

Digital Fairytale Book as a Children's Literature-based Learning Media for freedom to Learn in Primary Education Perspective

Nanda Veruna Enun Kharisma¹, Hermanto²

{nanda0031pasca.2020@student.uny.ac.id¹, hermansp@uny.ac.id²}

Yogyakarta State University
Colombo Street No. 1, Karangmalang, Sleman, Indonesia^{1,2}

Abstract. Empowering digitized children's literature for integrity recovery might be a solution in the era of freedom-to-learn post-pandemic of Covid-19. This study aims to produce a digital fairytale book that meets the validity and practicality criteria. This research used the research and development (R&D) method with the ADDIE model. The study was conducted in Agustus-September 2022 at Wuluhadeg State Elementary School. The research subjects were material expert, media expert, 3rd-grade elementary school students, and teachers. The data collection technique used questionnaires with a descriptive analysis technique. This research found that VIRTUE-BOOK is valid and practical to be used as a learning medium in elementary school learning for freedom-to-learn. The material expert gave a score of 3,7 (very valid). The media expert provided a score of 3,56 (very valid). The practicality is determined by students' and teachers' responses during one-on-one and small-group evaluations. Both evaluations obtained results as very-practical criteria.

Keywords: VIRTUE-BOOK, Digitized Children's Literature, Integrity

1 Introduction

The Freedom to Learn Curricula (Kurikulum Merdeka) has been implemented in Indonesia as a response to the crisis experienced by teachers and students during distance learning due to the Covid-19 pandemic. Crises and learning gaps are not new problems in Indonesia. However, the Covid-19 pandemic has exacerbated this problem. The pandemic has become an obstacle to improving and equalizing educational quality in Indonesia. The pandemic is also a factor in students experiencing moral degradation, specifically integrity.

According to Pokhrel & Chhetri [1], the closure of schools, institutions, and other learning spaces during the pandemic has affected more than 94% of the student population worldwide. Online distance learning system has been sought as a solution, regardless of the challenges and problems for teachers and students. One of the problems that arises as a result of distance

learning during the pandemic is related to character. Moral issues are a consequence of the world of education due to the pandemic. Various studies have shown that school closures due to the pandemic have negatively impacted students' character [2]. The Covid-19 pandemic, which led to the closure of schools, has been shown to interrupt students' academic integrity [3]. During a pandemic, students commit more fraud, such as cheating [4]. Distance learning has also caused students to become increasingly undisciplined regarding following lessons, assignments, or other matters [5].

In addition, during a pandemic, students show reactions such as refusing to fulfill their responsibilities as students [6]. These deviant behaviors indicate students are experiencing a decline in their character of integrity. Integrity is a quality that includes moral norms and values that refer to what is right or wrong, good or bad [7]. Integrity character must be grown in students through the education system in schools [8]. Those problems were also found in the 3rd-grade class of Wuluhadeg Elementary School during the needs analysis that had been hold in July to September 2022.

During the pandemic, the government rolled out a Freedom to Learn Curriculum to address various problems and challenges in education. The essence of freedom to learn is freedom of thought [9]. Freedom of learning provides a space of liberty for creativity using various media as learning resources [10].

Children's literature offers learning experiences relevant to the concept of independent learning. Children's literature can be a powerful weapon for conveying important messages to students [11]. Reading children's literature gives students space to think, build understanding, and reflect on what they read about real everyday problems [12].

Fairytales also contribute to students through their educative messages[13]. Fairytales present moral values in a form that is more fun and challenging [14]. Fairytales can shape children's values and character [15]. Fairytales can be used to instill character values of integrity in students. Character education through children's literature, such as fairytales, can build awareness in students that respect, honesty, courage, and other commendable qualities are exciting and tangible things in the world around them [16].

Practical learning from the teacher is essential for character recovery [17]. Now is an opportunity for teachers to focus on utilizing digital technologies in education. Data support that opinion; digital skills and digital literacy are the two things that have been reported to increase most during distance learning due to the Covid-19 pandemic [17].

Digital fairytale books are more accessible for students than abstract ideas or theories [14]. However, several criteria must be considered in developing digital fairytale books. This study aims to produce VIRTUE-BOOK, the digital fairytale book, to enhance students' integrity and determine its validity and practicality as a literature-based learning media for freedom to learn in primary education perspective.

