developed. Two tests, namely the pretest and the posttest, aim to measure students' basic skills and achievements after using HTML5-based interactive media. The test was done individually regarding the use of capital letters in narrative texts.

Data Analysis

Qualitative descriptive data analysis on non-test instruments provided through teacher and student needs questionnaires and feasibility questionnaires of material and media experts was then analyzed using the Likert scale. The test instrument was analyzed using quantitative descriptive methods. For the pretest and posttest instruments, item validity was analyzed using product-moment correlation to ensure each question contributed meaningfully to measuring students' capital letter writing skills. Items that did not

P-ISSN: 1693-8585
E-ISSN: 2622-9218

meet validity criteria were revised or removed before final administration. The initial data analysis consisted of validity, reliability and normality tests, while the final data analysis consisted of the wilcoxon test and the N-gain test using the SPSS 25 application. Content validity was assessed using a validation sheet consisting of item-level indicators rated on a Likert scale. Each item was evaluated based on relevance, clarity, and representativeness of the construct being measured. Items that received revision suggestions were improved before field implementation. The wilcoxon test compares two samples, namely the pretest and posttest results because the data produced is not normally distributed. Meanwhile, the N-gain test determines the effectiveness of learning media in increasing student learning.

It is important to clarify that although this study is framed within the Research and Development (R&D) model, the effectiveness testing phase employed a one-group pretest–posttest design without a control group. Therefore, the empirical testing component of this study functioned similarly to a quasi-experimental design with a single treatment group. The absence of a comparison group limits the ability to control extraneous variables and to attribute improvements solely to the developed media. Consequently, the effectiveness findings should be interpreted as preliminary evidence within the product development context rather than as definitive causal proof.

RESULT AND DISCUSSION

Research Findings

The results of research and development of HTML5-based media aim to test the feasibility and effectiveness of media to improve capital writing skills in narrative texts of IV grade students of SD Negeri Tambakaji 02, Semarang City. Based on the Borg and Gall model conducted by the researcher and has been adjusted to the research objectives. At the observation stage, interviews were conducted, and it was found that students still had difficulty distinguishing the use of capital letters due to inadequate media, so they felt bored. This encourages researchers to develop Indonesian language learning media, especially in capital letter writing materials in narrative texts. Furthermore, the researcher provides a questionnaire on the need for teachers to identify suitable media to support learning to improve capital writing skills. The questionnaire results show that interactive media is urgently needed, complementing simple quizzes. The researcher made a media design starting with a prototype in the form of a learning tool. The media used to design is *Coreldraw X7, Microsoft PowerPoint, and iSpring Suite 11*, which were then converted to HTML5 and uploaded to itch.io.

The third stage is the validation. The validator advises if deficiencies are found in the media to improve product quality. The assessment is done by filling out a questionnaire of validation instruments by material and media experts. The recapitulation of the validation of media and material are explained in Table 1.

P-ISSN: 1693-8585
E-ISSN: 2622-9218
http://jurnal.unipasby.ac.id/index.php/jurnal_buana_pendidik

Table 1. Recapitulation of Material and Media Expert Validation Scores

Validator	Percentage score (%)	Category
Material validator	97.5%	Very Worthy
Media validator	95%	Very Worthy
Average	96.25%	Very Worthy

The validation results provided by material experts indicated that the percentage of media feasibility assessment was obtained of 97.5% with the category of highly feasible. Meanwhile, the validation results by a media expert showed a percentage of 95% of the feasibility score in the very feasible category. The average of 96.5% is categorized as possible so that HTML5-based media can be piloted on students. Importantly, feasibility in this context does not only signify technical adequacy but also conceptual alignment with elementary students' cognitive characteristics. The validators emphasized clarity of instructions, readability, and simplicity of navigation as critical components supporting student engagement. Thus, the feasibility results indicate pedagogical suitability rather than solely statistical approval.

However, it is important to note that the feasibility classification (e.g., "very feasible") is derived from percentage-based Likert scale assessments completed by experts. Although expert validation is a common procedure in research and development studies, the interpretation of these percentages remains subject to evaluators' professional judgment. The limited number of validators may also introduce potential bias, as the assessment reflects individual perspectives rather than a broader panel evaluation. Therefore, while the results indicate strong feasibility, they should be interpreted with caution and complemented by empirical classroom testing to strengthen objectivity.

