

NEED ANALYSIS OF AFFORDABLE AND CLEAN ENERGY BASED BIG BOOK FOR SHARED READING ACTIVITIES TO SUPPORT PRESCHOOL STUDENTS' BEHAVIORAL READING ENGAGEMENT

Gusti Bagus Putu Rahayuda Septiawan¹, Luh Gd Rahayu Budiarta², Ni Wayan Monik Rismadewi³

Universitas Pendidikan Ganesha^{1,2,3}

e-mail: bagus.rahayuda@student.undiksha.ac.id¹, rahayu.budiarta@undiksha.ac.id²,
monik.rismadewi@undiksha.ac.id³

Diterima: 9/7/2026; Direvisi: 18/7/2026; Diterbitkan: 7/8/2026

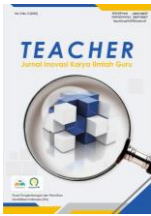
ABSTRAK

Keterbatasan media pembelajaran yang mendukung kegiatan *shared reading* serta belum terintegrasinya nilai-nilai *Sustainable Development Goal (SDG)* 7 dalam pembelajaran literasi bahasa Inggris menyebabkan keterlibatan perilaku (*behavioral engagement*) anak usia dini belum berkembang secara optimal. Penelitian ini bertujuan menganalisis kebutuhan riil sebagai dasar pengembangan media *Big Book* berbasis SDG 7 untuk meningkatkan *behavioral engagement* siswa pada pembelajaran literasi bahasa Inggris. Penelitian menggunakan pendekatan deskriptif kualitatif yang dilaksanakan pada tahap *need analysis* dalam kerangka *Design and Development Research (DDR)* di Danen'D Kiddy School. Data diperoleh melalui observasi kelas menggunakan lembar observasi terstruktur dan wawancara semiterstruktur dengan guru, kemudian dianalisis secara tematik untuk mengidentifikasi kebutuhan pembelajaran. Hasil penelitian menunjukkan tiga temuan utama, yaitu: (1) terbatasnya ketersediaan media *Big Book* yang mendukung pelaksanaan *shared reading* secara klasikal, (2) *behavioral engagement* siswa selama kegiatan membaca masih belum optimal dan belum merata, serta (3) materi bacaan bahasa Inggris yang digunakan belum mengintegrasikan tema keberlanjutan, khususnya SDG 7 tentang energi bersih dan terjangkau. Temuan tersebut menunjukkan adanya kesenjangan antara kebutuhan pedagogis di kelas dengan media yang tersedia. Penelitian ini memberikan kontribusi empiris sebagai landasan pengembangan prototipe *Big Book* berbasis SDG 7 yang mengintegrasikan peningkatan *behavioral engagement* dengan penguatan literasi keberlanjutan pada anak usia dini.

Kata Kunci: *Big Book, Shared Reading, SDG 7, Behavioral Engagement, Anak Usia Dini*

ABSTRACT

The limited availability of instructional media that effectively supports *shared reading* activities, together with the lack of integration of *Sustainable Development Goal (SDG)* 7 values into English literacy instruction, has resulted in suboptimal *behavioral engagement* among young learners. This study aimed to analyze the actual needs underlying the development of an SDG 7-based *Big Book* to enhance preschool students' *behavioral engagement* in English literacy learning. A qualitative descriptive approach was employed during the *need analysis* phase of the *Design and Development Research (DDR)* framework at Danen'D Kiddy School. Data were collected through structured classroom observations and semi-structured interviews with classroom teachers and were analyzed using thematic analysis to identify instructional needs. The findings revealed three major issues: (1) the limited availability of *Big Book* media to support whole-class *shared reading* activities, (2) uneven and



insufficient *behavioral engagement* among students during reading sessions, and (3) the absence of English reading materials integrating sustainability themes, particularly SDG 7 on affordable and clean energy. These findings indicate a clear discrepancy between pedagogical needs and the instructional media currently available in the classroom. This study provides an empirical foundation for developing an SDG 7-based *Big Book* prototype that integrates the enhancement of *behavioral engagement* with the promotion of sustainability literacy in early childhood education.

