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(IJEPC)<https://gaexcellence.com/ijepe>IN-SERVICE PRESCHOOL TEACHERS' EXPERIENCES IN  
CREATING DIGITAL STORYBOOKS USING A DIGITAL  
TOOLBalvinder Kaur Khalsa<sup>1</sup>, Iylia Dayana Shamsudin<sup>2\*</sup><sup>1</sup> Faculty of Human Education, Sultan Idris Education University, Perak, Malaysia;  
Department of Education, HELP University, Selangor, Malaysia [balvinderkaur.ss@help.edu.my](mailto:balvinderkaur.ss@help.edu.my) <https://orcid.org/0009-0009-2572-9790><sup>2</sup> Faculty of Human Education, Sultan Idris Education University, Perak, Malaysia [iyliadayana@fpm.upsi.edu.my](mailto:iyliadayana@fpm.upsi.edu.my) <https://orcid.org/0000-0003-3035-3854>

\*Corresponding Author

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## Abstract:

The paper aims to investigate in-service preschool teachers' experiences of creating digital storybooks using the digital tool Book Creator. Book Creator is an open digital tool available easily on the website. This digital tool was introduced to the in-service preschool teachers via an 8-hour training program. This research paper utilised a blend of quantitative and qualitative methods to obtain the data. The survey questionnaires were distributed to 30 in-service preschool teachers involved in the training program. The findings show a very high mean of 4.300, indicating that Book Creator is an easy-to-use digital tool for creating digital storybooks. JASP demonstrated a high mean value for the teachers' experience in applying multimedia elements available in Book Creator to create digital storybooks: adding text (4.10), inserting images (4.13), embedding videos (4.07), and adding recorded audio (4.10). Qualitatively, open-ended interviews were conducted to understand teachers' perceptions and use of the multimedia elements in Book Creator. The in-service preschool teachers described Book Creator as having great functionality and accessibility. Some challenges encountered were gaps in creativity and technological glitches. In conclusion, Book Creator, as a digital tool for creating digital storybooks, was well favoured and accepted by the in-service preschool teachers, although some limitations were noted. The experience gained through the training significantly enhanced the teacher's knowledge, providing positive, enriching hands-on practice in creating digital storybooks.

**DOI:** 10.35631/IJEPC.1163055**Keyword:**

Digital Literacy, Digital Storybooks, Digital Tools, Multimedia Elements



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## Introduction

Applying digital technologies skilfully is now necessary in learning and everyday life, especially in education. Likewise, as reading and writing were once the most fundamental skills, being technologically adept is now crucial for optimal performance in this digital age (Tomczyk & Fedeli, 2021).

In a study, Hamilton et al. (2019) describe digital storytelling as an approach that simplifies intellectual engagement between children and teachers by connecting to the material in a distinctive style. Digital stories use multimedia tools such as computer-generated images, text, audio, video, and music (Catalano & Catalano, 2022).

Book Creator was developed in 2011 as a tool to help visitors create, read, and share digital books (Red Jumper Limited, 2019). Book creator allows users, subscribers, or visitors to create their own interactive books or stories by leveraging a range of ready-made resources, such as video clips, sounds, images, and even their own voice and drawings (Fitria, 2024).

## Research Objectives

1. Determine the perception of in-service preschool teachers in creating digital storybooks using Book Creator as a digital tool.
2. Explore positive experiences of the in-service preschool teachers in creating digital storybooks.
3. Investigate the level of in-service preschool teachers' experience in using Book Creator's multimedia elements related to the skill of creating digital storybooks.
4. Examine the challenges encountered by the in-service preschool teachers during the creation of digital storybooks.

## Research Questions

1. To what extent does the use of Book Creator as a digital tool relate to in-service preschool teachers' perceptions of creating digital storybooks?
2. How do the in-service preschool teachers describe the creation of digital storybook experiences positively?

3. How does the level of in-service preschool teachers' experiences in using Book Creator's multimedia elements relate to their level of digital storybook creation skill?
4. How do the in-service preschool teachers describe the challenges they encountered during the creation of digital storybooks?

In the 21st-century, computer-driven age, interactive media, also known as multimedia, has been adopted as an essential component in education, particularly in teaching and learning (Mandar, 2024). It was reported in interviews that teachers are aware of the importance of multimedia; however, they collectively agreed that they have received insufficient training in integrating multimedia into teaching (Mandar, 2024). This highlights concerns and gaps that need clarification, prompting the researcher to prepare digital training for in-service teachers first, since they are in the industry and need knowledge enhancement.

