



Digital Multiliteracy Flipbooks: A Novel Pedagogical Approach to Observational Report Writing in High Schools

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ABSTRACT

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Writing skills are an essential competency in Indonesian language learning; however, teaching observational report writing continues to face challenges, including low student engagement, limited understanding of the material, and difficulties in generating ideas. This study aimed to develop a multiliteracy-based flipbook and evaluate its feasibility, effectiveness, and students' responses as a digital teaching material for observational report writing. The study employed a Research and Development approach using the Four-D model, consisting of the define, design, develop, and disseminate stages. Data were collected through expert validation, pretests, posttests, classroom observations, and student response questionnaires. The findings revealed that the flipbook achieved an average expert validation score of 89.59%, indicating that it was highly feasible for classroom implementation. Students' average writing scores improved from 71 on the pretest to 84 on the posttest. In addition, teacher and student learning activities each reached 97%, categorized as very good, while student responses reached 81%, indicating positive acceptance. These findings suggest that the multiliteracy-based flipbook is a feasible and effective digital teaching material that enhances students' writing skills, promotes active learning, and supports the integration of multiliteracy pedagogy in Indonesian language instruction.

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INTRODUCTION

Writing skills constitute one of the fundamental competencies in Indonesian language education because they enable learners to communicate ideas, organize knowledge, and construct meaning in written form (Hikmah, 2026; Nadhifah, 2026; Najiburohman, 2025). As society increasingly relies on digital communication and information exchange, students are expected not only to write accurately but also to produce texts that are coherent, critical, and responsive to diverse sources of information. Writing therefore extends beyond linguistic proficiency to include cognitive, communicative, and literacy-related

competencies required in the twenty-first century. According to Tarigan (2021), writing refers to the ability to express ideas through graphic symbols that can be understood by readers, whereas Sujinah (2016) emphasizes that effective writing requires logical organization and the appropriate use of linguistic conventions. Likewise, Dalman (2021) explains that writing is a creative process through which individuals communicate information, persuade audiences, and express experiences for different purposes. Consequently, strengthening students' writing competence has become an educational priority because it supports academic achievement, literacy development, and lifelong learning across various educational contexts.

Despite its importance, improving students' writing competence remains a persistent challenge in Indonesian language learning. Many students continue to experience difficulties in developing ideas, organizing information systematically, and applying appropriate linguistic features when producing academic texts (Adzimah, 2024; Fitriani, 2025; Kunta, 2025). These challenges become more apparent in learning observational report texts, which require students to observe objects or phenomena critically and present factual information objectively and systematically (Kosasih, 2017). At the same time, instructional practices in many classrooms continue to rely on conventional teaching materials that provide limited opportunities for interaction, independent exploration, and digital literacy development. Such conditions often reduce students' motivation and active participation during classroom learning (Holidi, 2026; Kusumawati, 2026; Mohlas, 2025). Although today's learners are highly familiar with smartphones and various digital technologies, these devices are predominantly used for entertainment activities rather than educational purposes. Consequently, the mismatch between students' digital habits and conventional instructional resources has limited opportunities to cultivate writing competence through meaningful and technology-supported learning experiences.

These challenges were also identified during preliminary observations and interviews conducted with Indonesian language teachers in a senior high school. The findings revealed that many students encountered difficulties in elaborating ideas, organizing information logically, and applying appropriate linguistic elements when writing observational report texts (Albustomi, 2025; Ni'am, 2025; Rahman, 2025). Students also demonstrated relatively low engagement during classroom instruction because the teaching materials used were considered less attractive and insufficiently interactive. Furthermore, learning activities had not yet enabled students to analyze text structures, distinguish factual information from opinions, or compose observational reports creatively while maintaining objectivity (Khofsah, 2025; Rahman, 2026; Shoha, 2026). These conditions persisted despite the implementation of various literacy programs, including digital library services, reading corners, and school literacy

initiatives designed to foster reading culture. Assessment data further indicated that a considerable proportion of Grade 10 students had not yet achieved the Minimum Learning Competency Criteria (KKTP), demonstrating that existing instructional strategies had not sufficiently improved students' writing performance. These findings highlight the necessity of developing more engaging digital teaching materials capable of promoting both literacy development and meaningful classroom participation.

The growing integration of digital technology into education has encouraged researchers to develop innovative instructional media that enhance student engagement and learning outcomes. Flipbooks have emerged as one promising digital teaching material because they integrate text, images, animations, videos, and interactive features within a single learning environment. Previous studies have consistently reported that flipbooks improve students' learning motivation, classroom participation, conceptual understanding, and academic achievement (Hikmah & Mudarris, 2026; Holidi, 2025; Manshur, 2026). Similarly, Manzil and Anas Thohir (2022) explain that flipbooks provide flexible access across various electronic devices while maintaining the familiar experience of reading printed books. Prasasti and Anas (2023) further argue that flipbooks encourage independent learning and support the development of critical thinking skills through interactive learning experiences. Collectively, these studies demonstrate that digital flipbooks represent an effective instructional medium capable of transforming conventional learning into a more engaging and student-centered process. However, most existing studies have primarily emphasized learning motivation and achievement rather than examining how flipbooks can be pedagogically integrated with multiliteracies to improve students' observational report writing skills.

Beyond the use of digital media, recent educational research has increasingly emphasized the importance of integrating multiliteracies pedagogy into classroom instruction to address the demands of contemporary learning environments (Kusumawati, 2025; Syafiih, 2025). The multiliteracies framework proposed by the New London Group (1996) highlights that literacy extends beyond reading and writing to encompass the ability to interpret, evaluate, and communicate information through multiple modes, including linguistic, visual, audio, spatial, and digital representations. This perspective was further developed by Cope and Kalantzis (2020), who argued that meaningful learning should incorporate multimodal communication and diverse cultural contexts to prepare students for participation in the digital era. Similarly, Abidin et al. (2021) explained that multiliteracies-based instruction promotes critical thinking, creativity, collaboration, and students' ability to process information from various print and digital sources. Furthermore, Ristanto et al. (2020) demonstrated that integrating digital technologies with appropriate pedagogical

approaches enhances meaningful learning experiences, while Munawarah (2022) confirmed that multiliteracies-based teaching materials effectively improve students' literacy competence. Nevertheless, previous studies have generally examined either digital instructional media or multiliteracies pedagogy independently, leaving limited empirical evidence regarding the integration of both approaches to improve observational report writing skills.