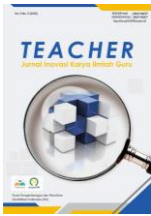
Keywords: *Big Book, Shared Reading, SDG 7, Behavioral Engagement, Early Childhood Education*

INTRODUCTION

Reading literacy constitutes one of the most fundamental competencies that influences children's cognitive, linguistic, and academic development from an early age. During the *golden age* of development, children experience rapid growth in language acquisition, reasoning, and social interaction, making this period highly responsive to meaningful literacy stimulation. Nevertheless, successful literacy learning is determined not only by children's exposure to reading materials but also by the extent to which they actively participate throughout the learning process. In this regard, *behavioral engagement*, reflected in students' attention, persistence, participation, and willingness to complete learning activities, has been identified as an important predictor of school readiness and subsequent academic achievement. Recent evidence further demonstrates that *behavioral engagement* mediates the relationship between children's executive functioning and improvements in school readiness, indicating that meaningful classroom participation is an essential prerequisite for effective early literacy development (Turnbull et al., 2024). Likewise, innovative instructional approaches that actively involve learners have been shown to improve both learning motivation and academic performance in early childhood settings (Ocha & Laksana, 2025).

One instructional approach that has consistently been associated with meaningful literacy experiences is *shared reading*. This approach creates opportunities for teachers and children to construct meaning collaboratively through interactive reading sessions, discussions, questioning, and repeated exposure to printed language. Rather than positioning children as passive listeners, *shared reading* encourages them to become active participants who observe illustrations, predict storylines, answer questions, and relate stories to their everyday experiences. Recent findings indicate that regular *shared storybook reading* significantly strengthens children's literacy habits and creates a more supportive literacy environment in early childhood classrooms (Nurhillal et al., 2025). Similar evidence reported by Adam and Barratt-Pugh (2023) also reveals that high-quality *book sharing* practices foster richer teacher-child interactions and contribute substantially to children's language development, vocabulary acquisition, and early literacy competence.

To maximize the effectiveness of *shared reading*, teachers require instructional media that are developmentally appropriate and capable of attracting children's attention throughout the reading session. One of the most widely recommended media is the *Big Book*, which combines large printed text, colorful illustrations, repetitive language patterns, and predictable storylines to facilitate collective reading experiences. Previous studies consistently demonstrate the educational value of *Big Book* media across different educational contexts. Oktaviana et al. (2021) reported that *Big Book* implementation significantly improved early reading skills among children aged five to six years by creating a more enjoyable learning atmosphere.

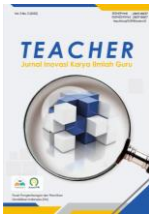


Likewise, Yansyah et al. (2021) found that bilingual *Big Book Storytelling* successfully enhanced children's literacy and vocabulary development, while Dayu and Setyaningsih (2022) showed that *Big Book* media improved reading literacy by increasing students' comprehension of reading materials through attractive visual presentations. Furthermore, Triutami et al. (2022) emphasized that storytelling activities supported by *Big Book* media positively contributed to children's overall developmental progress by encouraging active classroom participation and sustained attention during learning activities.

Although numerous studies have confirmed the effectiveness of *Big Book* media in improving literacy outcomes, most previous research has primarily focused on reading achievement and language development, with relatively limited attention given to children's *behavioral engagement* during literacy instruction. Moreover, existing *Big Book* materials generally emphasize language learning without integrating broader educational values that are increasingly required in contemporary education, particularly *Education for Sustainable Development (ESD)*. Recent educational discourse emphasizes that sustainability awareness should be introduced from early childhood to cultivate responsible attitudes toward society and the environment through meaningful learning experiences (Zai, 2025). Within this context, introducing concepts related to sustainable energy through literacy activities provides opportunities to simultaneously strengthen literacy competence and environmental awareness. Therefore, integrating *Sustainable Development Goal (SDG) 7* into *Big Book*-based *shared reading* represents an innovative direction that not only addresses literacy development but also supports the cultivation of ecological literacy and responsible citizenship from an early age.

In contemporary educational practice, literacy instruction is expected to achieve broader educational goals beyond developing children's reading proficiency. One important direction is the integration of *Education for Sustainable Development (ESD)*, which encourages learners to develop knowledge, attitudes, and responsible behaviors toward environmental sustainability from an early age. The introduction of sustainability values in early childhood education is considered essential because children begin forming habits, values, and environmental awareness during this developmental stage. Consequently, literacy activities that incorporate sustainability themes can simultaneously strengthen language competence while fostering children's awareness of global issues. Among the seventeen *Sustainable Development Goals (SDGs)*, SDG 7 concerning affordable and clean energy provides an appropriate context for introducing simple concepts such as saving electricity, recognizing renewable energy sources, and using energy responsibly through age-appropriate learning materials. Recent educational literature also emphasizes that sustainability-oriented learning should become an integral component of early childhood education to prepare future generations capable of contributing to sustainable development (Zai, 2025). Furthermore, a recent conceptual review highlights that introducing energy concepts through contextual learning enables children to understand the relevance of energy conservation in everyday life, thereby supporting the development of environmental literacy from an early age (Bariroh et al., 2026).