Some studies have revealed a substantial demand for kindergarten teachers to possess digital skills (Mohd Kharul Anuar Abdul Rahim & Kamariah Abu Bakar, 2023; Rohita, 2020). Since there is a great demand for preschool teachers to master digital skills, not only using the equipment, but also creating digital content, this study intends to give training on creating digital storybooks for young children.

This research is also informed by feedback from the teachers, who are ready to learn new digital skills; however, limited training leaves them apprehensive about integrating multimedia and developing new digital content.

The purpose of this study is to understand in-service preschool teachers' experiences creating digital storybooks using the digital tool Book Creator.

## **Literature Review**

### ***Importance of Digital Literacy among Preschool Teachers***

According to Xue (2025), digital literacy is defined as the ability to use digital technologies competently. Chan et al. (2025) reported that pedagogical skills have a greater impact when teachers are proficient in purposefully optimising technology as a learning tool and educational resource. Alternatively, preschool teachers expressed doubts about utilising technology in classrooms, as they were inadequately trained to implement digital learning activities and noted that they were victims of digital illiteracy (Hrdinová, 2025). Preschool teachers shared that children are evolving in accordance with the advancement of technology, which was handled greatly by teachers as they are mostly prepared to carry out web-based instructions, utilising numerous digital tools that contain videos, sounds and images (Catalano & Catalano, 2022; Mohd Kharul Anuar Abdul Rahim & Kamariah Abu Bakar, 2023). In contrast, some teachers were apprehensive that technology would influence children's long-term development (Hrdinová, 2025).

In particular, storytelling increased children's understanding and moral virtues when digital storybooks were used (Catalano & Catalano, 2022; Prasetya & Hirashima, 2018). This is due to the interactive multimedia components in the digital storybooks, which enhance children's curiosity, making the experience more enjoyable and engaging. In line with this, Khalsa (2026) reported that early childhood education (ECE) educators are keen to use digital storybooks to

teach stories and motivate children. Conversely, the ECE teachers reported limited knowledge of creating digital storybooks and requested training (Khalsa, 2026).

### ***Book Creator and Multimedia Elements***

Book Creator, as a web-based application, offers numerous benefits, including being handy: it can be accessed for reading anywhere, anytime, as long as there are devices. Besides, Book Creator is known for promoting environmental sustainability by reducing the use of paper made from trees (Muhisom et al., 2023). It comes together as packages with multimedia elements. Multimedia or multimodal generally refers to the combination of audio and visual elements, including texts, sound, images, and video (Meenakshi, 2023).

According to a study by Fitria (2024), Book Creator is a platform that enables individuals, be it students or teachers, to develop media-rich digital books for storytelling, portfolios, and more. This research by Fitria (2024) reported that interactive TOEFL course modules were successfully created using a combination of audio recordings, videos, and images, including reading passages, listening exercises, essay-writing prompts, and multiple-choice questions.

Similarly, a study of first-year students in Japan found that Book Creator was well received, as it was perceived as fun and easy to use, and its design was praised for conveying their imagination and teamwork (Mogi, n.d.).

On the other hand, Salsabilah Nur Izzati and Rachmawati (2026) reported that teachers and students face hurdles when using Book Creator as they lack digital capabilities and are not ready for digital utilisation. Individuals should be willing to accept longer planning and execution times and be creative and flexible, with a greater focus on design and visual components (Salsabilah Nur Izzati & Rachmawati, 2026).

### ***Experiential Learning KOLB Theory***

Kolb's model, or Experiential Learning Theory (ELT), is applied in this study to understand how in-service preschool teachers perceive and develop their practical knowledge through their engagement with Book Creator to create digital storybooks during the training. ELT is a functional and cognitive development path that highlights reflective practice or inquiry-based learning (Kolb, 1984).

Based on Figure 1, ELT comprises four learning cycles: concrete experience (CE), reflective observation (RO), abstract conceptualisation (AC), and active experimentation (AE). This theory guides the analysis of teachers' participation, reflection, understanding, and application, providing a thorough perspective on both quantitative and qualitative data.