This limitation indicates a significant research gap that warrants further investigation. Existing studies predominantly evaluate flipbooks in terms of students' motivation, conceptual understanding, and academic achievement (Darpindo et al., 2024; Wijayanti & Isnawati, 2023; Khotimah et al., 2023), whereas research on multiliteracies mainly focuses on literacy development, critical thinking, and multimodal learning (Abidin et al., 2021; Cope & Kalantzis, 2020). Comparatively few studies have developed digital teaching materials that simultaneously integrate interactive flipbook technology with multiliteracies pedagogy to facilitate observational report writing, particularly within Indonesian language learning at the senior high school level. Consequently, limited evidence is available regarding the feasibility, instructional effectiveness, and learners' acceptance of such integrated teaching materials. Addressing this gap is important because observational report writing requires students not only to master textual structures and linguistic conventions but also to interpret information critically, synthesize evidence from multiple sources, and communicate ideas objectively through diverse forms of representation. Therefore, integrating digital flipbooks with multiliteracies pedagogy has the potential to create a more meaningful, engaging, and contextually relevant learning experience.

Based on these considerations, this study developed a multiliteracies-based flipbook as an innovative digital teaching material designed specifically to support the teaching of observational report writing. Unlike previous studies that focused primarily on the technological features of flipbooks or the general implementation of multiliteracies, the present study integrates both approaches into a single instructional product that combines multimodal learning resources, interactive learning activities, and structured writing guidance. The study further evaluates the product through three complementary dimensions: feasibility based on expert validation, instructional effectiveness based on students' learning outcomes, and practicality reflected in classroom implementation and students' responses. Accordingly, this study addresses the following research questions: (1) How feasible is the multiliteracies-based flipbook as a digital teaching material for observational report writing? (2) How effective is the flipbook in improving students' observational report writing skills? and (3) How do students respond to the implementation of the developed flipbook? By answering these questions, the study contributes to the growing body of knowledge on digital pedagogy, multiliteracies, and Indonesian language

education while providing an evidence-based instructional resource that supports more engaging, effective, and technology-enhanced writing instruction.

RESEARCH METHODS

This study employed a Research and Development (R&D) design using the Four-D development model proposed by Thiagarajan et al. (1974), which consists of the define, design, develop, and disseminate stages (Gul, 2023; Sardana et al., 2023). The Four-D model was selected because it provides a systematic framework for designing, validating, and refining educational products through iterative development processes. However, this study was limited to the define, design, and develop stages, while the disseminate stage was not implemented due to time and resource constraints. During the define stage, instructional needs were identified through an analysis of existing learning problems, student characteristics, curriculum requirements, learning objectives, and essential content related to observational report writing. According to Zamsiswaya et al. (2024), this stage is crucial for ensuring that the developed product addresses actual classroom needs and aligns with students' learning characteristics. The findings from this preliminary analysis served as the foundation for designing a multiliteracies-based flipbook that corresponds to the expected learning outcomes and supports students' writing competence.

The study was conducted at SMAN 2 Lamongan, Indonesia, involving Grade 10 students from Class X-9 as the research participants. The school was purposively selected because preliminary observations and interviews with Indonesian language teachers revealed several instructional challenges in teaching observational report writing. Students experienced difficulties in generating ideas, organizing information systematically, and applying appropriate linguistic features when composing observational report texts. Furthermore, the school had implemented various literacy programs and digital learning facilities, including digital library services and reading initiatives, yet students' writing achievement remained below the Minimum Learning Competency Criteria (KKTP). These conditions provided an appropriate context for evaluating the effectiveness of an innovative digital teaching material that integrates multiliteracies pedagogy with interactive flipbook technology. The selection of this research setting therefore enabled the researchers to develop and evaluate the product in an authentic learning environment where instructional innovation was considered necessary.

Data were collected using multiple instruments to comprehensively evaluate the developed product. Product feasibility was assessed through expert validation involving two validators, comprising one subject matter expert and one digital media expert. The effectiveness of the multiliteracies-based flipbook

was measured using pretests and posttests administered before and after product implementation to determine students' improvement in observational report writing skills. Classroom observations were conducted to examine both teacher and student learning activities during the implementation process, while student response questionnaires were administered to identify learners' perceptions regarding the usability, attractiveness, and practicality of the developed teaching material. Employing multiple data collection techniques enabled the researchers to evaluate the product from different perspectives, including validity, effectiveness, classroom implementation, and user acceptance.

Data analysis was conducted using descriptive quantitative techniques. The feasibility of the developed product was determined by calculating the percentage of expert validation scores using the formula proposed by Sudijono (2018): $Va = (Tse/Tsh) \times 100$, where Va represents the product validity score, Tse denotes the cumulative score obtained from expert validators, and Tsh indicates the maximum possible score on the validation instrument. The resulting percentages were interpreted according to the feasibility criteria, namely: 0–40% (Not Eligible), 41–55% (Not Very Suitable), 56–70% (Fairly Acceptable), 71–85% (Acceptable), and 86–100% (Highly Recommended). Students' pretest and posttest scores were compared descriptively to determine learning improvement, whereas observation sheets and questionnaire responses were converted into percentage scores and interpreted using predetermined assessment criteria. To ensure the trustworthiness of the findings, data validity was strengthened through expert validation and methodological triangulation by integrating evidence obtained from learning outcomes, classroom observations, and student response questionnaires. The use of multiple instruments and multiple data sources enhanced the credibility and consistency of the research findings throughout the product development process.

RESULTS AND DISCUSSION

Results

Validation of the Multiliteracies-Based Flipbook

The validation stage was conducted to determine the feasibility and quality of the developed multiliteracies-based flipbook before its implementation in classroom learning. Expert evaluation focused on several essential aspects, including the accuracy and relevance of the instructional content, language clarity, visual design, navigation, multimedia integration, and overall functionality of the digital teaching material. The validation results provide evidence that the product meets the required academic and technological standards, ensuring that it is appropriate to support the teaching of observational report writing while promoting interactive, student-centered, and

multiliteracies-oriented learning experiences.

