



Development of Canva-Based E-Modules on Nanotechnology Materials for Class X High School Students

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Abstract: The development of e-modules aims to be an effective learning resource for students. This research focuses on assessing the validity and student response to Canva-based e-modules on Nanotechnology material at the high school level. The research method used is Research and Development (R&D), using the Planning, Production, and Evaluation (PPE) development model. Data analysis was done quantitatively using descriptive techniques. The results showed that the e-module had been successfully made using the Canva application and had been validated by material experts, media experts, and educational practitioners, the validity of the product reached an average value of 94.4%, categorized as very good and declared feasible to be tested. Student response trials were conducted in two classes, namely small class trials reaching a score of 92.5 and large class trials with a score of 91.3. Both results fall into the very good category.

Keywords: Canva application; Chemistry learning; E-module; Teaching materials

Introduction

The technological advancement of the 21st century, commonly referred to as the Fourth Industrial Revolution (Industry 4.0), has given birth to new technological innovations that are closely related to digital elements such as the Internet of Things (IoT), Artificial Intelligence (AI), big data, mobile technology, and production facilities that facilitate data collection and analysis, both manually and automatically. This alignment significantly impacts the evolution of education, culminating in the 4.0 era where learning strategies are enriched through the appropriate use of technology, especially by utilizing various learning media. In the context of era 4.0, there is a trend of utilizing diverse learning media, including audio, video, images, web-based media, and mobile-based media, which can be integrated with blended learning models (Putry et al., 2020). The application of these learning media is considered important to support the achievement of learning objectives, a concept

emphasized by previous researchers (Smaldino et al., 2007). Therefore, adopting learning media technology becomes very important to ensure the effectiveness and suitability of learning in this era.

In the context of the learning process, it is important for educators to have the ability to develop digital-based teaching materials flexibly in line with the development of the industrial revolution (Ramadhani & Fitri, 2020; Prasetyo et al., 2020). To meet these needs, innovations in electronic teaching materials are needed, such as the application of e-modules. E-modules are electronic modules that present learning materials that can be accessed by students independently, not limited by time and place (Pemimaizita, 2022). Similar to conventional teaching materials, e-modules have an introductory section that outlines learning objectives and subject matter, including the presentation of material and exercises. In electronic form, this module consists of text and attractive digital images (Herawati & Muhtadi, 2018; Astutik & Prahani, 2018). The advantage of e-modules lies in their ability to present images, audio,

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video, and animation, thus creating an interactive learning experience (Suarsana, 2013). Making e-modules requires the use of certain applications or software. One option is Canva. Canva is an online graphic design tool that provides animation and supports interactive insertion of video links (Pemimaizita, 2022). Its accessibility through smartphones or computers makes Canva a practical choice for teachers, facilitating the design of teaching materials and efficient content delivery (Hapsari & Zulherman, 2021).

In the context of technology-based education, the focus has shifted towards the use of media and teaching materials that are more practical and effective, making them easier to use for learners (Murjainah et al., 2020). Technological advances have had a positive impact, especially in the development of digital learning environments. The use of modules as media and teaching materials can be more easily realized with the support of available technology. This approach positions the module as a learner-oriented tool, encouraging independence and active participation of learners in the learning process (Putra & Syarifuddin, 2019). As the times adopt technology, many modules are transformed into e-modules to increase practicality, portability, and accessibility without requiring larger physical space (Irkhamni et al., 2021). Despite technological advances, there are limitations in the availability of modules, especially e-modules, regarding the distribution of flora and fauna in Indonesia. The use of Canva application was identified as a solution to create interactive e-modules relevant to this context. This initiative is expected to be an innovative step in supporting technology-based education and creating more modern teaching materials.

The development of e-modules through the Canva platform has become a major focus for educational researchers and practitioners in various fields. The selection of Canva as a platform for e-module development is based on several advantages, such as the availability of various animations and templates, easy application and website accessibility, optimal image upload quality, and drag-and-drop features that facilitate the editing process (Tanjung & Faiza, 2019). Previous relevant research on e-module development using Canva, such as that conducted by Pardede et al. (2022) showed that Canva-based electronic modules for regulatory system material were successfully developed and received very valid and very good categories, so they can be implemented in learning activities at school. Ceria et al. (2022) reported the results of their research, showing that the development of teaching materials in the form of e-modules was declared valid and practical through qualitative analysis. The validity of teaching materials is obtained through expert review with comments and suggestions from validators, while

practicality is measured through one-to-one and small group stages by analyzing comments and suggestions from students. Potential effects were found from student evaluation tests at the field test stage, where the developed e-module teaching materials showed potential effects with an 81.8% success rate in problem solving. Focusing on the results of research by Sutomo et al. (2023), obtained material expert validity of 78.4% (good category), media expert validity of 78.4% (decent category), and instructional design expert validity of 82.4% (very decent category). Thus, the average validity reached 79.73% in the feasible category.

