QUANTUM EDUKATIF

Volume 03, No. 02, 2026, P. 112-116
E-ISSN: 3089-3429
Website: https://synergizejournal.org/index.php/QE

Utilizing Digital Big Book Media to Improve Early Literacy Skills in Early Childhood

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Abstract

Early literacy is a crucial foundation for young children before entering primary education, yet rigid conventional literacy instruction often makes children bored and less active. This study aimed to analyse the development and implementation of a digital Big Book, examine its effectiveness in improving early literacy (particularly letter and phoneme recognition), and identify the obstacles faced by teachers and children. The study used a descriptive qualitative design combined with Classroom Action Research (CAR) involving 15 children of Group B (aged 5–6 years) at Kindergarten X (a pseudonym; the school's real name is withheld) in Padangsidimpuan City. Data were collected through participatory observation and documentation. The results showed that the digital Big Book significantly improved children's early literacy; dynamic visuals and large text attracted attention, increased listening focus, and encouraged children's verbal expression. The main obstacles were limited digital devices and varied adaptation to technology.

Keywords: digital Big Book; early literacy; early childhood; Padangsidimpuan City

Abstrak

Kemampuan literasi awal merupakan fondasi krusial bagi anak usia dini sebelum memasuki jenjang pendidikan dasar, tetapi metode pembelajaran keaksaraan konvensional yang kaku sering membuat anak cepat bosan dan kurang aktif. Penelitian ini bertujuan menganalisis proses pengembangan dan penerapan media Big Book berbasis digital, menguji efektivitasnya dalam meningkatkan literasi awal (khususnya pengenalan huruf dan fonem), serta mengidentifikasi kendala yang dihadapi guru dan anak. Penelitian menggunakan metode deskriptif kualitatif yang dipadukan dengan Penelitian Tindakan Kelas (PTK) pada 15 anak Kelompok B (usia 5–6 tahun) di TK X (pseudonim; nama asli sekolah disamarkan) Kota Padangsidimpuan. Data dikumpulkan melalui observasi partisipatif dan dokumentasi. Hasil penelitian menunjukkan bahwa Big Book digital secara signifikan meningkatkan literasi awal anak; visualisasi dinamis dan teks berukuran besar menarik perhatian, meningkatkan fokus menyimak, dan mendorong keberanian berekspresi. Kendala utama meliputi keterbatasan perangkat digital dan variasi adaptasi anak terhadap teknologi.

Kata Kunci: *Big Book digital; literasi awal; anak usia dini; PAUD Kota Padangsidimpuan*

INTRODUCTION

Early childhood education is a golden phase in which all aspects of children's development need to be optimally stimulated, including language and basic literacy skills. Early literacy is not merely the mechanical ability to read and write, but children's readiness to recognise letter symbols, understand phoneme sounds, and enjoy literacy activities. Khaironi (2020) explains that at the age of 5–6 years, children have a very high curiosity about literacy symbols and therefore need concrete media to facilitate their learning interactions. Unfortunately, field conditions show that many kindergartens still apply rigid beginning-reading methods based on drilling (rote repetition). In fact, according to the basic principles of early childhood education emphasised by Sujiono (2023), literacy should not be introduced to children through rigid methods, but through interactive media oriented towards the principle of "learning while playing and playing while learning".

To bridge this problem, innovative learning media are needed that attract visual attention while accommodating the learning styles of today's children. One medium that has proven effective in print is the *Big Book*. With its large text and pictures, the *Big Book* is highly effective in helping children recognise letters and spell words more easily. From a neuroscience perspective, structured, colourful, and large visual stimuli can optimise the work of both the right and left hemispheres of the child's brain, making it easier for children to remember symbols and phoneme sounds.

Along with advances in communication technology, this conventional learning medium needs to be modified to become more interactive. Fakhriyani (2021) emphasises the importance of transforming conventional print media into digital or multimedia formats so that they remain relevant to the characteristics of today's generation of children. A digital *Big Book* integrates text, contrasting colours, phoneme audio, and simple animation that can hold children's attention while they listen to the story. Beyond the receptive aspect, the interactive visuals of the digital version have been shown to stimulate children's imagination, making them more confident in retelling the sequence of events in the book. Based on this background, this study aimed to examine the implementation of digital *Big Book* media, test its effectiveness in improving the early literacy of Group B children, and map the operational obstacles that arose during classroom learning.

METHOD

This study used a descriptive qualitative design combined with a Classroom Action Research (CAR) approach. This approach was chosen to directly observe changes in children's literacy behaviour before and after the action was given. The subjects were 15 children aged 5–6 years (Group B). The study was conducted at a private early childhood institution, Kindergarten X, located in Padangsidimpuan City, North Sumatra Province. Kindergarten X is a pseudonym; the school's real name is withheld to protect the identity of the institution and its pupils. The site was selected on ethical grounds and because the institution needed to optimise the use of technology-based facilities to support children's learning outcomes, particularly in early literacy.

Data were collected through participatory observation and documentation. Observation was carried out regularly in each action cycle using an observation sheet to assess children's achievement of early literacy indicators, such as the ability to recognise vowels and consonants, imitate phoneme sounds, and show interest in listening to stories. Documentation, consisting of photographs of classroom activities, video recordings of children's interaction with the digital screen, and portfolios of children's performance assessment sheets, served as authentic supporting data to validate the qualitative field observations. Children's achievement was assessed using the criteria Not Yet Developed (BB), Starting to Develop (MB), Developing as Expected (BSH), and Very Well Developed (BSB).