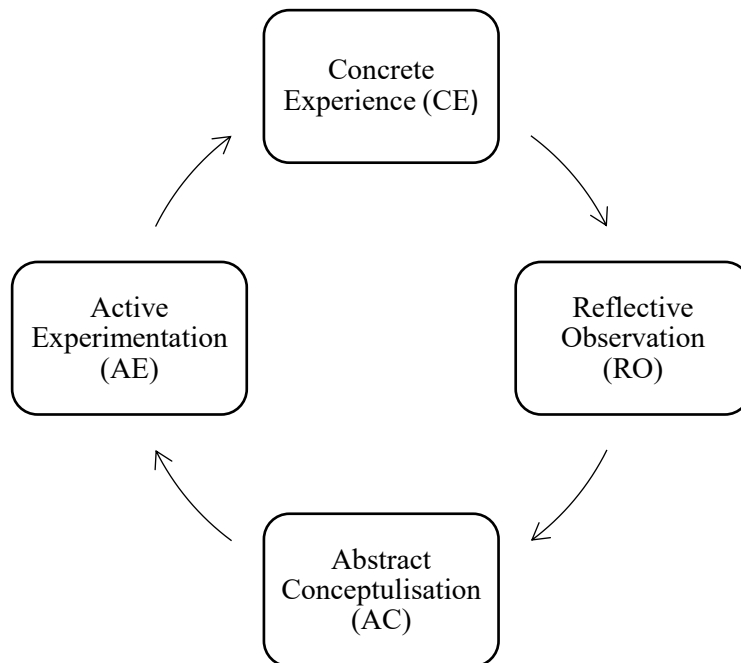


**Figure 1: Experiential Learning Theory**

Source: Adapted from Learning together: Kolb's experiential theory and its application by Akella, 2010 Journal of Management & Organization, 16(1), p. 100-112. Copyright 2010 by eContent Management Oty Ltd.

## Methodology

This study employed a mixed methods approach to data collection and analysis. The mixed-methods design proposes a thorough interpretation of the research (Sharma et al., 2023). In this research, a convergent parallel mixed-methods design (Figure 2) is employed. This design allows the researcher to collect both quantitative and qualitative data, and to analyse, compare, or relate them to determine whether the results support or contradict each other (Creswell & Creswell, 2018).

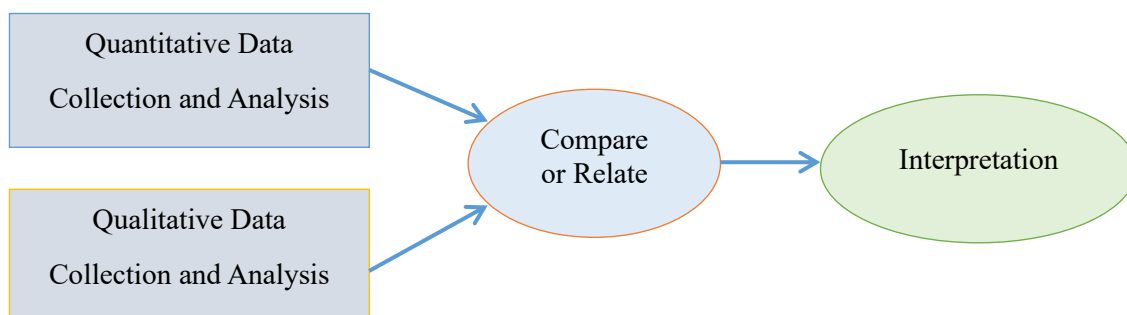


**Figure 2: Convergent Parallel Design.**

Source: Adapted from Exploring the Mixed Methods Research Design: Types, Purposes, Strengths, Challenges, and Criticisms, by Sharma et al., 2023, Global Academic Journal of Linguistics and Literature, 5(1), p. 7. Copyright 2023 by Global Academic Journal's Research Consortium (GAJRC).

The purposive sampling method was adopted for sampling technique to recruit 30 in-service preschool teachers due to the specificity of this study in the creation of storybooks for kindergarten children.

The instruments used to collect the data were 5 Likert-scale survey questionnaires. According to Koo and Yang (2025), a 5-point Likert scale is appropriate for data collection and enables participants to indicate their level of agreement, opinion, understanding, and disagreement. The questionnaires and semi-structured interview questions were validated by experts and found to be valid and reliable, with a good internal consistency ( $\alpha = 0.89$ )

The collected quantitative data were analysed using Jeffreys's Amazing Statistics Program (JASP; Reference). The qualitative data analysis was based on In Vivo's Coding, which emphasises the actual spoken words of the in-service preschool teachers (Manning, 2017).