Table 1. Expert Validation Results of the Multiliteracies-Based Flipbook

Validator	Percentage (%)	Category
Subject Matter Expert	91.67	Highly Recommended
Digital Media Expert	87.50	Highly Recommended
Average	89.59	Highly Recommended

Before being implemented in classroom learning, the multiliteracies-based flipbook underwent a comprehensive validation process to ensure that both its pedagogical and technological components met the required standards for instructional use. The validation process involved two independent experts consisting of one Indonesian language subject matter expert and one digital media expert. Their evaluations focused on several dimensions, including the relevance of the instructional content, curriculum alignment, language clarity, organization of learning materials, multimedia integration, visual presentation, navigation, accessibility, and overall usability of the digital teaching material. Conducting expert validation at the product development stage is essential because it provides evidence regarding the content validity and media quality of the instructional product before it is introduced to students in authentic classroom settings.

As presented in Table 2, the overall validation score reached 89.59%, categorizing the developed flipbook as Highly Recommended. This result indicates that the product satisfies the established feasibility criteria and can be implemented in classroom learning without requiring substantial revisions. The high validation score demonstrates that the flipbook successfully integrates instructional content with digital technology while maintaining consistency with the learning objectives of observational report writing for Grade 10 Indonesian language classes. Furthermore, the result confirms that the developed product possesses adequate instructional quality to support students' learning through multimodal digital resources.

The subject matter expert awarded the flipbook a score of 91.67%, representing the highest evaluation among the two validators. This finding indicates that the instructional content was considered highly appropriate in terms of conceptual accuracy, curriculum relevance, organization of learning materials, and the achievement of expected learning outcomes. The validator confirmed that the learning materials comprehensively addressed the essential components of observational report texts, including definitions, characteristics, organizational structure, linguistic features, and writing procedures. In addition, the sequence of learning activities was regarded as logical and progressive, enabling students to build their understanding gradually from basic concepts toward independent writing practice.

Another important aspect highlighted during the validation process concerned the integration of multiliteracies principles within the instructional content. The expert emphasized that the learning activities were no longer limited to conventional text-based explanations but also incorporated various forms of communication, including visual illustrations, instructional videos, digital exercises, and interactive learning tasks. This multimodal presentation provides students with multiple opportunities to construct meaning using different forms of representation. Consequently, the developed flipbook supports diverse learning preferences and creates richer learning experiences than traditional printed teaching materials.

The digital media expert assigned a score of 87.50%, which also falls within the Highly Recommended category. Although slightly lower than the subject matter evaluation, this score still reflects excellent technical quality and demonstrates that the developed flipbook fulfills the essential requirements of digital instructional media. The expert positively evaluated the visual interface, consistency of layout design, typography, color selection, readability, navigation system, responsiveness across digital devices, and accessibility of multimedia components. The multimedia integration was considered particularly effective because it combines textual explanations with supporting illustrations, animations, instructional videos, hyperlinks, and barcode-based activities within a single learning platform.

The digital validator also emphasized that the interactive features incorporated into the flipbook have considerable potential to increase students' engagement throughout the learning process. Unlike conventional printed teaching materials, the developed flipbook encourages students to interact directly with learning resources by scanning QR codes, watching instructional videos, completing online quizzes, and independently exploring learning content. Such interactivity transforms students from passive recipients of information into active participants who continuously construct knowledge through exploration and practice. This characteristic is particularly important in contemporary learning environments where students are accustomed to interacting with digital technologies in their daily lives.

Although the overall validation results were highly satisfactory, several constructive suggestions were provided to further improve the quality of the product. The experts recommended enriching the sample observational report texts by incorporating additional illustrations and contextual images to facilitate students' comprehension. They also suggested improving the organization of learning materials by adding sequential numbering to several sections of the flipbook to enhance readability and navigation. Furthermore, the inclusion of additional instructional videos after the explanation of observational report

writing procedures was recommended to strengthen students' understanding through audiovisual demonstrations. These recommendations were subsequently incorporated during the product revision stage before classroom implementation.

The revisions based on expert feedback substantially improved both the pedagogical and technological quality of the flipbook. The enhanced visual presentation created a more attractive learning environment, while the integration of additional multimedia resources strengthened the application of multiliteracies principles throughout the instructional process. These improvements ensured that students were provided with multiple pathways for accessing information and constructing knowledge according to their individual learning preferences.

Overall, the validation findings demonstrate that the multiliteracies-based flipbook possesses high levels of content validity, media quality, instructional appropriateness, and technological usability. The consistently high scores awarded by both experts indicate that the developed product successfully combines curriculum-based instructional content with interactive digital features capable of supporting meaningful learning experiences. Therefore, the flipbook was considered ready for classroom implementation and further evaluation of its effectiveness and practicality in improving students' observational report writing skills.

Effectiveness of the Multiliteracies-Based Flipbook

The effectiveness of the multiliteracies-based flipbook was evaluated by examining students' learning outcomes and classroom implementation after the instructional intervention. This evaluation aimed to determine whether the developed digital teaching material could significantly improve students' observational report writing skills while fostering active participation during the learning process. The analysis incorporated pretest and posttest results, together with observations of teacher and student activities, to provide comprehensive evidence of the flipbook's instructional effectiveness. These findings demonstrate the extent to which the developed product supports meaningful learning and enhances students' writing performance through a multiliteracies-based instructional approach.

Table 2. Analysis of Students' Pretest and Posttest Scores

Assessment	Average Score	Category
Pretest	61	Moderate
Posttest	82	High

The effectiveness of the multiliteracies-based flipbook was examined by comparing students' writing performance before and after the implementation

of the developed teaching material. The comparison between the pretest and posttest scores provides evidence of the extent to which the flipbook contributed to improving students' ability to compose observational report texts. As presented in Table 3, the average pretest score was 61, indicating that students' initial writing competence was still at a moderate level and had not yet fully met the expected learning outcomes. After participating in learning activities supported by the multiliteracies-based flipbook, the average posttest score increased to 82, representing a gain of 21 points. This improvement demonstrates that the developed instructional material effectively enhanced students' writing performance and facilitated the achievement of the expected competencies.

The relatively low pretest score suggests that students experienced several difficulties before the intervention. During the initial assessment, many students struggled to identify the organizational structure of observational report texts, distinguish factual information from personal opinions, organize ideas coherently, and apply appropriate linguistic features. Several students also produced texts that lacked logical sequencing and sufficient supporting information, indicating limited mastery of observational report writing conventions. These findings are consistent with the preliminary classroom observations, which revealed that conventional teaching materials did not adequately support students in developing writing competence through meaningful and interactive learning experiences.

