# Development of E-Book Based on Outcome Based Education (OBE) Curriculum In Guidance And Counceling Group Practicum Course

Rina Suryani<sup>1</sup>, Nindya Ayu Pristanti<sup>2</sup>, Khairunnisa<sup>3</sup>

{rinasuryani@unimed.ac.id<sup>1</sup>, nindyapristanti@unimed.ac.id<sup>2</sup>, nisa\_chaca@unimed.ac.id<sup>3</sup>}

Universitas Negeri Medan, Medan, Indonesia

**Abstract.** The purpose of this study was to find out whether the e-book based on Outcome Based Education (OBE) curriculum in guidance and counceling group practicum course met the requirements in terms of material and appearance, and to analyze the level of of effectiveness of the e-book. The type of research used is development research with the Dick dan Carry model. Data analysis used descriptive analysis and inferential analysis. The results showed that the e-book based on Outcome Based Education (OBE) curriculum was feasible and could be used as a medium in the learning process for guidance and counceling group practicum course.

Keywords: e-book, Outcome Based Education (OBE), guidance and counceling group

#### 1 Introduction

In this writing, we will discuss the Development of an Outcome-Based Education (OBE) Curriculum-Based E-Book for the Group Guidance and Counseling Practicum Course. The Group Guidance and Counseling Practicum is a course typically taken by students majoring in Guidance and Counseling. Through this course, students will be taught techniques and strategies in conducting group guidance and counseling [4] [5] [6].

With the continuous and rapid development of information technology, the use of E-Books as learning materials in the field of education is becoming increasingly popular. An E-Book is a digital publication that can be accessed through electronic devices such as computers, tablets, or smartphones [7] [8]. Based on the Outcome-Based Education (OBE) curriculum, this E-Book will be specifically developed for the Group Guidance and Counseling Practicum.

The development of the OBE Curriculum-Based E-Book in the Group Guidance and Counseling Practicum aims to provide a comprehensive, interactive, and easily accessible learning resource for students [9]. This E-Book will contain materials relevant to the practicum, including theories of group guidance and counseling, techniques used in groups, as well as case studies and practical examples that can enrich students' understanding.

Moreover, this E-Book will be equipped with interactive features to enhance students' learning experiences. For example, students can access video presentations, interactive simulations, or practice exercises to help them understand the concepts taught in the Group Guidance and Counseling Practicum. With the existence of this E-Book, it is expected that

students will feel more engaged and active in the learning process, strengthening their practical skills in group guidance and counseling [10] [11].

In its development, this E-Book will involve the instructors of the Group Guidance and Counseling Practicum course, as well as other relevant parties such as graphic design teams and technology developers. Instructors, as experts in their field, will be responsible for composing content deemed important and relevant in this E-Book. The graphic design team will assist in creating an attractive and easily navigable layout, while technology developers will integrate the necessary interactive features into this E-Book.

In conclusion, the development of an OBE Curriculum-Based E-Book for the Group Guidance and Counseling Practicum is an effort to provide an innovative and effective learning resource for students. This E-Book is expected to enhance the quality of learning and facilitate the understanding of concepts taught in the practicum [12]. With the presence of this E-Book, it is hoped that students will be more active and engaged in the learning process, acquiring strong practical skills in the field of group guidance and counseling.

Several studies on E-Book development have been conducted, including research by Munir et al. [13], Susantini et al. [14], Sari et al. [15], Alsadoon [3], Zhao [16]. However, a gap identified in these studies is the lack of research related to the effectiveness of E-Book usage in the context of group guidance and counseling practicum courses, and none have referred to the OBE curriculum. Based on these previous studies, there is a gap that needs to be addressed in the development of E-Books for group guidance and counseling practicum courses. Therefore, further research will explore the potential and challenges of E-Book development in the context of group guidance and counseling practicum, contributing to the understanding and development of better learning methods in this field.

### 2 Research Methods

# 2.1 Research Design

The research method employed in the development of an Outcome-Based Education (OBE) curriculum-based E-Book for the Group Guidance and Counseling Practicum course is the Research and Development (R&D) method. This method involves stages such as needs analysis, design, development, and evaluation. In this study, the R&D method is used to ensure that the developed E-Book aligns with the needs and standards of the existing OBE curriculum.