The next stage is the product usage test. The product was used to test the effectiveness of media use to improve capital letter writing skills in narrative text for fourth-grade students of SD Negeri Tambakaji 02, Semarang City, on both a small and large scale. The use test to measure the effectiveness before and after using and responding to the media. The questionnaire results for teacher and students responses are explained in Table 2.

Table 2. Teacher and Student Questionnaire Response

Respondents	Percentage score (%)	Category
Teacher	87.5%	Very Feasible
Student	95%	Very Feasible

Based on Table 2, the results of the responses questionnaire from the teacher and students are categorized as very feasible with a score percentage of 87.5% of the teacher's response and 95% of the student's response. In conclusion, HTML5-based interactive media is very feasible to teaching Indonesian capital letter writing material in narrative texts.

The implementation of small and large-scale trials was carried out by learning on capital letter writing materials in narrative texts using HTML5 interactive-based media. The purpose of small-scale trials is to decide the constraints and effectiveness of the media before testing it on a large scale. After a small-scale

P-ISSN: 1693-8585
E-ISSN: 2622-9218
http://jurnal.unipasby.ac.id/index.php/jurnal_buana_pendidik

trial, it was found that no obstacles were encountered, and HTML5-based interactive media can be used in capital letter writing materials in narrative text. The pretest and posttest results of students on a small scale are explained in Table 3.

Table 3. Student Pretest and Posttest Results on a Small Scale

Pretest Scores	Postest Value	Post-Pre	100-pre	N-gain
40	80	40	60	0.67
50	70	20	50	0.40
40	80	40	60	0.67
50	90	40	50	0.80
40	80	40	60	0.67
60	90	30	40	0.75
Average N-gain				0.66

Based on the results presented in Table 3, the N-gain outcomes were obtained at 0.66, which is an increase categorized as moderate. As for the percentage, it was received as 66% and was classified as quite effective. The results indicated an increase in activity before and after using HTML5-based interactive media. After the trial on a small scale, the next stage is the product's trial on a large scale. The large-scale trial was conducted with the entire population, namely 28 fouth-grade students. The normality test of student pretest and posttest results on a large scale is explained in Table 4.

Table 4. Normality Test of Large-Scale Pretest and Posttest Results

	Kolmogorov-Smirnova			Shapiro-Wilk		
Category	Statistics	Df	Sig.	Statistics	Df	Sig.
Pretest	.230	28	.001	.859	28	.001
Posttest	.290	28	.000	.857	28	.001

a. Lilliefors Significance Correction

Based on Table 4, the results were significant at 0.001. The test results showed that the significance level was less than 0.05, so data from the pretest and posttest results were not normally distributed. The Wilcoxon test can be used as a substitute for the T-test to compare two samples that are interconnected but not normally distributed (Sugiyono, 2021). The outcome of the Wilcoxon test are explained in Table 5.

Table 5. Wilcoxon Test Results

	POSTTEST - PRETEST
Z	-4.710b
Asymp. Sig. (2-tailed)	.000

The outcome of the Wilcoxon test show "Hypothesis is accepted" because of the value of 0.000 < 0.05This indicated thet there is a significant disparity in learning outcomes before and after results by using HTML5-based interactive media on capital letter writing material in narrative text. This statistical difference indicates that students demonstrated measurable improvement after engaging with the HTML5-based interactive media. However, beyond statistical significance, the improvement suggests that interactive

P-ISSN: 1693-8585
E-ISSN: 2622-9218
http://jurnal.unipasby.ac.id/index.php/jurnal_buana_pendidik

reinforcement, immediate feedback through quizzes, and multimedia presentation contributed to better conceptual understanding and application of capitalization rules. Subsequently, an N-gain test was calculated with SPSS version 25 to test whether the media improves capital writing skills in narrative texts. The following N-gain test results are explained in Table 6.

Table 6. N-gain Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
N-gain	28	.50	1.00	.7043	.14227
Valid N (listwise)	28				

The outcome of N-gain indicate an average N-gain score of 0.7043, which is involve in the high category because the N-gain ≥ 0.70. As for the percentage obtained in the form of 70.43%, it is categorized as quite effective. The quiet gain category suggests that the media not only supports short-term score improvement but also facilitates meaningful learning progression. The improvement reflects students' increased ability to identify and correctly apply capital letter rules within narrative writing contexts.