Table 1 portrays the interpretation of mean score indicators. The table shows scores between 1.00 and 1.89 as a very low mean score level, scores between 1.90 and 2.69 as a low mean score level, scores between 2.70 and 3.49 as a moderate mean score level, scores between 3.50 and 4.29 as a high mean score level and scores between 4.30 and 5.00 as a very high mean score level.

**Table 1: Mean Score Indicators**

| Mean Score  | Interpretation |
|-------------|----------------|
| 4.30 – 5.00 | Very High      |
| 3.50 – 4.29 | High           |
| 2.79 – 3.49 | Moderate       |
| 1.90 – 2.69 | Low            |
| 1.00 – 1.89 | Very Low       |

Source: Adapted from The Level of Integration among Students at Secondary School: A Study in Limbang, Sarawak, by Zaki & Ahmad, 2017, p. 3285. Copyright 2006 by Education Policy Planning and Research Division, MOE (BPPDP) and Kuala Lumpur Education Development Master Plan (PIPP) in The International Journal of Social Sciences and Humanities Invention.

Table 2 represents the interpretation of the correlation coefficient indicators. The table shows scores between 0.00 and 0.10 as a negligible correlation, scores between 0.10 and 0.39 as a weak correlation, scores between 0.40 and 0.69 as a moderate correlation, scores between 0.70 and 0.89 as a strong correlation and scores between 0.90 and 1.00 as a very strong correlation.

**Table 2: Correlation Coefficient Indicators**

| Correlation Coefficient | Interpretation          |
|-------------------------|-------------------------|
| 0.00 – 0.10             | Negligible correlation  |
| 0.10 – 0.39             | Weak correlation        |
| 0.40 – 0.69             | Moderate correlation    |
| 0.70 – 0.89             | Strong correlation      |
| 0.90 – 1.00             | Very strong correlation |

Source: Adapted from Correlation Coefficients: Appropriate Use and Interpretation by Schober, Boer & Schwarte, 2018, *Anesthesia & Analgesia* 126(5) p. 1763-1767.

## Findings

The results of the study are discussed quantitatively and qualitatively. Research question 1 is discussed below.

### *To What Extent Does the Use of Book Creator as A Digital Tool Relate to In-Service Preschool Teachers' Perceptions of Creating Digital Storybooks?*

#### *Quantitative*

The results in Table 3 indicate that teachers had positive perceptions of the Book Creator tool to create digital storybooks. The very high mean value of 4.367 indicates that teachers are very confident that the Book Creator is a tool that helps them create digital storybooks. Besides, a very high mean value of 4.333 indicates that teachers believe Book Creator can be learned very quickly to create digital storybooks. This is supported by the results, which show a very high mean value of 4.300, indicating that the teachers find Book Creator easy to use for creating digital storybooks. Being a useful application with a high mean value of 4.233, it explains why teachers were able to create digital storybooks. Additionally, Book Creator is an easy and flexible application, with a high mean value of 4.233, which proves that teachers could understand the Book Creator application better with a high mean value of 4.233 (high mean).

**Table 3: Descriptive Statistics of Teachers' Perceptions on Book Creator**

|                                                                                      | N  | Mean  | Std. Deviation |
|--------------------------------------------------------------------------------------|----|-------|----------------|
| The use of Book Creator can facilitate the process of creating digital storybooks.   | 30 | 4.367 | .490           |
| I find that Book Creator is a useful application.                                    | 30 | 4.233 | .774           |
| I find that Book Creator is easy to use to create digital storybooks.                | 30 | 4.300 | .535           |
| It is easy to become skilled in using the Book Creator to create digital storybooks. | 30 | 4.333 | .547           |
| My interaction with the Book Creator is clear because it is flexible.                | 30 | 4.133 | .0571          |
| I could understand the Book Creator application.                                     | 30 | 4.233 | 0.504          |

The results in Table 3 are further explained and supported by the results in Table 4. The Pearson correlation analysis demonstrates a positive, moderate, and statistically significant relationship between the use of Book Creator and perceptions ( $r = 0.460$ ,  $p = .011$ ). It suggests that increased utilisation is linked to satisfactory outcomes.