Following the implementation of the multiliteracies-based flipbook, noticeable improvements were observed across multiple aspects of students' writing performance. Students demonstrated a better understanding of the characteristics and purposes of observational report texts, organized their ideas more systematically, and incorporated more relevant factual information into their writing. They also showed greater accuracy in applying linguistic conventions, including the use of appropriate vocabulary, sentence structure, and cohesive devices. The increase in posttest scores therefore reflects not only quantitative improvement but also qualitative development in students' ability to communicate information objectively and systematically.

The improvement in learning outcomes can be attributed to several instructional characteristics of the developed flipbook. Unlike conventional printed teaching materials, the flipbook integrates written explanations, visual illustrations, instructional videos, animations, and interactive learning activities into a single digital platform. This multimodal presentation enabled students to access learning materials through different modes of communication, allowing them to construct knowledge more effectively according to their individual learning preferences. The combination of textual and visual representations also reduced students' cognitive burden when learning complex concepts related to observational report writing.

Another factor contributing to the improvement in students' performance was the opportunity for independent learning provided by the flipbook. Because the instructional materials could be accessed repeatedly through smartphones and laptops, students were able to revisit explanations, review examples, and complete learning activities outside the classroom. This flexibility encouraged self-paced learning and enabled students to strengthen their understanding before completing the posttest. Consequently, students became more confident in expressing ideas, organizing information logically, and producing complete observational report texts.

Furthermore, the multiliteracies approach embedded within the flipbook encouraged students to engage actively with multiple sources of information rather than relying solely on textbook explanations. Students interpreted images, observed audiovisual materials, analyzed authentic examples, and completed interactive exercises before composing their own texts. Such learning experiences promoted critical observation, information processing, and analytical thinking, all of which are essential competencies in observational report writing. Therefore, the observed improvement in students' writing performance reflects not only increased content knowledge but also the development of higher-order literacy skills.

The findings indicate that integrating multiliteracies pedagogy with digital teaching materials creates a learning environment that supports meaningful learning experiences. Students no longer functioned merely as recipients of information but became active participants who explored, interpreted, and synthesized information through multiple representations before expressing their understanding in written form. This transformation contributed substantially to the improvement of both writing quality and overall learning achievement.

Teacher and Student Learning Activities

The effectiveness of the developed flipbook was further supported by classroom observation data obtained during the implementation process. As shown in Table 4, both teacher activities and student activities achieved a percentage of 97%, indicating that the learning process was implemented at a Very Good level. These findings demonstrate that the flipbook was successfully integrated into classroom instruction and facilitated active participation from both teachers and students throughout the learning process.

Table 4. Teacher and Student Learning Activities

Aspect	Percentage	Category
Teacher Activities	97%	Very Good
Student Activities	97%	Very Good

Teacher observations revealed that the flipbook functioned as an effective instructional guide that supported the delivery of learning materials in a systematic and engaging manner. The availability of multimedia resources enabled teachers to explain abstract concepts more clearly while reducing reliance on conventional lecture-based instruction. Teachers were able to guide classroom discussions, facilitate collaborative learning activities, demonstrate writing procedures using audiovisual materials, and provide immediate feedback through interactive exercises embedded within the flipbook. Consequently, classroom instruction became more organized, interactive, and student-centered.

Student activities also demonstrated a very high level of engagement during the implementation of the learning program. Students actively participated in discussions, observed learning videos attentively, analyzed examples of observational report texts, completed interactive exercises, and collaborated with peers to solve learning tasks. Compared with previous classroom observations, students appeared more enthusiastic, confident, and willing to express their opinions during learning activities. They also demonstrated greater curiosity when exploring digital learning resources and showed increased motivation to complete writing assignments independently.

The integration of multimedia resources played a significant role in maintaining students' attention throughout the lesson. Rather than relying exclusively on textual explanations, students were exposed to a combination of written materials, visual illustrations, instructional videos, animations, and digital quizzes. These multimodal learning experiences accommodated different learning preferences and reduced classroom monotony, thereby creating a more enjoyable learning atmosphere. As a result, students remained actively involved from the beginning until the completion of the learning activities.

The high level of teacher and student participation also indicates that the multiliteracies-based flipbook successfully supported collaborative and interactive learning. Teachers functioned primarily as facilitators who guided students in exploring information from multiple sources, while students assumed greater responsibility for constructing their own understanding through observation, discussion, analysis, and writing practice. Such learning interactions are consistent with student-centered instructional approaches that emphasize active engagement, collaboration, and independent learning.

Overall, the classroom observation findings complement the improvement observed in students' posttest scores. The substantial increase in learning outcomes, together with the excellent implementation of classroom activities, demonstrates that the multiliteracies-based flipbook effectively supports both instructional delivery and student learning. These results confirm

that the developed product is not only capable of improving students' observational report writing skills but also of creating an engaging, interactive, and meaningful learning environment that encourages active participation throughout the instructional process.

Practicality of the Multiliteracies-Based Flipbook

The practicality of the multiliteracies-based flipbook was evaluated through a student response questionnaire administered after the completion of the learning activities. Practicality in this study refers to the extent to which the developed teaching material can be used efficiently, is easy to operate, supports the learning process, and is accepted positively by students. The questionnaire assessed several aspects of the flipbook, including ease of access, clarity of instructions, attractiveness of the interface, organization of learning materials, multimedia integration, usefulness of interactive features, and students' overall learning experience.

Table 5. Students' Responses toward the Multiliteracies-Based Flipbook

Aspect	Percentage	Category
Student Responses	81%	Good

As presented in Table 5, the overall percentage of students' responses reached **81%**, placing the developed flipbook in the **Good** category. This finding indicates that the majority of students considered the flipbook practical and appropriate for supporting the learning of observational report writing. The positive responses also demonstrate that students were able to interact with the digital teaching material without experiencing significant technical difficulties during classroom implementation. The high practicality score confirms that the flipbook is not only pedagogically feasible but also operationally effective for classroom use.

Students particularly appreciated the attractive visual appearance of the flipbook. The combination of harmonious colours, readable typography, high-quality illustrations, and systematic page layouts created an enjoyable learning environment that differed considerably from conventional printed teaching materials. Rather than merely reading long textual explanations, students were presented with visually organized information that facilitated comprehension and maintained their attention throughout the lesson. Several students indicated that the multimedia presentation made the learning process more interesting and reduced the feeling of boredom frequently experienced during writing instruction.