2 Research and Method

This study used research and development (R&D) methods with the ADDIE development model from Branch [18]. The ADDIE model development procedure consists of analyzing, designing, developing, implementing, and evaluating stages. This research hold in the 3rd-grade class of Wuluhadeg Elementary School in July to September 2022. This article discusses the validation

results of material expert and media expert as well as the results of product trials. The trials were conducted twice: one-to-one evaluation with four students and a teacher as subjects and small-group evaluation with 12 students and a teacher as subjects. The researchers collected data through questionnaire rating scales. The researchers conducted data analysis by quantitative descriptive.

The rating scale for the validation of material expert and media expert used a Likert scale of 4-3-2-1. Researchers then calculate the number of scores obtained with the following formula.

$$\bar{X} = \frac{\sum x}{n}$$

(1)

Information:

\bar{X} = mean

$\sum x$ = total score of all items

n = the number of items assessed

Researchers then convert the quantitative data from these calculations into qualitative data. After that, the researcher concludes the feasibility of the product. Guidelines for converting quantitative data into qualitative data are as follows [20].

Table 1. Guidelines for converting rating scale data

Mean Score	Category
$X > 3,4$	Very Valid
$2,8 < X < 3,4$	Valid
$2,2 < X < 2,8$	Invalid
$X < 2,2$	Very Invalid

3 Results and Discussion

3.1 VIRTUE-BOOK as a Digitized Fairytale Book to Enhance Integrity



(a)

(b)

Fig. 1. VIRTUE-BOOK the digital fairytale book

VIRTUE-BOOK has a feature in the form of option buttons in certain parts of the story. Students can choose one option to lead the story to a different plot for each option (Fig. 1 section a). The two options represent the main character's attitude following the character value of integrity (blue button) and an attitude contrary to the values of integrity (green button). Before choosing, students are encouraged to read the story carefully and comprehensively and then consider their choices. Each time one of the option buttons is pressed, students will receive a notification in the form of a pop-up whose function is as reinforcement for the choices made by students (Fig. 1 section b). If the student chooses the green button, he will get negative reinforcement. Conversely, if you select the blue button, students will receive notifications in the form of positive reinforcement. The purpose of developing VIRTUE-BOOK is to create learning media to improve the integrity of third-grade elementary school students. Reinforcement is a form of stimulus from the environment that can produce affirmation of the shown behavior [19]. Positive reinforcement will increase the frequency of the behavior and vice versa.

3. 2 Results of Experts' Validations and Trials

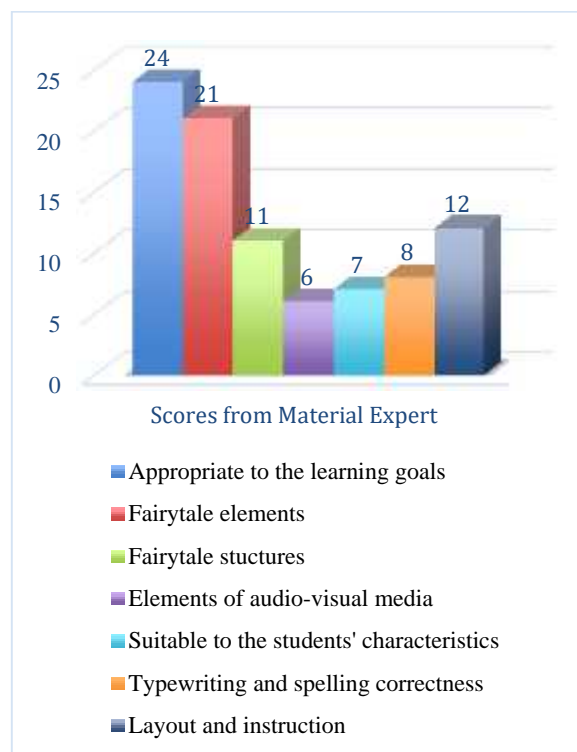


Fig. 2. Material Expert Validation Results

The diagram in Fig. 2 above displays indicators of eligibility criteria for digital fairytale books that are appropriate to be a literature-based learning media for freedom to learn in primary education perspective based on the assessment of material experts. The final score obtained an average of 3.7. The final score is in the very decent category.