**Table 4: Correlations between the usage of Book Creator and the Mean of Perceptions***Pearson's Correlations*

|                                             | n  | Pearson's r | p    |
|---------------------------------------------|----|-------------|------|
| Usage of Book Creator - Mean of Perceptions | 30 | 0.460*      | .011 |

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ *Qualitative*

Research question 2 is discussed below:

***How Do the In-Service Preschool Teachers Describe the Creation of Digital Storybook Experiences Positively?***

Further, research question 2 is noticed qualitatively with a description of the positive learning experience by the teachers through Table 5. Two categories: insightful moment and accessibility, were derived from the original excerpts of the teachers. Both of these categories are themed around the usability and engagement of Book Creator. This digital tool for creating digital storybooks was seen as easy to use with friendly features. These are supported by quotes from T1 and T2, who described it as “user-friendly” and “so much fun”.

**Table 5: Usage of Book Creator: Excerpts, Codes, Categories, and Themes**

| Teachers | Quote         | In Vivo Code           | Category          | Theme                  |
|----------|---------------|------------------------|-------------------|------------------------|
| T1       | User friendly | <i>“User-friendly”</i> | Insightful moment | Usability and engaging |
| T2       | So much fun   | <i>“So much fun”</i>   | Accessibility     | Usability and engaging |

Research question 3 is discussed below.

***How Does the Level Of In-Service Preschool Teachers' Experiences in Using Book Creator's Multimedia Elements Relate to Their Level of Digital Storybook Creation Skill?****Quantitative*

Table 6 indicates that the in-service preschool teachers were comfortable in using the multimedia elements of Book Creator, such as text, images, video and audio recordings. All these elements were added to the digital storybooks by the teachers. A high mean is displayed for adding text (4.10), inserting images (4.13), embedding videos (4.07) and adding recorded audio (4.10). The easy-to-use multimedia components in Book Creator make it simple for teachers to develop digital storybooks swiftly.

**Table 6: Experience of Using the Multimedia Elements (text, images, video and audio) in Book Creator to Create Digital Storybooks**

|                                                                 | N  | Mean | Std. Deviation |
|-----------------------------------------------------------------|----|------|----------------|
| I was able to add the text to the storybook                     | 30 | 4.10 | .481           |
| I was able to insert images into the storybook                  | 30 | 4.13 | .434           |
| I was able to embed videos into the storybook                   | 30 | 4.07 | .640           |
| I recorded my own voice and was able to add it to the storybook | 30 | 4.10 | .548           |

Table 7 presents the correlations between teachers' experience utilising multimedia elements in Book Creator and their skill in creating a digital storybook. The analysis showed no significant relationship between experience and the level of digital storybook creation ( $r = -0.080$ ,  $p = 0.676$ ), indicating that prior expertise or skill does not affect in-service preschool teachers' potential to develop digital storybooks.

**Table 7: Correlations between Teachers' Experience using Multimedia Elements in Book Creator and Level of Digital Storybook Creation***Pearson's Correlations*

|            |                                       | n  | Pearson's r | p    |
|------------|---------------------------------------|----|-------------|------|
| Experience | - Level of Digital Storybook Creation | 30 | -0.080      | .676 |

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

***Qualitative***

Research question 4 is discussed below:

***How Do the In-Service Preschool Teachers Describe the Challenges They Encountered During the Creation of Digital Storybooks?***

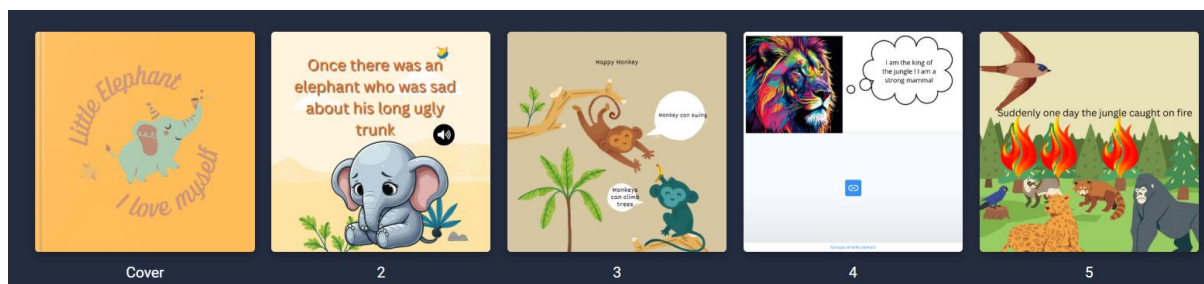
Table 8 presents excerpts from the open-ended interview questions. The teachers' original words are displayed as evidence of the codes. These results are opposite to the quantitative findings above. There are two categories in Table 5: layout challenges and technology restraints. Two themes emerged from these categories: hurdles in imagination and hurdles in technology. These findings demonstrate the challenges teachers face when creating a digital storybook using Book Creator. Hurdles in imagination are noticed from what T3 and T4 stated, respectively, "difficult to create a story" and "difficult to arrange pictures in the digital book".