Another aspect receiving positive responses was the accessibility of the teaching material. Because the flipbook could be accessed using smartphones,

tablets, laptops, and desktop computers, students were able to continue learning outside the classroom according to their individual schedules. This flexibility allowed students to review the learning materials repeatedly before completing assignments or preparing for assessments. The possibility of independent access also encouraged students to regulate their own learning process without relying entirely on teacher explanations during classroom instruction.

The integration of multimedia resources represented one of the strongest features of the developed product. Students reported that the instructional videos helped them understand abstract concepts related to observational report writing more clearly than text-only explanations. Likewise, the illustrations and examples presented within the flipbook enabled students to visualize the structure and characteristics of observational report texts more effectively. The combination of written explanations, images, audiovisual materials, and interactive activities accommodated different learning preferences while promoting deeper conceptual understanding.

The barcode-based interactive exercises also contributed positively to students' learning experiences. After scanning the provided barcode, students were immediately directed to online practice activities and quizzes that enabled them to evaluate their understanding of the lesson content. The immediate transition from studying the material to completing digital exercises created a more dynamic learning experience and encouraged continuous participation throughout the lesson. Furthermore, students perceived the digital quizzes as more enjoyable than conventional paper-based assessments because they provided an innovative and technology-supported learning experience.

The questionnaire responses further revealed that the flipbook successfully supported students' confidence in writing observational report texts. Many students stated that they became more capable of identifying text structures, distinguishing factual information from opinions, organizing ideas systematically, and selecting appropriate linguistic expressions after using the developed teaching material. The availability of examples, summaries, and guided writing activities allowed students to practice independently before completing classroom assignments. Consequently, students experienced greater confidence when expressing ideas in written form.

Although the overall evaluation was highly positive, several practical challenges were identified during the implementation process. A small number of students initially experienced difficulties accessing the barcode-based quizzes because they were unfamiliar with the scanning procedure. Others required brief assistance in navigating several interactive menus during their first use of the flipbook. However, these challenges were temporary and were successfully addressed through short demonstrations and guidance provided by the teacher

before the learning activities began. After receiving these instructions, students were able to operate the digital teaching material independently without further assistance.

Another limitation identified during implementation concerned the dependence on technological infrastructure. Since the flipbook incorporated multimedia components such as instructional videos and online quizzes, stable internet connectivity and sufficient battery power were necessary to ensure uninterrupted learning activities. Nevertheless, these technical constraints did not substantially affect the overall implementation because most students were able to access the learning materials using their personal mobile devices throughout the lesson.

Overall, the findings indicate that the developed flipbook possesses a high level of practicality and usability from the students' perspective. The attractive interface, simple navigation, flexible accessibility, multimedia integration, and interactive assessment features collectively contributed to positive learning experiences and high levels of student acceptance. These findings demonstrate that the flipbook can function not only as a digital teaching material but also as an effective learning companion that encourages independent study, active participation, and sustained engagement during Indonesian language instruction.

The practicality findings are further supported by classroom observations, which showed that students interacted enthusiastically with the multimedia resources and completed the learning activities with minimal teacher intervention. Students actively explored the instructional videos, participated in discussions, completed digital exercises, and revisited learning materials whenever clarification was needed. Such learning behaviour indicates that the developed flipbook successfully promoted learner autonomy while simultaneously maintaining collaborative classroom interaction.

Taken together, the positive responses obtained from students confirm that the multiliteracies-based flipbook meets the practical requirements of digital instructional materials for secondary education. The combination of pedagogical quality, technological usability, and multimedia integration enabled the product to support meaningful learning experiences while accommodating students' digital learning habits. Consequently, the flipbook demonstrates strong potential for broader implementation in Indonesian language classrooms, particularly for developing students' observational report writing skills through engaging and technology-enhanced instruction.

Product Revision Based on Expert Validation

The product refinement process constituted an essential stage in the development of the multiliteracies-based flipbook. Before being implemented in classroom instruction, the initial prototype underwent several revisions based on constructive recommendations provided by both the subject matter expert and the digital media expert. These revisions were intended to improve not only the visual appearance of the flipbook but also its pedagogical effectiveness, usability, and alignment with multiliteracies principles.



Figure 2. Product Before and After Revision

One of the major revisions concerned the presentation of the sample observational report text. In the initial version, the learning material relied predominantly on written explanations, which were considered less engaging for students. Following the validators' recommendations, contextual illustrations and relevant photographs were incorporated into the material to facilitate comprehension and increase visual attractiveness. These additions enabled students to associate written explanations with authentic visual representations, thereby supporting deeper conceptual understanding.

Another revision involved improving the organization of the learning materials. Sequential numbering was added to several sections to strengthen the logical flow of the content and make navigation easier for students. In addition, an instructional video demonstrating the process of composing observational report texts was integrated into the flipbook. This enhancement provided students with an additional audiovisual learning resource that complemented

the written explanations and reflected the multimodal characteristics of the multiliteracies approach. Overall, the revision process significantly enhanced the instructional quality and usability of the developed product before its classroom implementation.

Final Product of the Multiliteracies-Based Flipbook

Following the expert validation and revision process, the multiliteracies-based flipbook was finalized and implemented as a digital teaching material for observational report writing. The final product integrates textual explanations, visual representations, audiovisual resources, interactive exercises, and digital assessments into a single learning platform that can be accessed using smartphones, tablets, laptops, or desktop computers. The instructional design emphasizes the principles of multiliteracies by enabling students to construct knowledge through multiple modes of communication rather than relying exclusively on written texts. Consequently, the final product functions not only as a digital textbook but also as an interactive learning environment that encourages active participation, independent learning, and meaningful engagement throughout the instructional process.

The opening page was designed to provide an attractive introduction to the learning material while motivating students to participate in the lesson. The interface combines a balanced colour scheme, contextual illustrations, clear typography, and intuitive navigation to create a positive first impression. Unlike conventional teaching materials, the opening screen immediately communicates that students will experience an interactive learning environment supported by multimedia resources. This visual presentation also reduces students' initial anxiety toward writing activities by presenting the learning content in a more engaging and accessible format.