The research design used in the development of the OBE curriculum-based E-Book for the Group Guidance and Counseling Practicum course is a development research design that adopts the ADDIE approach (Analysis, Design, Development, Implementation, Evaluation). The research will go through several systematically arranged stages [1] [2].

The first stage is needs analysis, where researchers will conduct an in-depth analysis of the E-Book needs in the Group Guidance and Counseling Practicum course. In this stage, necessary data will be collected through surveys, interviews, and literature reviews to gather information about learning objectives, content to be covered, as well as the needs and preferences of students [3]. The second stage is initial design, where based on the needs analysis results, researchers will design the initial E-Book layout, including content structure, layout, images, and required interactivity. This initial design will serve as a guide for the subsequent development of the E-Book. The third stage is design revision, where the initial design will be evaluated and revised based on feedback from instructors and students. This

design revision aims to ensure that the developed E-Book meets user needs and expectations. The fourth stage is initial development, where researchers will create a prototype E-Book based on the revised design. This E-Book will be filled with content aligned with learning objectives and edited for easy comprehension by students. The fifth stage is development revision, where the E-Book prototype will be evaluated by instructors and students. Feedback from this evaluation will be used to make improvements and changes to the E-Book prototype to meet user needs and expectations. The sixth stage is the trial, where the developed E-Book will be implemented in teaching the Group Guidance and Counseling Practicum course. The effectiveness of the E-Book in supporting learning will be evaluated through observations, tests, and student satisfaction surveys.

# 2.2 Population and Sample

The population in this study consists of all students majoring in Guidance and Counseling at a university in Medan who are taking the Group Guidance and Counseling Practicum course. In this case, the population includes all students enrolled in that program at the university. Meanwhile, the sample used in this study consists of 64 students majoring in guidance and counseling who are taking the Group Guidance and Counseling Practicum course. The sample selection process was conducted using purposive sampling technique.

#### 2.3 Research Instruments

In the development of the OBE curriculum-based E-Book for the Group Guidance and Counseling Practicum course, the research uses several instruments aligned with the ADDIE approach [17]. These instruments include a needs analysis questionnaire to gather data on user needs, content validation questionnaires by subject matter experts to check content validity, media validation questionnaires by media experts to check media validity, and a usability trial questionnaire by users (students) to evaluate the usability of the E-Book [17] [18] [19] [20]. These instruments are designed to collect essential data at each stage of E-Book development related to user needs, content validity, media validity, and E-Book usability.

#### 2.4 Data Collection

Data collection in this study is conducted through several stages. First, user needs data is collected using a needs analysis questionnaire. Second, content validity and media validity data are collected through content validation questionnaires by subject matter experts and media experts. Finally, E-Book usability data is collected through a usability trial questionnaire by users (students). Data collection is carried out systematically and planned, ensuring the accuracy and validity of the obtained data [17].

#### 2.5 Data Processing

Data processing in this study will follow the ADDIE approach. The ADDIE approach consists of five main stages: Analysis, Design, Development, Implementation, and Evaluation. The first stage is Analysis, where data collected through questionnaires will be analyzed and interpreted using descriptive analysis methods. This method is chosen because it can help describe and analyze data systematically.

Next, the Design stage will involve creating tables, graphs, and narratives that are easily understood to present the results of the data analysis. This is done to ensure that the information obtained can be presented clearly and effectively to readers. During the design stage, it is crucial to ensure that data processing is done professionally and systematically. After that, the Development stage will involve data processing based on the designed and arranged methods. This process must be done carefully and meticulously to ensure that the obtained analysis results are valid and accurate.

Subsequently, the Implementation stage will involve the application of the previously developed data processing methods. In this stage, cooperation between the research team and implementers is crucial to ensure that the data processing process runs smoothly and efficiently. Finally, the Evaluation stage will involve assessing the results of data processing. Evaluation is conducted to evaluate the effectiveness and efficiency of data processing and to identify weaknesses or errors that may occur during the data processing process.

Throughout the data processing process, it is important to ensure that each stage is carried out systematically and planned. By using the ADDIE approach, data processing can be conducted effectively and efficiently, producing valid and accurate analysis results.