Discussion

Students' skills are still lacking in writing capital letters in narrative texts because learning media is less interesting, causing students to lack understanding and get bored quickly. The introduction of interactive media shifted the learning dynamic from teacher-centered explanation toward participatory exploration. This shift is pedagogically significant because elementary learners benefit from multimodal stimuli that combine visual, auditory, and kinesthetic elements. The integration of audio guidance and interactive quizzes appears to reduce cognitive overload by presenting information in segmented and structured formats. To overcome these problems, the proper methods and media are needed, one of which is by developing innovative media (Widodo & Hanifah, 2020). Therefore, the researcher developed an interactive learning media with attractive displays, audio and simple quizzes. The model used in the development is Borg and Gall, which goes through five stages. The initial stage is observed to discover the problems and the need to solve them. The observations and interviews found that students still have difficulty writing capital letters in narrative texts and are interested in HTML5-based interactive media innovations. A pleasant learning atmosphere is created because of the role of teachers who are in concert with the needs of students (Monteiro et al., 2021). The design stage is done by making prototypes and media designs through the CorelDRAW application, PowerPoint, and iSpring Suite 11, which are then converted to HTML5 and uploaded to itch.io. Media and material expert validators then validate the finished media and make repairs. Then, trials were carried out on small and large scales to decide the effectiveness of the media. Furthermore, evaluate and fill out questionnaires of teacher and student responses to interactive media that have been applied to learning.

In learning Indonesian several skills must be mastered, including writing skills. Students' skills must be honed continuously because writing is not only an activity of pouring ideas, but must also follow the proper rules. Interactive media can impact learning (Donna et al., 2021). The results of the validation test

P-ISSN: 1693-8585
E-ISSN: 2622-9218
http://jurnal.unipasby.ac.id/index.php/jurnal_buana_pendidik

of material and media experts showed a percentage of 96.25, with very feasible criteria, so that it would positively impact learning. Media that is integrated with simple quizzes and attractive displays accompanied by audio can arouse students' interest in learning (Utami et al., 2021). Students' interest and focus on learning will make students better understand the material (Nur Jannah et al., 2020).

The effectiveness of interactive media in this study is based on student learning outcomes, which show a difference in before and after learning with interactive media. This shows interactive media can help students improve their understanding and capital writing skills in narrative texts. Students are very interested in the existence of media that presents a colorful display accompanied by supportive audio and simple quizzes based on liveworksheets. In previous research, it was also found that there were differences in students' pretest and posttest results before and after using HTML5-based media (Firmansyah et al., 2023).

Using interactive media can enhance students' writing skills. (Maulita Regianti, 2023). Previous research found indications of the importance use interactive media in the learning process of writing characteristics of students (Azahra Wulandari et al., 2024). These research and development results will contribute to Indonesian learning media, especially capital letter writing materials in elementary schools. This research has the advantage that interactive media can be accessed by students on various devices. HTML5-based interactive media allows students to learn independently. In addition, this media can also be applied to online and offline learning due to its flexibility and adaptability.

Nevertheless, the interpretation of effectiveness in this study should be approached cautiously. The improvement in students' scores was determined through pretest and posttest comparisons within a single group design. Without a control group, it is not possible to fully eliminate the influence of extraneous variables such as maturation, prior exposure to similar materials, teacher guidance, or testing effects. Therefore, while the findings indicate positive learning gains after the implementation of the HTML5-based interactive media, the results do not establish a strong causal relationship but rather suggest potential instructional benefits.

CONCLUSION

The development of HTML5-based interactive media contributes to improving students' capital letter writing skills in narrative texts by creating a more engaging, structured, and student-centered learning environment. The integration of multimedia elements such as audio, visual design, and interactive quizzes supports students' focus and motivation, which in turn facilitates better understanding and application of capitalization rules. Within the scope of this development study, the findings indicate that interactive digital media shows potential as a supportive pedagogical tool in addressing specific writing difficulties, particularly capitalization skills in narrative texts. However, due to the use of a single-group pretest–posttest design without a control comparison, the conclusions regarding effectiveness should be interpreted as indicative rather than definitive. The results provide preliminary empirical support for the developed product within the tested classroom context. This study highlights the importance of aligning instructional media with

P-ISSN: 1693-8585
E-ISSN: 2622-9218

students' characteristics and learning needs. The flexibility of HTML5-based media also allows accessibility across devices and supports both online and offline learning contexts, making it adaptable to various classroom situations.