The successful integration of sustainability themes into literacy instruction requires learning media that correspond to children's developmental characteristics and learning preferences. Children at the preschool level tend to understand abstract concepts more effectively when information is presented through attractive visual representations, meaningful stories, and interactive classroom experiences. Therefore, the development of innovative instructional media should be preceded by a comprehensive *need analysis* to ensure that the resulting product addresses actual classroom needs. Previous studies on instructional media



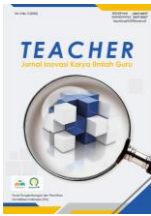
development consistently emphasize that identifying learners' characteristics, classroom conditions, and teachers' expectations is a fundamental stage for producing effective educational media. For example, Adistiarachma and Alia (2024) demonstrated that a systematic *need analysis* successfully identified the characteristics required for developing instructional media that effectively supports children's learning engagement. This finding suggests that educational media should be designed not merely based on theoretical assumptions but on authentic needs emerging from classroom practice.

A preliminary observation conducted at Danen'd Kiddy School revealed several instructional challenges that require immediate attention. Although English literacy activities have routinely implemented *shared reading*, the available reading media remain limited in both quantity and instructional suitability for whole-class learning. The classroom primarily relies on conventional storybooks whose size and visual presentation are insufficient to maintain children's attention throughout reading sessions, resulting in unequal levels of *behavioral engagement* among students. Moreover, the existing English reading materials have not yet incorporated sustainability-related themes, particularly those associated with SDG 7, despite increasing educational demands to integrate global citizenship and environmental awareness into early childhood learning. These findings indicate a clear discrepancy between the ideal characteristics of interactive literacy instruction supported by engaging learning media and the actual conditions encountered in classroom practice.

Previous studies have predominantly investigated the effectiveness of *Big Book* media in improving reading ability, vocabulary acquisition, and literacy achievement, while only limited attention has been given to integrating SDG 7 values into *shared reading* activities designed to strengthen preschool children's *behavioral engagement*. Likewise, studies concerning sustainability education in early childhood generally focus on environmental awareness without explicitly connecting it to literacy media development. This situation demonstrates an empirical gap that has not yet been adequately addressed by existing research. Therefore, this study seeks to bridge that gap by conducting a comprehensive *need analysis* as the initial phase of a *Design and Development Research (DDR)* approach for developing an SDG 7-based *Big Book* to support English *shared reading* activities. Specifically, this study aims to analyze teachers' and students' instructional needs, identify classroom conditions related to children's *behavioral engagement*, and establish empirical foundations for developing an innovative literacy medium that integrates reading instruction with sustainability education in early childhood settings.

RESEARCH METHOD

This study employed a qualitative descriptive approach conducted during the *need analysis* phase of the *Design and Development Research (DDR)* framework. The research was carried out at Danen'D Kiddy School, Bali, Indonesia, involving one English teacher and 7 preschool students who routinely participated in English *shared reading* activities. The English teacher was selected through *purposive sampling* because she was directly responsible for designing, implementing, and evaluating English literacy instruction, while the students were included as the primary subjects for observing *behavioral engagement* during classroom learning. Prior to data collection, permission was obtained from the school, and all participants



were involved in accordance with the ethical principles of educational research to ensure voluntary participation and the confidentiality of the collected data.

Data were collected through classroom observations and *semi-structured interviews*. Classroom observations were conducted using a structured observation sheet designed to document students' *behavioral engagement* during English *shared reading* sessions, including indicators such as maintaining attention, responding to teacher questions, participating in learning activities, following classroom instructions, interacting with learning media, and sustaining engagement throughout the reading process. To complement the observational findings, a *semi-structured interview* was conducted with the English teacher to explore classroom literacy practices, the strengths and limitations of the existing instructional media, students' learning behaviors, and expectations regarding the development of an SDG 7-based *Big Book* integrating themes of affordable and clean energy into English literacy learning. The credibility of the findings was strengthened through *source triangulation* by comparing information obtained from classroom observations with data generated from teacher interviews.