#### 3 Results and Discussion

This research indicates that the development of an e-book based on the Outcome Based Education (OBE) curriculum for the Group Guidance and Counseling Practicum course has been successfully executed. Following the stages of development and validation by subject matter experts and media experts, the e-book underwent testing with students as users. In the feasibility test, students provided positive feedback on the e-book, demonstrating its ability to be beneficial and meet their needs in learning the content of the group guidance and counseling practicum.

#### 3.1 Results

#### 3.1.1 Description of the Developed E-Book

The developed e-book is a learning resource designed based on the Outcome Based Education (OBE) curriculum. This e-book contains structured and organized content on group guidance and counseling practicum. Each chapter is equipped with concept explanations, case examples, and exercises to test students' understanding. Furthermore, the e-book provides interactive features such as videos and audios to assist students in comprehending the presented material.

### 3.1.2 Validation of the E-Book by Subject Matter Experts

The e-book underwent a validation process by subject matter experts. In their assessment, it was found that the content of the e-book is complete and accurate. Subject matter experts provided a positive assessment with a percentage rating of 91,67%. Alongside the positive evaluation, they also offered suggestions for adjustments and improvements regarding the presentation of material in the e-book. This is intended to enhance the quality of information delivery to the readers. Their assessment of these suggestions reached a percentage rating of 90.48%.

All suggestions from subject matter experts were carefully considered and implemented in the e-book. As a result, the e-book has been successfully enhanced, showing an increased quality rating of 91,07%. This improvement indicates that feedback from subject matter experts is valuable in enhancing the e-book's quality. With all efforts made to improve the e-book, it is now ready to proceed to the next validation stage. The alignment of content, accuracy of information, improved presentation, and literacy level within this e-book has been significantly elevated.

#### 3.1.3 Validation of the E-Book by Media Experts

The e-book underwent validation by Media Experts who provided a positive assessment on several crucial aspects. Regarding appearance, Media Experts gave an 85% rating as the e-book has an attractive and easily readable layout. The design of the e-book received a 92,50% rating as it has been updated to be more modern and responsive. The design update also included visually appealing graphic elements to support material understanding. Consistent design became a notable advantage in this e-book, facilitating readers in digesting information easily.

Simplicity of the e-book received an 92,50% rating. The language used is easily understandable and not overly technical, making it accessible to anyone. Proper formatting also aids in material learning, such as the use of numbering and neat text alignment to allow readers to follow the steps easily. The usefulness of the e-book's format received an 85% rating since the e-book provides well-structured content. Each section has clear subtitles, aiding students in understanding the material systematically. References are also well included in each section to accommodate deeper understanding.

The graphics used in the e-book received a 92,50% rating. Although the graphics used are relevant and support material explanation, there is a slight drawback in terms of color and alignment with the theme of the group guidance and counseling practicum. Media Experts recommended the addition of more interesting and relevant graphics to enhance the visual quality of this e-book. With the input provided by Media Experts, the e-book has been updated to be more engaging and interactive through the addition of images, videos, and audio. Design improvements were also implemented to enhance the user experience and visual aesthetics. Media Experts' assessments can serve as a reference to increase students' interest and motivation in learning the content of the group guidance and counseling practicum through this e-book.

#### 3.1.4 Feasibility Test of the E-Book by Users (Students)

In the feasibility test involving 65 students, the developed e-book received positive feedback. Students were given direct access to use the e-book and provide assessments of their experience using it. The results of this test indicate that the e-book is very accessible and user-friendly for students.

Students also provided positive feedback on the content presented in the e-book, the clarity of explanations, and the interactivity available within the e-book. From this, it can be concluded that the e-book meets the established feasibility criteria and can be considered an effective learning resource for students in studying their group guidance and counseling practicum.

The positive percentage from the 65 students involved in this feasibility test serves as tangible evidence of the effectiveness of this e-book. The content presented through this e-book received a high positive rating from 86,50% of students, indicating that the material available in this e-book meets students' needs. The language used in the e-book also received a good rating, with 89,65% of students stating that the language used in the e-book is easy to understand.

Graphics presented in the e-book also received positive ratings, with 87,78% of students stating that the graphics in the e-book are clear and aid their understanding. Finally, the benefits obtained from using this e-book received positive responses from 86,91% of students, indicating that the e-book provides significant benefits for students in their learning process.