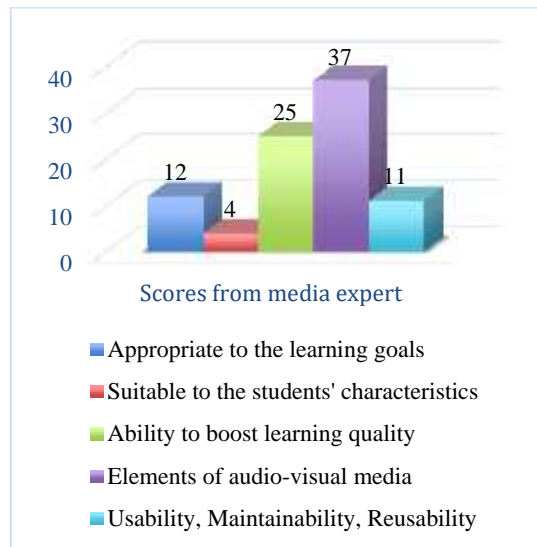


Fig. 3. Results of Media Expert Validation

The diagram in Fig. 3 above presents indicators of eligibility criteria for digital fairytale books that are appropriate to be a literature-based learning media for freedom to learn in primary education perspective based on the assessment of media experts. The final score obtained an average of 3,56. That final score of the media expert validation is in the very valid category.

Table 2. Guidelines for converting rating scale data

Criteria	Students Responses		Teachers Responses	
	One-to-one Evaluation	Small-group Evaluation	One-to-one Evaluation	Small-group Evaluation
Legibility	4,0	4,0	3,0	3,0
Dictions	4,0	3,75	4,0	4,0
Understandable	3,25	3,75	3,0	3,0
Illustrations	4,0	4,0	4,0	4,0
Audio background	4,0	4,0	4,0	4,0
Presentation	4,0	4,0	4,0	4,0
Instruction	4,0	4,0	4,0	4,0

Efficiency	3,5	3,875	3,0	4,0
Usable	3,5	3,875	4,0	4,0
Maintainable	4,0	4,0	4,0	4,0
Mean	3,825	3,875	3,7	3,8

Table 2 above shows that there was progress in the form of increasing scores from the first trial (one-to-one evaluation) to the second trial (small-group evaluation), both from student responses and teacher responses). Those improvements indicate a level-up in the quality of VIRTUE-BOOK after assessment and revision. The data on student and teacher responses helps demonstrate the practicality of the VIRTUE-BOOK.

3.3 A Valid and Practical Digital Fairy-tale Book for 3rd-grade Elementary School Students and Its Relevancy to Freedom to Learn

The feasibility or validity quality of a learning media can be determined through two criteria, namely relevance (content validity) and consistency (construct validity) [20]. The bearing is assessed from the media design based on the latest scientific studies (based on state-of-the-art or scientific knowledge). The logical structure of the designed media judges consistency. The validation results show that VIRTUE-BOOK is feasible based on material and media experts' assessment.

Practical learning media meet the requirements. Namely, they can be used according to designed and developed settings or usable [21]. In addition, applicable learning media are easy to use [21]. Therefore, VIRTUE-BOOK was tested on students and teachers to measure its practicality. The trial results twice confirm that VIRTUE-BOOK is very practical to use.

The first validity indicator, both from the material and media aspects, is appropriate to the learning goals [23] [24] [25] [26] [27]). Furthermore, writing fairytales must follow the elements and structures of fairytales [28] [29] [30] [31] [32] [33]. Then, the material presented and the presentation's appearance in the media must be suitable to the characteristics of students at the stage of concrete operational cognitive development [34] [35].

The following criterion is the accuracy of writing and spelling and audio-visual media elements [36]. The feasibility of audio in learning media includes the following [36]. Following the standards, results, and learning objectives. 2) Language according to the age of the student. 3) Load accurate (correct) content. 4) Sufficient technical quality.

As a visual media, VIRTUE-BOOK needs to consider the criteria for typeface, font size, and font color. Writing in a digital fairytale book must be enjoyable and read clearly. Hojjati & Muniandy [36] stated that the factors affecting legibility are font type, size, and spacing. Font and background colors affect the readability of text [38]. Legibility also determines practicality (Smaldino).

According to Smaldino [36], the recommended text style or type of font for teaching purposes or conveying information is a style that is straightforward and plain (without any decoration. Fonts without decoration are sans-serif-type fonts [39]. Sans serif fonts are suitable for screen display because they are easier and faster to read [37]. In addition to the type of font, the choice of font size (letters) and capital letters must also be adjusted to the level of legibility and its proportion to the visual media being created [36].