The collected data were analyzed using *Thematic Analysis* proposed by Clarke and Braun (2014). The analysis began with repeated reading of the observation records and interview transcripts to achieve familiarity with the data, followed by *coding* meaningful information related to literacy practices, instructional media, *behavioral engagement*, and the integration of SDG 7 values. Codes sharing similar meanings were subsequently organized into broader categories and synthesized into overarching themes representing the instructional needs of teachers and students. Finally, the identified themes were interpreted to formulate empirical design requirements for developing an SDG 7-based *Big Book* capable of promoting preschool students' *behavioral engagement* during English *shared reading* activities.

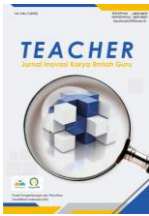
RESULT AND DISCUSSION

Result

The findings were generated from classroom observations and *semi-structured interviews* conducted during the *need analysis* phase at Danen'D Kiddy School. Data analysis produced three major themes describing the current implementation of English literacy learning, students' *behavioral engagement*, and the need for integrating SDG 7 into English reading materials. Before presenting each theme in detail, the classroom observation findings are summarized in Table 1 to provide an overview of the observed learning conditions. The table presents the implementation status of each observation indicator without further interpretation.

Table 1. Summary of Classroom Observation Results

No	Observation Indicator	Observation Result
1	English reading activity	Conducted once a week as part of classroom learning
2	<i>Shared reading</i> implementation	Implemented during English learning activities
3	Reading media	Mainly used <i>flashcards</i> and a limited number of picture storybooks
4	Size of reading media	Existing books were not large enough for whole-class viewing
5	Reading materials	Themes were limited and focused mainly on basic vocabulary



No	Observation Indicator	Observation Result
6	Students' attention	Most students initially paid attention to the teacher
7	Students' participation	Participation varied among students during reading activities
8	Students' <i>behavioral engagement</i>	Engagement was not consistently maintained until the end of the session
9	Teacher–student interaction	The teacher encouraged interaction through questions and responses
10	SDG 7 integration	No reading materials explicitly incorporated SDG 7 themes

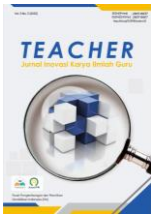
As shown in Table 1, English reading activities had become part of the classroom routine and *shared reading* was implemented regularly. However, the observation also documented limitations in the availability and characteristics of instructional media, particularly the absence of large-format reading materials suitable for whole-class reading. Differences in students' participation and sustained *behavioral engagement* were also recorded during the observation sessions. Furthermore, no English reading materials integrating SDG 7 themes were identified throughout the classroom observations.

To complement the observation findings, a *semi-structured interview* was conducted with the classroom teacher. The interview explored existing literacy practices, the characteristics of instructional media currently used, students' responses during reading activities, and expectations regarding future learning media. A summary of the interview findings is presented in Table 2. The table organizes the teacher's responses according to the major topics explored during the interview.

Table 2. Summary of Teacher Interview Findings

Interview Topic	Summary of Teacher Responses
English reading activities	Conducted once a week using printed books and digital stories as literacy activities
Existing instructional media	Mostly used storybooks, <i>flashcards</i> , and digital media; limited availability of materials specifically designed for <i>shared reading</i>
Students' learning behavior	Students showed varied responses; some actively participated while others became distracted, talked, screamed, or moved around the classroom
Characteristics of ideal reading media	Large-sized books, attractive illustrations, short stories, and simple language suitable for preschool children
Integration of SDG 7	Considered important to introduce energy conservation and responsible energy use through English reading materials from an early age

The interview findings presented in Table 2 confirmed several classroom conditions identified during the observations. The teacher described that reading activities had been routinely implemented using available learning resources but acknowledged the limited availability of media specifically designed to facilitate *shared reading*. Variations in students' classroom behavior during reading sessions were also consistently reported. In addition, the



teacher expressed the need for reading materials that combine age-appropriate literacy content with environmental sustainability topics, particularly SDG 7.

Following the integration of observation and interview data through *thematic analysis*, three overarching themes were identified. These themes summarize the main instructional needs emerging from both sources of data and provide the empirical basis for the subsequent development stage. The synthesis of these themes is presented in Table 3. The table combines evidence from observations and teacher interviews without providing interpretative discussion.