Considering the aspects of Content Presentation, Language, Graphics, and Benefits, it can be concluded that this e-book successfully passed the user feasibility test with averages of persentages is 87,50%. The high percentage feedback from students indicates that this e-book meets the desired quality standards and can be relied upon as an effective learning resource for students.

# 3.2 Discussion

In this discussion section, we will explore the development of an e-book based on the Outcome Based Education (OBE) curriculum for the Group Guidance and Counseling Practicum course. The e-book was developed with the aim of enhancing the quality of learning in the group guidance and counseling practicum. Additionally, it is expected to provide benefits for students in better understanding and applying theories and practical skills in group guidance and counseling. This discussion will cover the strengths and limitations of the OBE-based e-book, its alignment with the OBE curriculum, and the benefits of the e-book in the group guidance and counseling practicum course.

#### 3.2.1 Strengths and Limitations of OBE-Based E-Book

In developing an OBE-based e-book for learning the group guidance and counseling practicum, it is essential to consider the strengths and limitations identified in previous research. One significant advantage is the flexibility of using the e-book, allowing access anytime and anywhere through gadgets or computers. This supports independent learning and enables students to learn at their own pace and schedule.

Previous research also indicates that OBE-based e-books can enhance active understanding of the material through interactive features such as video, audio, and animations. These features provide a deep and engaging learning experience, allowing students to better comprehend complex concepts. Furthermore, e-books can offer additional resources like internet links and reference materials supported by relevant theories, enriching student learning and expanding their understanding.

However, some limitations have also been identified in previous research. One of them is limited access for those without internet access or e-book reading devices. This can be a real barrier for students in remote areas or those unable to afford such devices. Additionally, the user interface limitations need consideration, as some users may be uncomfortable or unfamiliar with the e-book's provided interface, hindering understanding and use of the material.

In developing an OBE-based e-book, it is crucial to evaluate previous research and relevant theories. This evaluation helps maintain the quality and effectiveness of the e-book and ensures its alignment with user needs. It also helps identify areas that need improvement or modification to enhance the student learning experience.

To maximize the strengths and overcome the limitations of the OBE-based e-book in learning the group guidance and counseling practicum, appropriate strategies need to be implemented. For example, offering offline access alternatives for students without internet access or e-book reading devices. Additionally, user-level training and support are needed to ensure that students and educators can make the most of the e-book.

#### 3.2.2 Alignment with OBE Curriculum

In developing an OBE-based e-book, it is crucial to ensure alignment with the applied Outcome Based Education (OBE) curriculum. The e-book designed should meet the standards and competencies set in the curriculum.

The OBE-based e-book, built using an OBE approach, is expected to support outcomebased learning. Through the use of this e-book, students are expected to achieve the specified learning goals in the curriculum. Each material presented in the e-book should have a clear connection with the expected learning outcomes.

Moreover, this e-book provides an opportunity for students to develop skills and knowledge in line with the competency standards set in the OBE Curriculum. The materials in the e-book should offer in-depth understanding of relevant concepts related to the field of study being pursued.

To ensure the alignment of the e-book with the OBE Curriculum, it is essential to link it with relevant previous research and theories. The results of previous research and relevant theories serve as the basis for organizing materials and learning settings within the e-book. By

linking the e-book with previous research and relevant theories, it is expected that the e-book can provide effective and high-quality learning.

In developing an e-book that aligns with the OBE Curriculum, continuous evaluation is also required. This evaluation can involve experienced educators and practitioners in the relevant field. They can provide input and suggestions to improve the e-book's quality and ensure its alignment with the OBE Curriculum.

Therefore, the alignment of the OBE-based e-book with the Outcome Based Education (OBE) Curriculum is crucial to ensure the effectiveness of learning. The developed e-book should meet the standards and competencies outlined in the curriculum and connect it with previous research and relevant theories. Thus, the e-book can provide quality learning and support the development of students' skills and knowledge in accordance with the competency standards set in the OBE Curriculum.