**Table 8: Experience of Teachers: Excerpts, Codes, Categories and Themes**

| Teachers | Quote                                             | In Vivo Code                                               | Category             | Theme                                 |
|----------|---------------------------------------------------|------------------------------------------------------------|----------------------|---------------------------------------|
| T3       | Difficult to create a story                       | <i>"Difficult to create a story"</i>                       | Layout challenges    | Hurdles in creativity and imagination |
| T4       | Difficult to arrange pictures in the digital book | <i>"Difficult to arrange pictures in the digital book"</i> | Layout challenges    | Hurdles in creativity and imagination |
| T5       | Hard to record video                              | <i>"Hard to record video"</i>                              | Technology Restraint | Hurdles in technology                 |
| T6       | Not familiar with adding video and audio          | <i>"Not familiar with adding video and audio"</i>          | Technology Restraint | Hurdles in technology                 |
| T2       | Cannot copy images from the browser               | <i>"Cannot copy images from browser"</i>                   | Technology Restraint | Hurdles in technology                 |

Some of the digital storybooks in Figures 3-5 were created by the teachers during the training sessions.

Figure 3 is a digital storybook created by a teacher (T4) with the title of 'Little Elephant – I love Myself'. This teacher successfully created five pages, indicating confidence in adding text, images, audio, background, and a simple task (an animal-category puzzle).

**Figure 3: Example of Digital Storybook by T4**

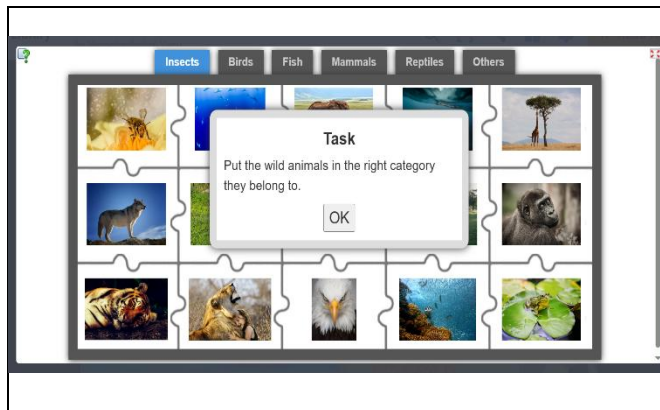


Figure 4 Appears When Slide 4 In Figure 3 Is Clicked. It Is a Task to Select the Correct Category of Wild Animals.

**Figure 4: A Task to Select the Correct Categories of Wild Animals**

Figure 5 is a digital storybook by a teacher (T6) with the title 'A Day as a Cat'. Creating a five-page digital storybook is a good starting point for a teacher who faces the challenge of adding video and audio. However, on a positive note, T6 was able to add texts, images and use a layout or background.