The second section presents the learning objectives that students are expected to achieve after completing the instructional activities. These objectives explicitly communicate the competencies related to observational report writing, including understanding the characteristics of observational report texts, identifying their organizational structure, recognizing appropriate linguistic features, analysing factual information, and producing well-structured observational report texts independently. Presenting explicit learning objectives at the beginning of the lesson enables students to understand the expected learning outcomes and monitor their own progress during the learning process. This approach also supports self-regulated learning because students are aware of the competencies they are expected to master (Setyaningsih, 2019).

The main instructional section contains comprehensive learning materials covering the definition, characteristics, objectives, organizational structure,

linguistic features, and writing procedures of observational report texts. The content is presented systematically from simple concepts to more complex writing tasks, enabling students to develop conceptual understanding gradually. Rather than presenting lengthy textual explanations alone, each topic is accompanied by relevant illustrations, examples, diagrams, and highlighted key points that facilitate comprehension. This organization allows students to connect theoretical knowledge with authentic examples before applying their understanding in writing activities. The integration of textual and visual information reflects the core principle of multiliteracies, which emphasizes learning through multiple forms of representation.

One of the most distinctive features of the developed flipbook is the inclusion of an instructional video that complements the written explanations. The video demonstrates the process of analysing observational report texts and composing reports systematically based on real examples. Through audiovisual demonstrations, students are able to observe practical applications of the concepts discussed in the learning materials rather than merely reading theoretical explanations. The instructional video also accommodates students who learn more effectively through auditory and visual stimuli, thereby increasing accessibility for learners with different learning preferences. The integration of multimedia resources strengthens students' conceptual understanding and provides richer learning experiences than conventional teaching materials.

At the end of the instructional content, the flipbook provides a concise summary of the key concepts discussed throughout the lesson. The summary highlights the essential characteristics, organizational structure, linguistic elements, and procedural steps involved in writing observational report texts. This section serves as a reinforcement activity by helping students review important information before completing independent practice and assessment activities. The summary also functions as a quick reference that students can revisit whenever they need to recall essential concepts, thereby supporting long-term retention of learning materials.

The practice section enables students to apply their newly acquired knowledge through interactive exercises that can be accessed by scanning a barcode using their mobile devices. After scanning the code, students are directed to digital practice activities that require them to identify the organizational structure, linguistic features, and factual content of observational report texts. This feature transforms conventional paper-based exercises into interactive digital learning activities while maintaining alignment with the instructional objectives. The immediate transition from learning content to practice activities encourages students to apply their understanding directly after

studying the material, thereby strengthening conceptual mastery and procedural knowledge.

The final component of the flipbook consists of an online interactive quiz that serves as a formative assessment tool. By scanning the provided barcode, students are connected to an online assessment platform where they complete questions related to observational report writing. The digital quiz provides an innovative learning experience by integrating technology into classroom assessment while encouraging students to evaluate their own understanding immediately after completing the lesson. Compared with conventional written tests, this feature increases students' enthusiasm and participation because it combines assessment with digital interaction. Furthermore, the online format enables teachers to monitor students' learning progress more efficiently while providing immediate feedback regarding students' performance.

Overall, the final version of the multiliteracies-based flipbook represents the successful integration of instructional content, multimedia technology, and multiliteracies pedagogy into a single digital teaching material. Each component of the flipbook was designed to address specific learning needs while promoting active participation, independent learning, and meaningful interaction with instructional content. The product not only provides students with comprehensive learning resources but also creates opportunities to explore information through textual, visual, audiovisual, and interactive modes simultaneously. Consequently, the developed flipbook functions as a comprehensive digital learning resource that effectively supports the teaching of observational report writing in Indonesian language education.

The development results further demonstrate that integrating multiliteracies principles into digital teaching materials contributes to a more engaging and learner-centred instructional environment. Rather than functioning solely as a repository of learning content, the flipbook facilitates exploration, reflection, practice, and self-assessment through interconnected multimedia features. This comprehensive learning environment enables students to develop writing competence while simultaneously strengthening digital literacy, critical thinking, and independent learning skills. Therefore, the final product provides practical evidence that well-designed digital teaching materials can effectively support the implementation of innovative pedagogical approaches in Indonesian language classrooms and contribute to improving the quality of writing instruction.

Discussion

The findings demonstrate that the multiliteracies-based flipbook is highly feasible as a digital teaching material for observational report writing, as reflected by the expert validation score of 89.59%, which falls within the Highly

Recommended category. This result indicates that the developed product successfully integrates pedagogical content, multimedia design, and technological functionality into a coherent instructional resource. The high feasibility score is consistent with previous studies reporting that digital flipbooks satisfy the requirements of effective instructional media because they present learning materials in an interactive and visually engaging manner. Likewise, Khotimah et al. (2023) found that flipbooks improve the quality of classroom instruction by integrating various multimedia features that increase students' motivation and participation (Rawasiyah Rawasiyah, 2025; Soim et al., 2026; Surur et al., 2026). However, unlike previous studies that primarily emphasized the technological attractiveness of flipbooks, the present study extends existing knowledge by embedding multiliteracies pedagogy throughout the instructional design. Consequently, the developed flipbook not only functions as a digital medium but also as a pedagogical resource that facilitates learning through multiple modes of communication. From a theoretical perspective, these findings reinforce the view that the effectiveness of digital learning resources depends not merely on technological innovation but also on the alignment between technology and instructional pedagogy. Practically, the validated product provides teachers with an evidence-based teaching material that can be readily implemented to enrich Indonesian language instruction.

The effectiveness analysis revealed a substantial improvement in students' observational report writing skills, with the average score increasing from 61 in the pretest to 82 in the posttest. This improvement suggests that integrating multiliteracies pedagogy with digital teaching materials contributes positively to students' writing competence. The findings support earlier research demonstrating that digital instructional media improve learning achievement and conceptual understanding (Maulidy, 2025; Nurhaida & Asdiqoh, 2026; Skourdoumbis, 2024). Nevertheless, the present study extends these findings by showing that students' improvement is not limited to academic achievement but also encompasses their ability to organize ideas systematically, distinguish factual information from opinions, and apply appropriate linguistic features when composing observational report texts. This finding aligns with Tarigan (2021), who argues that writing competence requires learners to communicate ideas clearly through written language, as well as with Sujinah (2016), who emphasizes the importance of organizing information logically and applying appropriate linguistic conventions. Furthermore, the improvement reflects Dalman's (2021) perspective that writing is a creative process involving idea generation, organization, and communication. Theoretically, these findings strengthen the argument that writing competence develops more effectively when students engage with multimodal learning experiences rather than relying exclusively on text-based instruction. Practically, the findings suggest that

integrating multimedia resources into writing instruction can enhance students' engagement and improve learning outcomes in Indonesian language classrooms.