# 3.2.3 Benefits of E-Book in the Group Guidance and Counseling Practicum

The benefits of using an e-book in the Group Guidance and Counseling Practicum course are significant in enhancing the quality of learning and student engagement. One of the key advantages of using an e-book in this course is the ease of access and learning of practicum material. With the advancement of technology, e-books have become a highly popular learning resource among students. In the e-book, students can easily access materials related to the group guidance and counseling practicum through electronic devices such as laptops, tablets, or smartphones. With this easy access, students no longer need to carry heavy physical books and can quickly search for the information they need through text searches available in the e-book.

Additionally, the e-book provides various formats of diverse learning media, including text, images, videos, audio, and interactive elements. Previous research indicates that the use of multimedia in learning can enhance the level of understanding and student engagement with the learning material. In the e-book, students can learn through text accompanied by illustrations. They can also watch videos and listen to audio explanations of key concepts. Furthermore, interactivity in the e-book allows students to participate directly in learning, such as answering quizzes or completing assignments. This makes the learning process more interesting and interactive for students.

Another advantage of the e-book in the Group Guidance and Counseling Practicum course is the ease of assessment and feedback. In the e-book, integrated exercise and assignment features allow students to work on questions and assignments directly. Upon completion, students can receive instant feedback on their work. Research has shown that instant feedback can accelerate the learning process and improve student understanding of the learning material. With this feature, students can immediately see their mistakes and correct them independently.

With these benefits, the use of an e-book in the Group Guidance and Counseling Practicum course can enhance the effectiveness of learning and student engagement in the learning process. Students can access and learn practicum material more easily, understand important concepts through various learning media formats, and receive fast and instant feedback.

Therefore, the development of an e-book in the Group Guidance and Counseling Practicum course is highly necessary to improve the quality of education and learning in higher education.

#### 4 Conclusion

In this research, the findings indicate that the development of an Outcome Based Education (OBE) Curriculum-based E-Book for the Group Guidance and Counseling Practicum course has been successful. This E-Book demonstrates significant advantages in facilitating adaptive learning that aligns with students' needs.

Following the validation process by subject matter experts and media experts, the E-Book has proven to possess a good level of validity. Both the content and design of the E-Book adhere to relevant standards and support the intended learning objectives.

Based on the feasibility test results conducted by students, the E-Book has a substantial positive impact. Students reported that the E-Book assisted them in enhancing their understanding and skills in the Group Guidance and Counseling Practicum course. Furthermore, the use of the E-Book enables them to engage in self-directed learning and access learning materials as needed.

Nevertheless, there are limitations that need to be considered in the development of this E-Book. One of them is the limitation of internet access, which can affect the utilization of the E-Book. To address this issue, it is recommended that students receive training on using the E-Book so that they can maximize its benefits without being hindered by internet access limitations.

In addition to its application in the Group Guidance and Counseling Practicum course, the development of this OBE-based E-Book can also be implemented in other courses according to the existing curriculum. By adopting the concept of this E-Book, other courses can also leverage its advantages to enhance the quality of learning.

Overall, the development of the OBE Curriculum-based E-Book for the Group Guidance and Counseling Practicum course has proven to be effective and provides significant benefits to the learning process. It is recommended that the development of this E-Book continues, and its concept is adopted in other courses to improve the overall quality of education. Additionally, future researchers are advised to delve deeper into this study to enhance understanding of the development of OBE Curriculum-based E-Books.

# 5 Acknowledgment

I would like to express my sincere gratitude to the honorable Rector of Universitas Negeri Medan for providing the funding that made this research possible. The support from the university has been instrumental in the successful completion of this study, allowing for the exploration and contribution to the academic discourse.

I would also like to extend my heartfelt appreciation to all individuals and entities who have supported and contributed to this research endeavor. Their assistance, guidance, and encouragement played a crucial role in navigating the complexities of the research process.