However, this research has several limitations. First, the sample size was limited to one elementary school with 28 students in the large-scale trial, which may restrict the generalizability of the findings. Second, the research design did not include a control group comparison, so improvements cannot be fully attributed solely to the developed media without considering other potential influencing factors. Third, the study was conducted within a specific context and focused only on capital letter usage in narrative texts, limiting its broader applicability to other writing components or educational settings.

Future research is recommended to involve larger and more diverse samples, apply experimental designs with control groups, and explore the implementation of HTML5-based interactive media in different writing skills or subject areas to strengthen the evidence of its effectiveness.

REFERENCES

Alfian, P., Handayani, S., & Utami, M. (2023). Web-Based Learning Media Information System Case Study Of 05 Tebat Karai State Elemehntary School Sistem Informasi Media Pembelajaran Berbasis Web Studi Kasus Sd Negeri 05 Tebat Karai. *Jurnal KOMITEK*, *3*(2), 413–422. https://doi.org/10.53697/jkomitek.v3i2.

Asih, S., Abbas, N., & Nurharini, A. (2020). Developing Audiovisual Media To Enhance Writing Skills. *International Journal Of Scientific & Technology Research*, *9*, 2. www.ijstr.org.

Azahra Wulandari, S., Dwi Wahyuni, S., Erna Puspa Sari, dan, Rawa Badak Selatan, S., Indah Kapuk, P., & Al Kamal, S. (2024). Pengaruh Persepsi Atas Penggunaan Media Interaktif dan Minat Belajar Terhadap Kemampuan Menulis Narasi. *Jurnal Pendidikan Universal*, *1*, 607–614.

Donna, R., Egok, A. S., & Febriandi, R. (2021). Pengembangan Multimedia Interaktif Berbasis Powtoon pada Pembelajaran Tematik di Sekolah Dasar. *Jurnal Basicedu*, *5*(5), 3799–3813. https://doi.org/10.31004/basicedu.v5i5.1382.

Firmansyah, L. F., Ahied, M., Tamam, B., Yuniasti, A., Wulandari, R., & Yasir, M. (2023). Pengembangan Multimedia Interaktif Berbasis Html 5 Pada Materi Sistem Tata Surya. In *Jurnal Natural Science Educational Research* (Vol. 6, Issue 2).

Hidayatullah, D. (2022). Meta-Analisis Media Pembelajaran Audiovisual Dalam Meningkatkan Keterampilan Menulis Di Sekolah. *Dialektika: Jurnal Ilmiah Pendidikan Bahasa, Sastra, Dan Matematika*, *8*(2), 31–40. https://journal.fkip-unilaki.ac.id/index.php/dia31-40fromhttps://journal.fkip-unilaki.ac.id/index.php/dia/articles/view/51.

Ichsan Mahardika, A., Wiranda, N., & Pramita, M. (2021). Pembuatan Media Pembelajaran Menarik Menggunakan Canva Untuk Optimalisasi Pembelajaran Daring. *Jurnal Pendidikan Dan Pengabdian Masyarakat*, *4*(3), 275–281.

Isnaeni, N., & Hildayah, D. (2020). Media pembelajaran dalam pembentukan interaksi belajar siswa. *Jurnal Syntax Transformation*, 148.

Jong, A., & Tacoh, Y. T. B. (2024). Pemanfaatan Aplikasi Quizizz untuk Meningkatkan Motivasi Belajar Siswa. *Jurnal Dimensi Pendidikan Dan Pembelajaran*, *12*, 131–147. http://journal.umpo.ac.id/index.php/dimensi/index.

P-ISSN: 1693-8585
E-ISSN: 2622-9218
http://jurnal.unipasby.ac.id/index.php/jurnal_buana_pendidik

Kurniawati, K. R., Novitasari, D., & Kurniawati, R. (2023). Optimalisasi Pengalaman Belajar Siswa SD melalui Media Pembelajaran Interaktif Berbasis Web. *Nusantara Educational Review*, *1*(1), 43–55. https://journal.unusida.ac.id/index.php/ner/.

Lelilita, L. N., & Zuhdi, U. (2020). Pengembangan Multimedia Interaktif Berbasis HTML Materi Perpindahan Kalor Kelas V Sekolah Dasar. *Jurnal Penelitian Pendidikan Sekolah Dasar*, *8*, 430–441.

M, M. (2021). *Mudah Membuat Web Bagi Pemula (Mengenal Html, Html5, Css Dan Javascript)*. Yayasan Prima Agus Teknik.