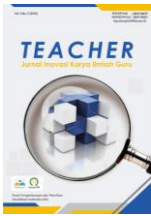
Table 3. Themes Identified through *Thematic Analysis*

Theme	Evidence from Classroom Observation	Evidence from Teacher Interview
Limited instructional media for <i>shared reading</i>	Reading media mainly consisted of <i>flashcards</i> and small-sized storybooks	Teacher reported limited availability of large-format reading media suitable for whole-class instruction
Uneven students' <i>behavioral engagement</i>	Students demonstrated different levels of attention, participation, and persistence during reading sessions	Teacher observed that several students frequently lost focus and required additional stimulation to remain engaged
Need for SDG 7 integration in English reading materials	No classroom reading materials addressed affordable and clean energy topics	Teacher emphasized the importance of introducing SDG 7 concepts through age-appropriate English reading materials

As summarized in Table 3, the analysis generated three dominant themes derived from the convergence of classroom observation and teacher interview data. These themes describe the existing conditions of literacy instruction, the characteristics of students' *behavioral engagement* during *shared reading*, and the current availability of sustainability-related learning content. The findings represent the empirical results of the *need analysis* conducted at Danen'D Kiddy School. Further interpretation of these findings and their relationship with previous studies is presented in the Discussion section.

Discussion

The findings of this study indicate a clear discrepancy between the existing literacy practices at Danen'D Kiddy School and the instructional conditions recommended for effective preschool literacy learning. The limited availability and inappropriate size of the existing reading media contributed to uneven levels of children's *behavioral engagement* during *shared reading* activities. Rather than merely reflecting a shortage of instructional resources, these findings suggest that the characteristics of learning media substantially influence how children participate in classroom literacy experiences. This interpretation is consistent with Turnbull et al. (2024), who demonstrated that *behavioral engagement* functions as an important mechanism through which children develop school readiness skills. Consequently, when literacy media fail to attract children's attention or facilitate active participation, opportunities to develop early literacy competencies may also become less optimal. The present findings therefore reinforce the view that improving children's engagement requires not only appropriate instructional

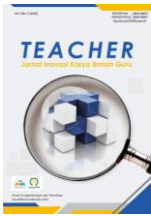


strategies but also learning media specifically designed to accommodate preschool learners' developmental characteristics.

The instructional limitations identified in this study further highlight the pedagogical importance of *Big Book* media in *shared reading* activities. Unlike conventional storybooks, *Big Books* provide enlarged text and illustrations that allow all children to observe the reading material simultaneously, thereby supporting collective interaction between teachers and learners. Such visual accessibility creates opportunities for children to focus on the story, respond to questions, observe illustrations collaboratively, and construct meaning through social interaction rather than individual observation. These findings corroborate those reported by Oktaviana et al. (2021), who found that *Big Book* media significantly improved young children's early reading skills by creating an enjoyable and engaging learning atmosphere. Similar conclusions were reported by Triutami et al. (2022), who demonstrated that storytelling activities supported by *Big Book* media encouraged greater participation and facilitated children's developmental progress. Likewise, Dayu and Setyaningsih (2022) explained that attractive visual presentations enhance learners' comprehension because illustrations and enlarged text enable students to connect written language with contextual meaning more effectively.

Another important finding concerns the relatively low level of children's *behavioral engagement* during classroom literacy activities. Several children demonstrated passive behaviors, reduced attention, and inconsistent participation throughout the *shared reading* sessions, indicating that the existing instructional media had not yet succeeded in maintaining sustained engagement. From a pedagogical perspective, *behavioral engagement* reflects children's willingness to invest attention, effort, persistence, and participation in learning activities, all of which are essential for successful literacy acquisition. Therefore, improving engagement should involve creating learning environments that encourage children to interact actively with both teachers and instructional materials. In this regard, the implementation of *shared reading* supported by *Big Book* media provides opportunities for collaborative dialogue, repeated language exposure, and meaningful teacher–child interaction. This interpretation is supported by Adam and Barratt-Pugh (2023), who found that high-quality *book sharing* creates richer literacy interactions and strengthens children's language development. Similarly, Nurhillal et al. (2025) reported that regular *shared storybook reading* contributes positively to children's literacy habits because interactive reading sessions increase children's motivation and active participation throughout classroom learning.

The present findings also demonstrate that the effectiveness of *Big Book*-assisted *shared reading* should not be viewed solely from the perspective of improving reading performance but also from its contribution to increasing children's classroom engagement. Interactive illustrations, repetitive language patterns, and opportunities to participate verbally encourage children to become active contributors rather than passive recipients during literacy instruction. This interpretation is consistent with Ocha and Laksana (2025), who emphasized that innovative and interactive learning approaches play an important role in increasing learners' engagement and academic achievement through meaningful classroom participation. Furthermore, the bilingual *Big Book Storytelling* developed by Yansyah et al. (2021) illustrates that appropriately designed visual literacy media can simultaneously improve vocabulary acquisition, listening skills, and children's enthusiasm for participating in literacy activities. Collectively, these studies support the present findings by indicating that the educational value of *Big Book* media extends beyond improving reading ability, serving as an instructional



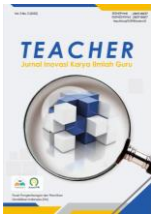
medium capable of strengthening preschool children's *behavioral engagement* through enjoyable, interactive, and developmentally appropriate literacy experiences.