#### References

- [1] Ranuharja, F., Ganefri, G., Fajri, B. R., Prasetya. F. (2021). Development of Interactive Learning Media Edugame Using ADDIE Model. *Jurnal Teknologi*, academia.edu.
- [2] Nuryadin, A., Lidinillah, D. A. M., and Muharram, M. R. W. (2021). Pre-service teachers' experiences in developing digital learning designs using ADDIE model amid COVID-19 pandemic. *Jurnal Basicedu*, jbasic.org.
- [3] Alsadoon, H. (2020). Obstacles to using E-books in higher education. *International Journal of Education and Literacy*, aiac.org.au.
- [4] Novia., S. P. (2023). Pelaksanaan Layanan Konseling Kelompok Dengan Teknikself Management Dalam Mereduksi Perilakuprokrastinasi Akademik ..., radenintan.ac.id.
- [5] R. Yuliyanto. Efektivitas Layanan Konseling Kelompok Rational Emotive Behavior Therapy (REBT) Dengan Teknik Behavioral Untuk Menurunkan Prokrastinasi Akademik..., *Nusantara Persatuan Guru Republik Indonesia UN*, simki.unpkediri.ac.id.
- [6] Saraswati., B. S. (2020). Efektivitas Konseling Kelompok Realitas Wdep Untuk Meningkatkan Tanggung Jawab Siswa Dalam Menyelesaikan Tugas Akademik ...,ummgl.ac.id.
- [7] Novitasari, L. (2020). E-Book Sebagai Literasi Digital (Studi Media Aplikasi iMartapura Terhadap Minat Baca Masyarakat Kabupaten Banjar), uniska-bjm.ac.id.
- [8] Makdis, N. (2020). Penggunaan e-book pada era digital, Al Maktabah, uinjkt.ac.id.
- [9] Revola, Y. R. (2023). İmplementasi Literasi Digital dalam Merancang Desain Pembelajaran Bahasa Inggris bagi Mahasiswa Tadris Bahasa Inggris Menggunakan Aplikasi Canva, KENDURI: Jurnal Pengabdian dan Pemberdayaan, siducat.org.
- [10] Susilawati, S., and Supriyatno, T. (2020). Online learning through WhatsApp group in improving learning motivation in the era and post pandemic COVID-19. *Jurnal Pendidikan: Teori*, uinmalang.ac.id.
- [11] Ferri, F., Grifoni, P., and Guzzo, T. (2020). Online learning and emergency remote teaching: Opportunities and challenges in emergency situations. *Societies*, mdpi.com.
- [12] Rice, M. F., and Ortiz, K. R. (2021). Evaluating digital instructional materials for K-12 online and blended learning. *TechTrends*. springer.com.
- [13] Munir, A.F., Setiyowati, A.J., Atmoko, A. (2024). Pengembangan Panduan Bimbingan Kelompok Teknik Sinemaedukasi Berbasis E-Book Untuk Mencegah Prokrastinasi Akademik Siswa Sekolah Menengah Atas. ... Bimbingan dan Konseling. upy.ac.id.
- [14] Susantini, E., Puspitawati, R. P., Raharjo. (2021). E-book of metacognitive learning strategies: design and implementation to activate student's self-regulation. In *Technology Enhanced Learning, Springer*. springer.com.
- [15] Sari, S. Y., Rahim, F. R., Sundari., P. D. (2022) The importance of e-books in improving students' skills in physics learning, in the 21st century: A literature review," Journal of Physics. iop.org.
- [16] Zhao, J., Hwang, G. J., Chang, S. C., Yang, Q. (2021). Effects of gamified interactive e-books on students' flipped learning performance, motivation, and meta-cognition tendency in a mathematics course. *Educational Technology Research and Development*. HTML.
- [17] Hidayat, F., and Muhamad, N. (2021). ... Addie (Analysis, Design, Development, Implementation and Evaluation) Dalam Pembelajaran Pendidikan Agama Islam Addie (Analysis, Design, Development ... . J. Inov. Pendidik. Agama Islam. archive.org.
- [18] Rusmayana., T. (2021). Model Pembelajaran ADDIE Integrasi Pedati di SMK PGRI Karisma Bangsa sebagai Pengganti Praktek Kerja Lapangan dimasa Pandemi Covid-19. penerbitwidina.com.
- [19] Rustandi, A. (2021). Penerapan model ADDIE dalam pengembangan media pembelajaran di SMPN 22 Kota Samarinda. *Jurnal Fasilkom*. umri.ac.id.
- [20] Gumulya, D. (2022). Penerapan Model Pembelajaran Addie: Applied, Develop, Design, Implement, Evaluation Pada Perancangan Media Edukatif Tematik ... Jurnal Lentera Widya. idbbali.ac.id.