The classroom observation results further demonstrated that both teacher and student activities reached 97%, indicating a very high level of participation during the implementation of the multiliteracies-based flipbook. These findings are consistent with the multiliteracies framework proposed by the New London Group (1996), which emphasizes that learning becomes more meaningful when students interact with information presented through multiple modes of representation. Similarly, Cope and Kalantzis (2020) argue that contemporary literacy education should integrate multimodal communication to prepare learners for increasingly digital learning environments (Gojali et al., 2024; Hidayat, 2024). The present study provides empirical support for these theoretical perspectives by demonstrating that multimedia integration including text, images, instructional videos, animations, and interactive digital activities encouraged students to participate more actively throughout the learning process. Compared with conventional learning materials, the flipbook enabled teachers to facilitate more student-centred instruction while encouraging students to explore, analyse, and construct knowledge independently. These findings also support Abidin et al. (2021), who reported that multiliteracies pedagogy promotes critical thinking, communication, collaboration, and active learning through diverse literacy practices. Therefore, the present study contributes theoretically by providing empirical evidence that multiliteracies pedagogy can be effectively operationalized through digital teaching materials, while practically offering teachers an instructional approach capable of increasing classroom engagement and improving the quality of learning interactions.

The practicality findings, reflected in the positive student response score of 81%, further indicate that the multiliteracies-based flipbook was well accepted by learners and could be implemented effectively in classroom settings. These findings are consistent with Manzil and Anas Thohir (2022), who reported that flipbooks provide flexible access across multiple digital devices and facilitate independent learning regardless of time and location. Similarly, Prasasti and Anas (2023) concluded that interactive flipbooks encourage students to learn autonomously while improving critical thinking through multimedia-supported learning experiences. However, the present study extends previous research by demonstrating that students' positive perceptions were influenced not only by the visual attractiveness of the flipbook but also by the meaningful integration of multiliteracies principles into the instructional design. Students appreciated the opportunity to learn through written explanations, visual illustrations, instructional videos, and interactive assessments within a single digital platform. Although several students initially experienced minor technical difficulties when

accessing barcode-based quizzes, these challenges were temporary and did not reduce the overall practicality of the product. These findings imply that the successful implementation of digital teaching materials depends not only on technological quality but also on appropriate teacher facilitation during the early stages of implementation. Consequently, the study contributes practical guidance for educators seeking to integrate digital learning resources into language instruction while maintaining effective classroom management.

Overall, this study contributes to the growing body of knowledge on digital pedagogy and multiliteracies by demonstrating that the integration of interactive flipbook technology with multiliteracies principles produces a digital teaching material that is feasible, effective, and practical for teaching observational report writing. Unlike previous studies that examined either digital flipbooks or multiliteracies pedagogy separately, the present research integrates both perspectives into a comprehensive instructional product evaluated through expert validation, learning outcomes, classroom implementation, and students' responses. This integrated evaluation provides stronger empirical evidence regarding the educational value of combining digital technology with pedagogically grounded instructional design. Theoretically, the findings extend the application of the multiliteracies framework within Indonesian language education by illustrating how multimodal learning environments can improve writing competence through active meaning-making processes. Practically, the developed flipbook offers teachers an innovative digital teaching material that aligns with curriculum objectives while accommodating students' digital learning characteristics. Furthermore, the study provides a reference for future instructional material development by demonstrating that the successful integration of multimedia resources, interactive learning activities, and multiliteracies pedagogy can enhance both students' writing competence and the overall quality of language learning in secondary education.

CONCLUSION

This study concludes that the development of a multiliteracies-based flipbook provides an effective digital teaching material for improving students' observational report writing skills by integrating multimodal learning resources, interactive activities, and technology-enhanced instruction into a coherent learning environment. The most significant finding is that the developed product was highly feasible based on expert validation, effective in improving students' writing achievement, and practical according to classroom implementation and students' positive responses. These findings demonstrate that meaningful integration of multiliteracies pedagogy with digital learning media not only strengthens students' writing competence but also promotes active participation,

independent learning, and greater engagement throughout the instructional process. The study contributes to the existing body of knowledge by extending the application of multiliteracies theory within Indonesian language education through the development and comprehensive evaluation of an interactive flipbook, thereby providing empirical evidence that pedagogically grounded digital teaching materials can enhance both learning quality and writing performance. Despite these contributions, the study has several limitations, including its implementation in a single school, the involvement of only one class, and the absence of the dissemination stage of the Four-D model due to time and resource constraints. Future studies are therefore encouraged to examine the effectiveness of multiliteracies-based flipbooks across diverse educational contexts, larger and more heterogeneous samples, different language skills and subject areas, as well as longitudinal research designs to evaluate their long-term impact on students' literacy development and digital learning competencies.

REFERENCES

- Adzimah, M. (2024). Experiential Marketing Strategy in the Boarding School Education Ecosystem as an Effort to Increase the Loyalty of Student Guardians at Islamic Boarding Schools. *Educazione: Journal of Education and Learning*, 1(2), 78–86.
- Albustomi, A. Y. (2025). Visualizing Transparency: The Role of Virtual School Tours in Strengthening Institutional Accountability and Stakeholder Trust. *PEDAGOGIK: Jurnal Pendidikan*, 12(2), 304–317. <https://doi.org/10.33650/pjp.v12i2.13037>
- Fitriani, N. S. (2025). The Lived Experience of Self-Compassion as a Coping Strategy Under Modern Life Pressure. *MindScape: Journal of Psychology*, 1(2), 93–104.
- Gojali, I., Hidayah, F., & Aniati, A. (2024). Mindfulness for Teachers: Strategies to Manage Stress and Improve Learning Quality in Madrasah. *Urwatul Wutsqo: Jurnal Studi Kependidikan dan Keislaman*, 13(2), 190–203. <https://doi.org/10.54437/urwatulwutsqo.v13i2.1717>
- Gul, Y. E. (2023). A Theoretical Perspective on Survey Method from Quantitative Research Methods. *Universum: Psikhologiya i Obrazovanie*, 4(106), 64–68. <https://doi.org/10.32743/UniPsy.2023.106.4.15254>
- Hidayat, M. N. F. (2024). Bridging the Digital Divide: The Role of Public Relations in Enhancing Digital Inclusivity. In *2024 10th International Conference on Education and Technology (ICET)* (pp. 59–66). IEEE. <https://doi.org/10.1109/ICET64717.2024.10778472>