Another noteworthy finding of this study is the absence of literacy materials that explicitly integrate SDG 7 into preschool English learning. This finding indicates that literacy instruction at Danen'D Kiddy School remains predominantly focused on language acquisition, with limited attention given to developing children's understanding of global sustainability issues. From the perspective of *Education for Sustainable Development (ESD)*, literacy activities should not only facilitate children's language development but also cultivate values, attitudes, and responsible behaviors that contribute to sustainable living. Therefore, integrating SDG 7 into *shared reading* activities represents an educational strategy that connects literacy learning with children's everyday experiences. Zai (2025) emphasized that sustainability-oriented education should be introduced from early childhood because this developmental stage provides a critical foundation for shaping children's values and responsible behaviors. Consequently, the absence of sustainability themes identified in this study reflects an opportunity to redesign literacy instruction so that it contributes simultaneously to language development and character education.

The findings further suggest that introducing concepts related to affordable and clean energy requires instructional media capable of translating abstract ideas into concrete learning experiences. Preschool children generally understand new concepts more effectively when learning is supported by stories, illustrations, and familiar real-life situations rather than abstract explanations. In this context, *Big Book* media provide meaningful contextualization because visual narratives allow children to associate sustainability concepts with simple daily practices, such as turning off unused lights, utilizing sunlight, and conserving electricity. This interpretation is supported by Bariroh et al. (2026), who concluded that contextual learning is essential for helping learners understand energy concepts and their practical application in everyday life. Accordingly, integrating SDG 7 into children's storybooks extends the educational function of literacy media beyond reading instruction by introducing fundamental concepts of *energy literacy* through developmentally appropriate learning experiences.

The present study also demonstrates the importance of conducting a systematic *need analysis* before developing instructional media. The classroom observations and teacher interviews revealed that the existing literacy resources were unable to adequately support *shared reading*, maintain children's *behavioral engagement*, or integrate sustainability values into English literacy instruction. These findings indicate that instructional media development should be grounded in authentic classroom needs rather than solely in theoretical assumptions or curriculum expectations. Similar conclusions were reported by Adistiarachma and Alia (2024), who found that a comprehensive *need analysis* enables developers to identify learners' characteristics, instructional challenges, and teachers' expectations, thereby producing educational media that are more relevant and effective. Therefore, the findings of this study provide empirical justification for proceeding to the subsequent stages of *Design and Development Research (DDR)* in order to develop an SDG 7-based *Big Book* that responds directly to the instructional needs identified in the field.

Compared with previous studies, the present research offers an important contribution to the literature on early childhood literacy. Earlier investigations predominantly demonstrated that *Big Book* media improve reading ability, vocabulary acquisition, comprehension, and children's participation during literacy instruction (Oktaviana et al., 2021; Dayu & Setyaningsih, 2022; Triutami et al., 2022; Yansyah et al., 2021). Other studies highlighted the



educational value of *shared reading* and *book sharing* for strengthening literacy habits and promoting meaningful teacher–child interaction (Adam & Barratt-Pugh, 2023; Nurhillal et al., 2025). However, these studies have rarely integrated SDG 7 values into *Big Book*-based *shared reading* while simultaneously positioning *behavioral engagement* as the principal instructional outcome. Accordingly, the present study extends existing knowledge by demonstrating that the development of an SDG 7-based *Big Book* should be informed by empirical classroom needs and can potentially function as an innovative literacy medium that simultaneously strengthens children's *behavioral engagement*, supports early *energy literacy*, and promotes environmental awareness within preschool English learning contexts.

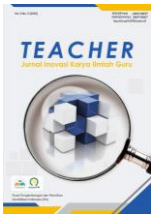
CONCLUSION

The findings of this study demonstrate that the challenges encountered in English literacy learning at Danen'D Kiddy School extend beyond the limited availability of instructional media, reflecting the need for learning resources that are capable of simultaneously promoting students' *behavioral engagement* and introducing meaningful sustainability concepts. The *need analysis* identified three interconnected instructional priorities, namely the provision of large-format reading media that effectively supports *shared reading*, the enhancement of preschool students' active participation throughout literacy activities, and the integration of SDG 7 (*Affordable and Clean Energy*) into English reading materials. These findings provide empirical evidence that literacy media for early childhood education should not only facilitate language acquisition but also encourage active learning experiences while fostering awareness of sustainable development from an early age. Consequently, this study contributes a conceptual and empirical foundation for developing an SDG 7-based *Big Book* that integrates English literacy, *behavioral engagement*, and environmental education within a single instructional medium.