Manurung, P. (2020). Multimedia Interaktif Sebagai Media Pembelajaran Pada Masa Pandemi Covid 19. *Al-Fikru: Jurnal Ilmiah*.

Marlina, D., Permatasari, D., Dayu, K., & Rulviana, V. (2022). *Multimedia E-Learning Interaktif Berbasis Sole Pada Pembelajaran Daring Dan Luring*.

Maulita Regianti, A. (2023). Pengembangan Media Interaktif Fabel Untuk Meningkatkan Minat Baca Dan Ketrampilan Menulis Peserta Didik. *Autentik: Jurnal Pengembangan Pendidikan Dasar*, *7*, 70.

Monteiro, V., Carvalho, C., & Santos, N. N. (2021). Creating a Supportive Classroom Environment Through Effective Feedback: Effects on Students' School Identification and Behavioral Engagement. *Frontiers in Education*, *6*. https://doi.org/10.3389/feduc.2021.661736.

Nur Jannah, I., Prasetiyawati Diyah Hariyanti, D., Adhi Prasetyo, S., & Jurnal, L. (2020). Efektivitas Penggunaan Multimedia dalam Pembelajaran IPA di SD. *Jurnal Ilmiah Sekolah Dasar*, *4*(1), 54–59.

Purnamawati, E., Apriliya, S., Nursofa, R., Dinaryanti, D., & Nugraha, M. U. (2024). Analisis Penggunaan Ejaan, Tanda Baca dan Huruf Kapital Peserta Didik Kelas V dalam Menulis Kreatif. *Kalam Cendekia: Jurnal Ilmiah Kependidikan*, *12*, 1306–1319.

Purnasari, P. D., & Sadewo, Y. D. (2021). Strategi Pembelajaran Pendidikan Dasar di Perbatasan Pada Era Digital. *Jurnal Basicedu*, *5*(5), 3089–3100. https://doi.org/10.31004/basicedu.v5i5.1218.

Putriana, N. A., & Yuniati, T. H. (2025). *Rancang Bangun Media Pembelajaran Interaktif Pengenalan Huruf Berbasis Website Metode MDLC (Studi Kasus SDN 1 Kuwayuhan)*.

Rusanti, R., Fathurohman, I., & Pratiwi, I. A. (2023). Analisis Kesalahan Penggunaan Huruf Kapital dan Tanda Baca Siswa Sekolah Dasar. *Jurnal Ilmu Sosial Dan Pendidikan (JISIP)*, *6*, 3995–4001.

Sugiyono. (2021). *Metode Penelitian Pendidikan*. Alfabeta.

Sukirman. (2020). Tes Kemampuan Keterampilan Menulis dalam Pembelajaran Bahasa Indonesia di Sekolah. In *Jurnal Konsepsi* (Vol. 9, Issue 2). https://p3i.my.id/index.php/konsepsi72.

Syifa Miasari, R., Indar, C., Purwoto, P., Hanifa Salsabila, U., Amalia, U., & Romli, S. (2022). *Teknologi Pendidikan Sebagai Jembatan Reformasi Pembelajaran Di Indonesia Lebih Maju*.

Utami, R. A., Riki, C., & Habibie, A. (2021). Perancangan Aplikasi Kuis Interaktif Berbasis Android Sebagai Media Pembelajaran Pada Mata Pelajaran Teknologi Informasi & Komunikasi Di Kelas X Sma Plus Nurul Ilmi Cibalong. *Jurnal PRODUKTIF*, *5*(1), 397–404.

Waluyo Hadi, Yofita Sari, & Nadra Maulida Pasha. (2024). Analisis Penggunaan Media Interaktif Wordwall terhadap Peningkatan Hasil Belajar IPA di Sekolah Dasar. *JURNAL PENDIDIKAN MIPA*, *14*(2), 466–473. https://doi.org/10.37630/jpm.v14i2.1570.

Widodo, B. J., & Hanifah, B. A. (2020). Pengembangan Media Monopoli Aksara Jawa Untuk Pembelajaran Membaca Aksara Jawa Di Sekolah Dasar. *Jurnal Ilmiah Kontesktual*, *1*, 19–28.

Yunita, D. A., Sugono, D., & Suendarti, M. (2020). Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. *Diskursus: Jurnal Pendidikan Bahasa Indonesia*, *3*(2), 121.

Click or tap here to enter text.