The following visual element is color. Children generally prefer hot colors, especially red, pink, yellow, and orange [36]. The illustrations and display of digital fairy tale books pay attention to selecting colors suitable for third-grade elementary school students. Digital fairy tale books in this study used color combinations with warm tones, namely red, yellow, orange, and brown, to stimulate student understanding [40] and stimulate student enthusiasm, intelligence, and memory [41]. Besides that, many use color combinations with cool tones, namely green, blue and purple, to stimulate students' creativity and cognitive thinking in critical thinking and problem-solving [42].

The following eligibility and practicality criteria for digital fairytale books are clear, understandable, excellent presentation, usable, maintainable, and reusable [24] [25]. As a proper learning medium, it would be nice if digital fairy tale books could be used for more than one subject matter, for example, on material analyzing the intrinsic elements of fairy tales.

VIRTUE-BOOK is relevant to the concept of freedom to learn. VIRTUE-BOOK can improve students' ability to develop cognitive skills and instill values of character integrity in students. Another advantage possessed by VIRTUE-BOOK is its capacity as a digital technology-based media. The advantages of utilizing technology in learning include at least five things [43]. First, it can be a tool to support knowledge construction. Second, a vehicle for information to explore knowledge. Third, it can provide a context that promotes learning by doing. Fourth, as a medium for socializing and discussing with colleagues. Fifth, being an intellectual partner for students through reflection.

Digital technologies empower student-centered learning [44]. Moreover, digital fairytale books are flexible and can be easily used anywhere and anytime [45]. Fairytales empower students [11] and teach them about virtuous such as integrity [15]. Children's literature encourages students to engage in motivating learning activities (didactic aspect), encourages students to acquire a value system (educational role), and encourages students to deal with inner conflicts and life's difficulties (psychological value) [14]. Therefore, VIRTUE-BOOK, as a digital fairytale book, can be a double empowerment for students to increase their character of integrity in the form of freedom to learn.

4 Conclusion

Based on the results and discussion above, VIRTUE-BOOK is very feasible as a digital fairytale book to improve the integrity of third-grade primary school students based on a material expert validation score of 3,7 (very feasible) and a media expert of 3,56 (very feasible). The results of the individual trials showed that VIRTUE-BOOK was very practical based on students' response score of 3,825 (very practical) and teacher's response score of 3,7 (very practical). According to a material expert, the eligibility criteria for digital fairytale books include: appropriate learning goals, fairytale elements, fairytale structures, elements of audio-visual media, suitable to the students' characteristics, typewriting and spelling correctness, layout, and instruction. According to a media expert, the eligibility criteria for digital fairytale books include: appropriate to the learning goals, suitable to the students' characteristics, ability to boost learning quality, elements of audio-visual media, usability, maintainability, and reusability.

The results of the small-group evaluation showed an increase in the practicality of VIRTUE-BOOK based on students' responses score of 3,875 (very practical) and teacher's response of 3,8 (very practical). These results prove that VIRTUE-BOOK is valid and practical to use as a

learning medium to improve the character of integrity and is relevant to the concept of freedom to learn. The practical criteria for digital fairytale books include: legibility, dictions, understandability, illustrations, audio backgrounds, presentation, instruction, efficiency, usability, and maintainability.