- [21] Susanto, T. T. D., Dwiyanti, P. B., Marini, A. (2022). E-Book with Problem Based Learning to Improve Student Critical Thinking in Science Learning at Elementary School. in *Journal of Interactive*. researchgate.net.
- [22] Merkle, A.C., Ferrell, L.K., Ferrell, O.C. (2022). Evaluating E-book effectiveness and the impact on student engagement. *Journal of Marketing Education*. sagepub.com.
- [23] Wang, J., Shimada, A., Oi, M., Ogata, H., et al. (2023). Development and evaluation of a visualization system to support meaningful e-book learning. *Interactive Learning Environments, Taylor & Francis*. tandfonline.com.
- [24] Sawitri, Y., Asrizal, A., and Mufit, F. (2021). Analysis of physics e-books assisted by application of learning house using quantum learning models to improve the 21st century skills of high school student. *Journal of Physics: Conference Series*. iop.org.
- [25] Almunawaroh, N. F. (2020). The Effectiveness of Using an E-book in ELT: worldwide cases. in *Teaching and Learning English in Multicultural*. unsil.ac.id.
- [26] Firdausy, B. A., and Prasetyo, Z. K. (2020). Improving scientific literacy through an interactive e-book; A literature review. in *Journal of Physics: Conference Series*. iop.org.
- [27] Sabtaningrum, F. E., Wiyokusumo, I. (2020). E-book Tematik Terpadu Berbasis Multikultural Ddlam Kegiatan SFH (School from Home). *Jurnal Ilmiah Sekolah* ... . undiksha.ac.id.
- [28] Ziya, K. (2024). Efektifitas Penggunaan E-Book Bagi Siswa SMA Negeri 5 Banda Aceh. ar-ranirv.ac.id.
- [29] Andaresta, N., and Rachmadiarti, F. (2021). Pengembangan e-book berbasis stem pada materi ekosistem untuk melatihkan kemampuan literasi sains siswa. Berkala Ilmiah Pendidikan. unesa ac.id.
- [30] Rosmawati, W. (2023). Efektifitas Penggunaan E-Book untuk Melatih Kemampuan Berpikir Kritis Peserta Didik. Jurnal Didaktika Pendidikan Dasar. kemdikbud.go.id.
- [31] Reria, R. U. (2023). Pengembangan E-Book Interaktif Berbasis Everyday Life Phenomena Materi Korosi Berorientasi Pada Penguasaan Konsep. unila.ac.id.
- [32] Sari, P. I. (2021). Pengembangan E-Book Pada Materi Kesetimbangan Kimia Untuk Pembelajaran Daring Saat Pandemi Covid-19. unila.ac.id.21
- [33] Hafizah, N. (2023). Media Pembelajaran Digital Generasi Alpha Era Society 5.0 Pada Kurikulum Merdeka. Al-Madrasah: Jurnal Pendidikan Madrasah. stiq-amuntai.ac.id.
- [34] Zhang, R., Zou, D., Xie, H., Au, O. T. S., Wang, F. L. (2020). A Systematic Review of Research on E-Book-Based Language Learning, in ... *Management & E-Learning*. ed.gov.
- [35] dos Santos Silva, D. E., Sobrinho, M. C. (2023). Development of 21st-Century Skills and Competencies in High School Students Through the Interactive E-Books Creation. Revista Brasileira de. sbc.org.br.
- [36] Ariastya, R. M., Astuti, I., and Enawaty, E. (2023). Analysis of the Development Needs for Interactive Web-Based E-book on Pressure Topic for Differentiated Science Learning. *Jurnal Pendidikan Fisika*. unram.ac.id.
- [37] Wijaya, R., Lukman, M., and Yadewani, D. (2020). Dampak Pandemi Covid19 Terhadap Pemanfaatan E Learning. *Jurnal Dimensi*. unrika.ac.id.
- [38] Maulana, H. A., and Hamidi, M. (2020). Persepsi mahasiswa terhadap pembelajaran daring pada mata kuliah praktik di pendidikan vokasi. *Equilibrium: Jurnal Pendidikan. unismuh.ac.id.*