RESULTS AND DISCUSSION

Implementation of the digital Big Book at the research site

The implementation of the digital *Big Book* in Group B at Kindergarten X Padangsidimpuan was designed in three main stages: pre-learning, core activity, and evaluation. In the initial stage, the teacher arranged the children in a semicircle facing the display device or interactive screen in the classroom. The use of the medium began with the teacher directing the children's attention to the cover of the digital book, which displayed contrasting colours and moving animations close to the children's surroundings (such as local fruits and environmental stories). This practical step is in line with Latifah (2020), who states that media with contrasting colours and simple text are highly effective in fostering enjoyment of reading and independent exploration among children. During shared reading, the teacher used the interactive audio feature, with children taking turns to come

forward and tap letter symbols on the screen to hear the correct phoneme pronunciation independently.

Based on the documentation collected during the learning process, the interactivity of the lessons was clearly recorded in the following three main phases.

1. **Pre-learning phase.** Documentation of the opening activity shows the teacher arranging the 15 Group B children to sit neatly in a semicircle on the classroom carpet. The display device projected the cover of the digital *Big Book* entitled "Petualangan Si Kancil Cerdik" (The Adventures of the Clever Mouse Deer). Photographs show the children's faces full of enthusiasm and their full attention directed at the screen, stimulated by the vivid colour illustrations.
2. **Core phase (media interaction).** Photo and video documentation of the core stage captured the moment when a representative child (Ananda F) came to the front of the class under the teacher's guidance to tap the sound button icon on the interactive screen. The camera recorded the child accurately imitating the phoneme "b-b-b-buku" (book) following the audio from the speaker, which was then repeated in unison by the other children.
3. **Outcome phase (children's portfolios).** Post-action learning portfolios contained worksheets for tracing letters and matching words with pictures, as well as the teacher's daily assessment sheets, which were dominated by four-star achievements (Very Well Developed).

Improvement in children's early literacy skills

After the learning action using the digital *Big Book* was implemented, there was a significant increase in the literacy performance of the 15 Group B children. Based on the observation sheets completed from the initial condition (pre-cycle) through Cycle I to Cycle II, the development of children's abilities is summarised in Table 1.

Table 1. Observation Results of the Qualitative Development of Early Literacy Skills of Group B Children (N = 15)

Early Literacy Indicator	Pre-cycle	Cycle I	Cycle II	Impact of the Action
1. Recognising letter symbols (distinguishing vowels and consonants and similar letters b-d, p-q)	MB (40% mastery)	BSH (65% mastery)	BSB (86% mastery)	Children no longer confused letter shapes because the typography on the large screen was big and clear.
2. Phonetic understanding (imitating letter/phoneme sounds via media audio)	BB/MB (33% mastery)	BSH (60% mastery)	BSB (80% mastery)	Phonics audio support from the digital system sharpened the accuracy of children's phoneme pronunciation.
3. Receptive skills (focus on listening to the story and answering the teacher's questions)	MB (46% mastery)	BSH (73% mastery)	BSB (93% mastery)	Constantly moving visual animation maintained children's concentration throughout the storyline.
4. Expressive skills (daring to retell the sequence of events in front of the class)	BB (26% mastery)	MB/BSH (53% mastery)	BSH (80% mastery)	Dynamic visual stimulation enriched imagination and built children's self-confidence.

Note: BB = Belum Berkembang (Not Yet Developed); MB = Mulai Berkembang (Starting to Develop); BSH = Berkembang Sesuai Harapan (Developing as Expected); BSB = Berkembang Sangat Baik (Very Well Developed).

Referring to Table 1, the letter-symbol recognition indicator showed very good gradual strengthening. Before the action, only about 40% of children could consistently distinguish similar letters. After the interactive digital *Big Book* was implemented, the percentage of achievement rose sharply to 86% in the final evaluation. This empirical finding confirms the advantage of digital visual elements in capturing children's visual attention, making it easier for the brain to record and absorb new literacy information optimally.

An equally important improvement was found in children's expressive language. The representative and adaptive characteristics of the digital images successfully stimulated children's

cognitive imagination. As a result, children were encouraged to articulate ideas and retell the story in their own sentences coherently in front of the class. This large-format contextual visual stimulation proved to enrich children's new vocabulary and train their verbal ability to produce short, logically structured sentences.

Supporting and inhibiting factors during learning

The main supporting factor was children's high enthusiasm for the interactive technology presented by the teacher. Children perceived learning to read as an enjoyable educational multimedia activity, which minimised boredom. However, the researcher also found several operational obstacles. The main obstacles included limited supporting technology infrastructure, such as an occasionally unstable internet connection and display devices that had to be shared with other classes. In addition, at the beginning of implementation, the teacher faced challenges in maintaining classroom order because several children scrambled to come forward and touch the interactive screen at the same time. Children's varying levels of adaptation to digital devices also required extra attention so that those unfamiliar with such devices at home did not fall behind their peers.

CONCLUSION

The use of digital *Big Book* media proved effective in improving the early literacy skills of children aged 5–6 years in Group B at Kindergarten X; the integration of large text, moving animation, and interactive phonics audio optimised children's visual cognitive functions so that letter recognition was understood more quickly, the classroom became child-centred, and children's courage to communicate increased. Despite technical and managerial obstacles at the beginning of implementation, the overall effectiveness of this medium was very good in laying the foundations of children's literacy in an enjoyable way. School administrators and early childhood teachers are advised to schedule the use of digital devices in a structured manner and to establish clear classroom rules so that children can take turns interacting with the media in an orderly way; teachers should continue developing their technological skills so that they can independently produce digital *Big Books* on various themes; and future researchers are expected to examine the effectiveness of this medium with larger samples and its influence on other developmental aspects such as cognitive and fine motor development.

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