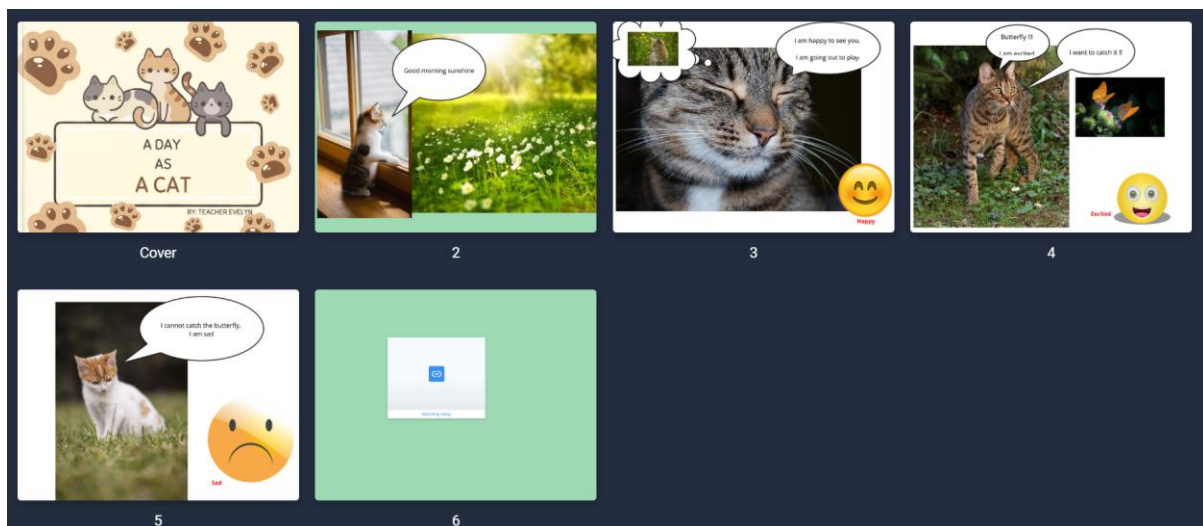


**Figure 5: Example of Digital Storybook by T6**

### Interpretation Of Findings

Generally, the in-service preschool teachers had positive views and valued utilising the Book Creator as a digital tool to develop digital storybooks; however, they still encountered obstacles with certain enhanced functionalities and in designing storybooks. The amplified utilisation was linked to more enriching experiences, while prior understanding did not alleviate complexity. This underlines the need for professional development and systematic facilitations.

### Discussions

Research question one revealed that the teachers had positive experiences using Book Creator to create digital storybooks, which they described as easy, flexible, and clear, indicating that it

can be learned quickly. These results are consistent with the previous study by Fitria (2024), which stated that the key features of Book Creator are user-friendly for users of all levels. Qualitatively, in response to research question two, the in-service teachers reported that they had fun due to the accessibility provided by Book Creator. This is supported by Salsabilah Nur Izzati and Rachmawati (2026), who explained in their discussion that Book Creator is a fresh, fun, and interesting learning opportunity. Contrarily, Muhsom, Anjar, Destiani, and Pangestu (2023) argued that Book Creator has some subordinate shortcomings, such as affecting eye health if continuously looking at the computer screen, and obviously requiring electrical power to read, which means if a device dies, there is no longer access to the Book Creator.

The findings in research question three exhibit that adding digital elements, such as images, text, video, and audio, was conveniently learned by the teachers while developing digital storybooks. These results reveal that the Book Creator is an easy-to-use digital tool for beginners (Red Jumper Limited, 2019). Similarly, it was reported that users effortlessly manage text, images, audio and video to create digital books creatively (Fitria, 2024). Conversely, the findings qualitatively in research question four revealed that some teachers encountered challenges with creativity while developing the digital storybooks. In line with these findings, it was reported that Book Creator had limitations in preparation and implementation time (Salsabilah Nur Izzati & Rachmawati, 2026). This shows that teachers' capabilities and readiness are important, with sufficient planning and guidance (Salsabilah Nur Izzati & Rachmawati, 2026).

Following Kolb's cycle in Figure 1, in accordance with the ELT, it is noted that the in-service preschool teachers were delighted using the Book Creator tool (experience), they then observed it as beneficial and practical (reflection), they began to comprehend and grasp it (conceptualisation), and eventually, when they frequently applied it, their perceptions were refined and developed.

### **Implications**

The in-service preschool teachers valued the training they received in using the easy, simple web-based application to create digital storybooks. They built their confidence level, although they faced some hiccups. They were able to include the multimedia elements in the storybooks.

### **Recommendation & Conclusion**

In future research, the number of participants can be increased to better understand the preschool teachers' digital capabilities. Additionally, other digital tools available on the market can be utilised to create digital storybooks for young children. I would suggest a quasi-experimental study involving both teachers and children to allow a comparative analysis. Overall, it was a good start with a short 2-day training for in-service preschool teachers on creating digital storybooks; however, the training time could be increased to give teachers ample time to create their books.

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**Author Contribution Statement:** All authors contributed significantly to the development of this manuscript. Balvinder Kaur Khalsa contributed to the literature review and drafted; handled data collection, analysis, and interpretation of results. Iylia Dayana Shamsudin was responsible for the conceptualisation, methodology, and overall supervision of the study and critical revision of the manuscript. All authors read and approved the final version of the manuscript before submission.

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