References

- [1] Pokhrel, S., & Chhetri, R. (2021). A literature review on impact of covid-19 pandemic on teaching and learning. *Higher Education for the Future*, 8(1), 133–141. <https://doi.org/10.1177/2347631120983481>
- [2] Rajmil, L., Hjern, A., Boran, P., Gunnlaugsson, G., Kraus De Camargo, O., & Raman, S. (2021). Impact of lockdown and school closure on children's health and wellbeing during the first wave of COVID-19: A narrative review. In *BMJ Paediatrics Open* (Vol. 5, Issue 1). BMJ Publishing Group. <https://doi.org/10.1136/bmjpo-2021-001043>
- [3] Gamage, K. A. A., de Silva, E. K., & Gunawardhana, N. (2020). Online delivery and assessment during COVID-19: Safeguarding academic integrity. *Education Sciences*, 10(11), 1–24. <https://doi.org/10.3390/educsci10110301>
- [4] Janke, S., Rudert, S. C., Petersen, Ä., Fritz, T. M., & Daumiller, M. (2021). Cheating in the wake of COVID-19: How dangerous is ad-hoc online testing for academic integrity? *Computers and Education Open*, 2, 100055. <https://doi.org/10.1016/j.caeo.2021.100055>
- [5] Dzulfikar, M. I., & Amrullah, M. (n.d.). The Effect of the COVID-19 Pandemic on Discipline Character Habituation in Students at SD Muhammadiyah 1 Sidoarjo. *Proceedings of The ICECRS*, 10. <https://doi.org/10.21070/icecrs20211150>.
- [6] Aslan, H., Aslan, A. M., & Tuzgöl Dost, M. (2022). COVID-19 pandemic experiences of secondary school students in Turkey. *Current Psychology*. <https://doi.org/10.1007/s12144-022-03111-0>
- [7] Huberts, L. W. J. C. (2018). Integrity: What it is and Why it is Important. *Public Integrity*. <https://doi.org/10.1080/10999922.2018.1477404>
- [8] Clarken, R. H. (2009). Moral Intelligence in the Schools.
- [9] Mastuti, R., Maulana, S., Iqbal, M., Faried, A. I., & Arpan. (2020). *Teaching from Home: dari Belajar Merdeka Menuju Merdeka Belajar* (J. Simarmata, Ed.). Medan: Yayasan Kita Menulis.
- [10] Yamin, M., & Syahrir. (2020). Pembangunan Pendidikan Merdeka Belajar (Telaah Metode Pembelajaran). *Jurnal Ilmiah Mandala Education*, 6(1), 126–133. <http://ejournal.mandalanursa.org/index.php/JIME/index>.
- [11] Hirst, N., & Wilkinson, C. (2021). Student Authors, Children's Literature and Early Childhood Education for Sustainability: Findings from a Pedagogic Research Project. *International Journal of Early Childhood Environmental Education*, 9(1), 40.
- [12] Schmidt, C. (2020). Librarians' book talks for children: An opportunity for widening reading practices? *Journal of Early Childhood Literacy*. <https://doi.org/10.1177/1468798420964941>
- [13] Ayrancı, B. B. (2017). A Study on Choosing Tales for Utilising as Teaching Materials in Turkish Language Education. *Journal of Education and Training Studies*, 5(12), 174. <https://doi.org/10.11114/jets.v5i12.2738>
- [14] Pulimeno, M., Piscitelli, P., & Colazzo, S. (2020). Children's literature to promote students' global development and wellbeing. In *Health Promotion Perspectives* (Vol. 10, Issue 1, pp. 13–23). Tabriz University of Medical Sciences. <https://doi.org/10.15171/hpp.2020.05>