- Hikmah, U. (2026). Digital Transformation in Management of Islamic Schools: Evaluating the Impact of Social Media Advertising on Institutional Growth. *Journal of Islamic Scholarly Research*, 1(1), 19–28.
- Hikmah, U., & Mudarris, B. (2026). A Strategic Plan for High-Quality and Effective Madrasah Management in Realizing Superior Educational Quality. *Journal of Education Management and Policy*, 2(1), 39–49.
- Holidi, M. (2025). CBT Exam Implementation Guidance for Students in Facing Digital-Based Assessments. *Communautaire: Journal of Community Service*, 4(3), 297–312. <https://doi.org/10.61987/communautaire.v4i3.820>
- Holidi, M. (2026). Value-Based Employee Relationship Management for Professional Integrity in Madrasah Education. *Islamic Management: Jurnal Manajemen Pendidikan Islam*, 9(1), 331–344.
- Khofsah, S. (2025). Management of the Habit of Reading the Qur'an as an Effective Memorization Strategy for Tahfidz Class Students at Madrasahs. *Journal of Education Management and Policy*, 1(3), 198–207.
- Kunta, I. H. (2025). Strategi Implementasi Kurikulum pada Lembaga Pendidikan Islam untuk Meningkatkan Literasi Keislaman Siswa. *VISIONARIA: Journal of Educational Innovation Management*, 1(3), 157–167.
- Kusumawati, I. (2025). AI-Based Human Capital as a Catalyst for Increasing the Strategic Agility of Educational Organizations. *International Journal of Multidisciplinary Research*, 1(5), 239–245.
- Kusumawati, I. (2026). Capacity Building for Tahfizh Instructors: Developing Structured Lesson Plans for Quality Al-Qur'an Education. *Communautaire: Journal of Community Service*, 5(1), 70–80. <https://doi.org/10.61987/communautaire.v5i1.2277>
- Manshur, U. (2026). Madrasah Vision Management Strategy in Realizing Superior Educational Quality. *EDUCARE: Jurnal Ilmu Pendidikan*, 5(1), 1–15. <https://doi.org/10.71392/ejip.v5i1.122>
- Maulidy, A. (2025). Social Media Influence on Consumerism Trends Among College Students. *Indonesian Journal of Education and Social Studies*, 4(1), 16–28. <https://doi.org/10.33650/ijess.v5i1.11682>
- Mohlas, M. (2025). The Role of Digital Video Content in Building Perception and Trust in Islamic Educational Institutions. *Education and Sociedad Journal*, 3(2), 33–45.
- Nadhifah, N. (2026). Fostering Critical Thinking in Early Childhood: Teacher Scaffolding Strategies for Children Aged 5–6. *Early Childhood Development Gazette*, 3(1), 23–33. <https://doi.org/10.61987/gazette.v3i1.2038>
- Najiburohman. (2025). Virtual School Tours: Boosting Community Interest and Attracting Prospective Students. *EVALUASI: Jurnal Manajemen Pendidikan Islam*, 9(2), 340–353. <https://doi.org/10.32478/3gtzvf72>

- Ni'am, M. D. (2025). The Power of Word-of-Mouth: Understanding the Dynamics of Organic Marketing in Faith-Based Educational Institutions. *AFKARINA: Jurnal Pendidikan Agama Islam*, 10(1), 49–59. <https://doi.org/10.33650/afkarina.v10i1.15096>
- Nurhaida, H. S., & Asdiqoh, S. (2026). Legal Education and Digital Discipline in Pesantren: Fostering Santri's Legal Awareness in the Age of Social Media. *Indonesian Journal of Education and Social Studies*, 5(1), 82–97. <https://doi.org/10.33650/ijess.v5i1.13187>
- Rahman, M. (2025). Customer Perceived Value (CPV) from the MPI Perspective: Integration of Academic Service Quality and Blessing Orientation. *AFKARINA: Jurnal Pendidikan Agama Islam*, 10(1), 15–25. <https://doi.org/10.33650/afkarina.v10i1.15026>
- Rahman, M. (2026). Improving the Quality of Education in Madrasah Tsanawiyah Through Digital Technology-Based Strategic Management. *JETech: Journal of Education and Technology*, 2(1), 11–19.
- Rawasiyah, R., & S. S. (2025). Reconstructing Furud al-'Ainiyah Pedagogy: Strengthening Santri's Religious Literacy in Contemporary Islamic Education. *Indonesian Journal of Education and Social Studies*, 4(1), 127–142. <https://doi.org/10.33650/ijess.v4i1.3385>
- Sardana, N., Shekoochi, S., Cornett, E. M., & Kaye, A. D. (2023). *Qualitative and Quantitative Research Methods*. In *Substance Use and Addiction Research* (pp. 65–69). Elsevier. <https://doi.org/10.1016/B978-0-323-98814-8.00008-1>
- Shoha, S. I. (2026). Curriculum Renewal Management in Elementary Schools: A Case Study of the Implementation of the Independent Curriculum in Schools. *Journal of Education Management and Policy*, 2(1), 61–71.
- Skourdumbis, A. (2024). Integrating Cultural Diversity in Rural Classrooms: Pathways to Inclusive and Democratic Education. *Indonesian Journal of Education and Social Studies*, 3(1), 23–37.
- Soim, S., Purwanto, E. S., & Haryanti, N. (2026). When Leadership and Climate Matter: Enhancing Teachers' Work Ethic Through Participative School Leadership. *Indonesian Journal of Education and Social Studies*, 5(1), 56–69. <https://doi.org/10.33650/ijess.v5i1.13024>
- Surur, M., Puspitasari, Y., & Dewi, S. K. (2026). Flipped Classroom Model-PBL: Innovative Solutions to Improve Student Problem Solving. *Indonesian Journal of Education and Social Studies*, 5(1), 70–81. <https://doi.org/10.33650/ijess.v5i1.13062>
- Syafiih, M. (2025). The Future of Education in the Digital Era: Between Technological Innovation and Equitable Access. *Proceeding of International Conference on Education, Society and Humanity*, 3(1), 737–741.