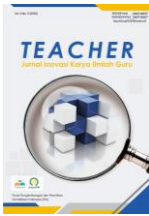
From a practical perspective, the findings offer valuable guidance for teachers, schools, and instructional media developers in designing literacy resources that are developmentally appropriate, visually engaging, and contextually relevant to contemporary global issues. The identified instructional needs may serve as design criteria for producing a *Big Book* that supports whole-class *shared reading* while introducing simple concepts of energy conservation and responsible energy use through meaningful storytelling experiences. Furthermore, this study establishes the initial stage of the *Design and Development Research* process, providing a strong empirical basis for subsequent phases involving prototype development, expert validation, practicality testing, and effectiveness evaluation in broader early childhood educational settings. Future research is therefore expected to examine the impact of the developed media on preschool students' English literacy achievement, *behavioral engagement*, and early sustainability literacy across diverse learning contexts.

REFERENCES

- Adam, H., & Barratt-Pugh, C. (2023). Book sharing with young children: A study of book sharing in four Australian long day care centres. *Journal of Early Childhood Literacy*, 23(3), 348–373. <https://journals.sagepub.com/doi/full/10.1177/1468798420981745>
- Adistiarachma, N., & Alia, D. (2024). Analisis kebutuhan pengembangan media video animasi untuk meningkatkan keterampilan menyimak anak usia dini. *Al-Abyadh*, 7(1), 35–41. <https://doi.org/10.46781/al-abyadh.v7i1.1000>



- Anis, Y. Y., Mukti, A. B., & Mulyani, S. (2023). Perancangan game sederhana menggunakan *Scratch Programming* sebagai media pembelajaran visual bagi anak usia dini. *Bulletin of Information Technology (BIT)*, 4(3), 320–327. <https://doi.org/10.47065/bit.v4i3.769>
- Audine, N., Sulistianah, S., Dewantari, T., & Tohir, A. (2023). Peran guru dalam menanamkan perilaku sopan santun pada anak usia dini di TK Amarta Tani Bandar Lampung. *Jurnal Multidisiplin Dehasen (MUDE)*, 2(4), 689–692. <https://doi.org/10.37676/mude.v2i4.4735>
- Aulia, R. N., Habibah, U., Nabila, P. S., & Hendarwati, E. (2025). Strategi literasi visual dalam meningkatkan kemampuan membaca anak usia dini melalui buku bergambar. *Pedagogi: Jurnal Anak Usia Dini dan Pendidikan Anak Usia Dini*, 11(2), 180–192. <https://doi.org/10.30651/pedagogi.v11i2.27185>
- Bariroh, U., Prayogo, M. S., Kamaliah, D. N., & Aini, C. N. (2026). Analisis konseptual pembelajaran energi dan perubahannya dalam kehidupan sehari-hari di sekolah dasar: Sebuah *structured literature review*. *Jurnal Ilmiah Multidisipin*, 4(6), 485–494. <https://doi.org/10.60126/jim.v4i6.1572>
- Culatta, B. E., Setzer, L. A., & Hall-Kenyon, K. M. (2022). Incorporating digital literacy materials in early childhood programs: Understanding children's engagement and interactions. In *Handbook of Research on Acquiring 21st Century Literacy Skills Through Game-Based Learning* (pp. 671–696). IGI Global Scientific Publishing. <https://www.igi-global.com/chapter/incorporating-digital-literacy-materials-in-early-childhood-programs/294954>
- Dayu, D. P. K., & Setyaningsih, N. D. (2022). Big book to increase 5th grade students' reading literacy. *Jurnal Prima Edukasia*, 10(1), 1–8. <https://doi.org/10.21831/jpe.v10i1.41115>
- Fauziah, R., Kesumawardani, A. D., Kuswanto, E., & Oktafiani, R. (2026). Kontribusi pendidikan biologi terhadap pencapaian delapan tujuan SDGs: *Systematic literature review*. *SAKALIMA: Pilar Pemberdayaan Masyarakat Pendidikan*, 3(2), 161–181. <https://doi.org/10.70211/sakalima.v3i2.507>
- Lenhart, J., Suggate, S. P., & Lenhard, W. (2022). Shared-reading onset and emergent literacy development. *Early Education and Development*, 33(4), 589–607. <https://www.tandfonline.com/doi/abs/10.1080/10409289.2021.1915651>
- Masykuroh, K., Chandrawaty, C., & Mursyidah, I. (2023). Peran orangtua dalam menanamkan literasi lingkungan anak usia dini. *Seling: Jurnal Program Studi PGRA*, 9(2), 162–170. <https://jurnal.stitnualhikmah.ac.id/index.php/seling/article/view/1714>
- Murron, F. S., Djumhana, N., CA, N. D., Ginting, L. C. B., Hendriani, A., & Kurniasih, K. (2024). Pelatihan pengembangan media pembelajaran berbasis pembelajaran berdiferensiasi sebagai upaya optimalisasi program SDGs Indonesia. *BERNAS: Jurnal Pengabdian Kepada Masyarakat*, 5(2), 1773–1781. <https://ejournal.unma.ac.id/index.php/bernas/article/view/8910>
- Nurhillal, Z., Utami, F. B., Valentin, A. D., & Ningsih, T. I. (2025). Enhancing early childhood literacy through the habit of shared storybook reading at TK Mutiara Hati Tangerang. *Community Empowerment*, 10(8), 1653–1660. <https://coba.unimma.ac.id/ce/article/view/13834>
- Ocha, F. A., & Laksana, S. D. (2025). Transformasi pendidikan anak usia dini dan sekolah dasar melalui gamifikasi digital: Solusi kreatif untuk meningkatkan keterlibatan dan prestasi belajar. *Journal of Early Childhood Education Studies*, 5(1), 208–233. <https://doi.org/10.54180/joeces.v5i1.580>