- [15] Unsriana, L. (2021). Effectiveness of Fairy Tales in Conveying Its Moral Lesson: Analysis of Indonesian and Japanese Fairy Tales. In *Proceedings of the 3rd International Conference on Social Sciences, Laws, Arts and Humanities (BINUS-JIC 2018)*, p. 444-446 ISBN: 978-989-758-515-9. <https://doi.org/10.5220/0010010104440446>.
- [16] Almerico, G. M. (2014). Building character through literacy with children's literature. In *Research in Higher Education Journal* (Vol. 26). <http://www.aabri.com/copyright.html>.
- [17] Page, E., Leonard-Kane, R., Kashefpakdel, E., Riggall, A., & Guerriero, S. (2021). Learning loss, learning gains and wellbeing: a rapid evidence assessment. *Non-Journal. ERIC Number: ED615066. ISBN: 978-1-912610-06-8. https://eric.ed.gov/?id=ED615066*.
- [18] Branch, R. M. (2010). *Instructional Design: The ADDIE Approach*. Oakland: Springer. <https://doi.org/10.1007/978-0-387-09506-6>.
- [19] Papageorgi, I. (2021). *Positive and Negative Reinforcement and Punishment*. In *Encyclopedia of Evolutionary Psychological Science*. Oakland: Springer.
- [20] Akker, J. van den, Bannan, B., Kelly, A. E., Nieveen, N., & Plomp, T. (2013). *Educational Research Design*. Netherlands Institute for Curriculum Development (SLO).
- [21] Akbar, T. N. (2016). Pengembangan Multimedia Interaktif IPA Berorientasi Guided Inquiry pada Materi Sistem Pernapasan Manusia Kelas V SD N Kebonsari 3 Malang. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, 1(6), 1120–1126.
- [22] Widoyoko, E. P. (2016). *Evaluasi Program Pembelajaran*. Yogyakarta: Pustaka Pelajar.
- [23] Aqib, Z. (2013). *Model model, Media, dan Strategi Pembelajaran Kontekstual (Inovatif)*. Bandung: Yrama Widya.
- [24] Sudjana, N., & Rivai, A. (2017). *Media Pengajaran*. Bandung: Sinar Baru Algesindo.
- [25] Sanaky, H. A. (2013). *Media Pembelajaran Interaktif-Inovatif*. Yogyakarta: Kaukaba Dipantara.
- [26] Supriadi, R. (2013). Media Pembelajaran Interaktif Perangkat Lunak Pengolah Angka untuk Kelas XI SMA Negeri 2 Wates. http://eprints.uny.ac.id/8587/1/Jurnal%20Rosyid%20Supriadi_08520244051_Pendidikan%20Teknik%20Informatika.pdf.
- [27] Arsyad, A. (2016). *Media Pembelajaran*. Depok: Raja Grafindo Persada.
- [28] Trimansyah, B. (2020). *Panduan Penulisan Buku Cerita Anak (1st ed.)*. Jakarta: Pusat Pembinaan Bahasa dan Sastra, Badan Pengembangan dan Pembinaan Bahasa, Kementerian Pendidikan dan Kebudayaan, Republik Indonesia.
- [29] Nurgiantoro, B. (2018). *Sastra Anak Pengantar Pemahaman Dunia Anak*. Yogyakarta: UGM Press.
- [30] Pratiwi, W. M. (2018). *Petualangan Budi Pekerti : Berimajinasi Dengan 20 Cerita*. Jakarta Pusat: Elex Media Komputindo.
- [31] Tompkins, G. E. (2017). *Literacy for the 21st Century: A Balanced Approach*. London: Pearson.
- [32] Lukens, R. J. (2003). *A Critical Handbook of Children Literature*. London: Pearson Education Inc.
- [33] Gamble, N. (2019). *Exploring Children's Literature: Reading for Knowledge, Understanding and Pleasure (4th ed.)*. Thousand Oaks: SAGE Publications Ltd.
- [34] Hergenhahn, B. R., & Olson, M. H. (2008). *Theories of Learning (7th ed.)*. Jakarta Timur: Prenada Media Group.
- [35] Schunk, D. (2019). *Learning Theories: An Educational Perspective (8th ed.)*. London: Pearson.
- [36] Smaldino, S. E., Lowther, D. L., Mims, C., & Russell, J. D. (n.d.). *Instructional Technology and Media for Learning*. London: Pearson.
- [37] Hojjati, N., & Muniandy, B. (2014). The effects of font type and spacing of text for online readability and performance. In *Contemporary Educational Technology* (Vol. 5, Issue 2).
- [38] Cheng, Z. (2015). Effect of Font and Background Color Combination on The Recognition Efficiency For LCD Displays. *A Thesis Presented*.

- [39] Dressler, E. (2019). Understanding the Effect of Font Type on Reading Comprehension/Memory under Time-Constraints. *Theses/Capstones/Creative Projects*, 70. https://digitalcommons.unomaha.edu/university_honors_program/70.
- [40] Plass, J. L., Heidig, S., Hayward, E. O., Homer, B. D., & Um, E. (2014). Emotional design in multimedia learning: Effects of shape and color on affect and learning. *Learning and Instruction*, 29, 128–140. <https://doi.org/http://dx.doi.org/10.1016/j.learninstruc.2013.02.006>.
- [41] Nael, M. (2019). The effects of the emotion happy as induced by colors on the performance of grade I pupils in addition. *Southeast Asia Early Childhood Journal*, 8(2), 1–15. <https://doi.org/10.37134/saecj.vol8.no2.1.2019>.
- [42] Jain, A. (2020). Psychological effects of color on childrens creativity: do cool colors have stronger impact? *International Journal of Advanced Research*, 8(7), 673–682. <https://doi.org/10.21474/IJAR01/11325>.
- [43] Jonassen, D. H. (2013). *Chapter 6 Transforming Learning With Technology Beyond Modernism and Post-Modernism, or Whoever Controls the Technology Creates the Reality*. Perth: Pearson Education.
- [44] Iqdami, M. N. (2016). Resource based learning for teaching and learning english in digital environments. *Register Journal*, 9(2), 187–203.
- [45] Fuad, N. (2016). *Mengenal Ebook dan Bagaimana Membacanya di Perangkat Android dan PC: Berbagai Pilihan Ebook Store dan Cara Membeli Ebook, serta Mengatasi Batasan Tertentu dalam Membaca Ebook*. https://books.google.co.id/books?id=fAe5DAAAQBAJ&source=gbs_navlinks_s.