Identifying e-books in promoting literacy for children in general and children with disabilities

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Abstract. ICT-based media have been chosen by people within various contexts. One of the easiest media to access nowadays is electronic books (e-books). This article seeks to identify e-books effectiveness to promote literacy digitally. E-books from various online platform were acquired and analysed. The results showed that e-books had been revealed to be effective in promoting literacy for children with and without disabilities. It is implied that e-books can be an effective virtual tool in the era of industrial revolution 4.0.

1. Introduction
Children are now increasingly familiar with the digital world. Devices such as smartphones, PC, as can e-books. Electronic book users are increasingly growing among children. In accordance with the journal in Toole and Kannass [1], that in 2017, 28% of children had read e-books on tablet devices, or smartphones.

In using technology, digital literacy or skills and abilities are needed to stay in balance with the current technological era [2]. Like reading, understanding multimedia texts, and also being able to convey them included in the aspects of digital literacy [2].

Digital literacy relates to using electronic books, or digital versions of printed books. This electronic book can be defined as a copycat of a printed book that is converted into reading on an electronic screen without changing the basic structure that can be downloaded from various platforms and can be stored on mobile devices [3,4].

E-books have an important role in cognitive aspects because children can have knowledge and learn from this e-book, of course, associated with literacy, such as word knowledge, reading, also has a positive effect that can support children to stay involved and read or listen to stories in the electronic book [5,6].

E-books become one of the contexts so that children who are familiar with the internet and technology-based platforms, not only use digital as entertainment, but can also be learning and improve literacy for children by continuing to read using digital books [7].

2. Methods
The method for this research is the study of literature by examining various journals of the last five years accessed from the Sage journal, Routledge, Taylor & France, and Science Direct platforms. Journal search terms include e-books, electronic books, e-books for children, digital books, literature review, e-book features, digital literacy.
3. Research results

3.1. E-book for children

The existence of the Internet, smartphones, ease of accessing and downloading e-books, full-text search, options for downloading and printing, storage space that is not large, lower prices than printed books, easy to make copies, easy to carry, and easy to sought is the main attraction for making e-books as reading material and the reasons for the development of electronic book users [3,8-10].

Types of e-books that are widely used by children, such as computer story books, e-book tablets, smartphone applications, of course, are related to the features contained in the book. because the features used allow them to read independently and are interesting to read over and over again, not only that, e-books succeed in influencing learning and involvement directly in children [1,11].

3.2. Tools in e-books

Compared to printed books, e-books are very interesting because of the tools used, such as audio narratives, games, music, text highlighting, video, and other interactive content [1,9]. Korat O and Shneo, the book used includes narrative text stories, animations, and dictionaries that explain difficult words in the story [12], such as:

- A dictionary
- Bubble words that show written dictionary words
- Verbal explanation of words
- Dynamic illustration that illustrates the meaning of the word

Significant improvement between the numerical learning approach of children who use e-books and children who do not use e-books in research Li et al [5] can be attributed to e-book tools, namely:

- Demonstrate the operation process of video

Situation-based interactive e-books are designed in the form of videos that display the character visually.

Tools for adding multimedia must be developed in e-books because it is not only entertaining, but can also improve literacy, development in children's language, and understanding of the stories provided [13]. Tools that must be developed such as:

3.2.1. Dynamic visuals. Dynamic visual is animation, which consists of music and sound that appears on the e-book. For example, sound and animation will appear when clicking on an animation in an electronic book. This tool can certainly add to the attractiveness of children.

3.2.2. Book process. The book process includes; move back and forth through the screen, highlighted text, re-read text, background music to the story, turn off text reading, turn off background music and mute all (reading and music), and choose different languages.

3.2.3. Game. Games in the e-book are only slightly relevant to the story text. Examples of the game are puzzles that illustrate the characters in the story. While the e-book feature for children with MV-ASD or children who have a minimum verbal autism spectrum disorder by reading an e-book that has 10 to 12 words per page, along with photos or images that are appropriate and accompanied and read aloud-hard has features; manipulation of text, sound, and images [14].

3.3. Implications of e-books on children's literacy

In increasing children's literacy, the real implication that can be used is the existence of an e-book called WKe-book. The electronic book is effective in increasing the calibration of word knowledge, as well as the use of strategies [6]. E-books designed with supportive animations can help children's learning. In addition, electronic books can also add new vocabulary during reading or listening without the help of
others, especially for children who are at risk or learning disabilities [15,16]. The existence of various tools, increased their attention a little to the e-book [14].

E-books are more effective than paper books to increase children's involvement by using an online dictionary which is one of the tools in e-books [6]. Simple audio narration tools can also attract children's attention and support them to add new vocabulary [1]. The implementation of animation tools that illustrate the meaning of words along with their visual images in e-books motivates children to learn new words [7].

4. Conclusions and upcoming research

4.1. Conclusion

E-books can increase literacy in children in terms of adding new vocabulary, the use of e-book features such as pictures or animations can provide support, encouragement, and motivation in children [11]. Dynamic visual features can attract children's attention for reading electronic books, e-books are also more effective in increasing children's involvement in digital literacy. Then, for MV-ASD children, e-books attract a little more attention and get to know the concepts of letters better and in terms of numerical learning, e-books can improve children's learning achievement.

Although there are obstacles in using e-books such as, inconvenience when reading on the mobile screen, lack of relevant e-books available, eye health problems due to reading in electronic books, and features that are not appropriate [3] however, in research conducted Lawson et al., [1], that e-books become children's habits that are fun and make them feel happy.

4.2. Future research

Future studies are expected to be able to conduct research directly, and develop the scope of research, not only for the use of features for children literacy, but also more specifically about features suitable for children who want to listen to the e-book without and or assistance from the closest person, both parents or teacher.

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