- Oktaviana, W., Warmansyah, J., & Trimelia Utami, W. (2021). The effectiveness of using Big Book media on early reading skills in 5–6 years old. *Al-Athfal: Jurnal Pendidikan Anak*, 7(2), 157–166. <https://doi.org/10.14421/al-athfal.2021.72-06>
- Safita, F., Maghfirah, F., & Pertiwi, A. D. (2026). Pengaruh media Big Book terhadap kemampuan ekoliterasi anak usia 5–6 tahun di Samarinda. *Aulad: Journal on Early Childhood*, 9(2), 689–699. <https://www.aulad.org/index.php/aulad/article/view/1586>
- Setiasih, O., Setiawardani, W., Rusman, R., Djoehaeni, H., & Apriyanto, A. (2025). Pelatihan pengembangan konten edukasi viral bagi pendidik anak usia dini berbasis *techno-pedagogy approach* untuk mencapai tujuan pembangunan berkelanjutan (SDGs) di Provinsi Jawa Barat. *Abdimas Siliwangi*, 8(1), 250–265. <https://journal.ikipsiliwangi.ac.id/abdimas-siliwangi/article/view/26232>
- Triutami, N., Widayati, S., & Komalasari, D. (2022). Penerapan metode bercerita dengan media Big Book kalender untuk meningkatkan perkembangan anak. *Jurnal Pendidikan Anak*, 162–170. <https://jurnal.uny.ac.id/index.php/jpa/article/view/54177>
- Turnbull, K. L., DeCoster, J., Downer, J. T., & Williford, A. P. (2024). Elucidating linkages of executive functioning to school readiness skill gains: The mediating role of behavioral engagement in the PreK classroom. *Early Childhood Research Quarterly*, 69, 38–48. <https://www.sciencedirect.com/science/article/abs/pii/S0885200624000978>
- Yansyah, Y., Hamidah, J., & Ariani, L. (2021). Pengembangan Big Book storytelling dwibahasa untuk meningkatkan literasi anak usia dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(3), 1449–1460. <https://doi.org/10.31004/obsesi.v6i3.1779>
- Zai, S. (2025). Pendidikan Kristen untuk anak usia dini dalam mendukung pembangunan manusia yang berkelanjutan melalui pembelajaran berkualitas. *Montessori: Jurnal Pendidikan Kristen Anak Usia Dini*, 6(1), 101–113. <https://ejournal-iakn-manado.ac.id/index.php/montessori/article/view/2291>
- Zaing, D. K. (2026). Strategi literasi visual dalam meningkatkan kemampuan membaca anak usia dini melalui buku bergambar. *Jurnal Wahana Literasi Pendidikan*, 1(3), 337–346. <https://ejournal.lli.or.id/index.php/JWLP/article/view/410>