This research applies the Planning, Production, and Evaluation (PPE) model formulated by Richey and Klein as a framework for developing Canva-based interactive e-modules, with a focus on Nanotechnology matrix material. The purpose of this study is to evaluate the validity and assess student responses to the development of interactive e-modules based on the Canva application for learning Nanotechnology material in grade X high school.

Method

This research uses a Research and Development (R&D) approach, which is a development research method used to produce new products and test them to evaluate their effectiveness (Marpaung et al., 2021). The R&D approach was applied with the aim of developing and validating Canva-based teaching materials on Nanotechnology material for grade X high school students. The research location was carried out at SMA Negeri 5 Malinau in the odd semester of the 2023/2024 school year, with the location selection using the purposive sampling area method.

In this development, the research refers to the Richey and Klein development model known as the PPE (Planning, Production, and Evaluation) development model, which is then modified by adding an analysis stage. The development stages include analysis stage, planning stage, production stage, product validation test, student response test stage, and evaluation stage.

Analysis Stage

This stage is carried out to collect data required for the creation of e-modules. During the analysis process, the focus is to assess the needs of students during the learning process. The analysis stage was carried out by conducting a survey using a questionnaire given to students in grades X-1 and X-2. The data from the questionnaire analysis of student needs was then analyzed using the formula (Nindiawati et al., 2021):

$$\text{Percentage total} = \frac{\text{Total number of students who chose}}{\text{Total number of students}} \times 100 \quad (1)$$

$$\text{Total overall percentage} = \frac{\text{Total overall percentage}}{\text{Number of Indicators}} \times 100 \quad (2)$$

Planning Stage

This stage involves data acquisition and design planning. Details of these two steps include: data acquisition is done to collect materials that will be integrated into the e-module, and e-module design planning is done through Canva application as software for product creation. Design planning includes elements from the front page, such as the cover to the bibliography.

Production Stage

At this stage, the process of making products, developing product assessment instruments, validation, revision, and product trials are carried out. The details include: the product manufacturing process is the finalization stage of the previous step to produce a product that is in accordance with the expectations of the researcher, and the development of product assessment instruments includes making indicators that will be used by validators in evaluating e-modules. Validation Test Stage.

Product Validation Test

The validation test stage is carried out by testing the e-module that has been made and evaluated by experts who have competence in their fields. Validation is done by asking the validator to provide an assessment of the product produced and provide suggestions or input regarding the Canva-based e-module. This study used instrument sheets, and data analysis was carried out by converting qualitative data into quantitative data. The score assigned to the product assessment criteria by the validator can be seen in Table 1.

Table 1. Criteria for Continuation of E-module Validation Eligibility Criteria for E-module Validation (Oktaviara et al., 2019)

Score	Reach (%)	Criteria	Interpretation
5	81 - 100	Very good	No need for revision
4	61 - 80	Good	Revise as necessary
3	41 - 60	Good enough	Quite a lot of revisions
2	21 - 40	Poor	Many revisions
1	0 - 20	Very bad	revision

The validation calculation is done using the following formula (Oktaviara et al., 2019):

$$\text{Percentage} = \frac{\text{Total score of validation result}}{\text{Highest score}} \times 100 \quad (3)$$

$$\text{The average total score} = \frac{\text{Total value of all validators}}{\text{Number of validators}} \times 100 \quad (4)$$

The validation assessment score can be seen in Table 2.

Table 2. The Validation Assessment Score (Rahmayani et al., 2021)

Score	Criteria
5	Very good
4	Good
3	Good enough
2	Poor
1	Very bad

Student Response Test Stage

Response testing was carried out through small group and large group trials, where small group trials were carried out using the simple random sampling method with 12 respondents randomly selected from Class X-1. The large group trial was conducted in Class X-2 by involving all Class X-2 students. Product assessment criteria can be seen in Table 3. Large group testing was conducted in Class X-2, involving all students of Class X-2. The criteria for product assessment by students can be seen in Table 3.

Table 3. Student Response Assessment Criteria (Arini et al., 2019)

Score	Criteria
81 - 100	Very good
61 - 80	Good
41 - 60	Good enough
21 - 40	Poor
0 - 20	Very bad

The calculation of student responses was carried out using the following formula:

$$\text{Total average value} = \frac{\text{Total number of student responses}}{\text{Respondent} \times \text{Number of Indicators}} \times 20 \quad (5)$$

The student response rating scale can be seen in Table 4.

Table 4. Student Response Rating Scale (Arini et al., 2019)

Score	Criteria
5	Strongly agree
4	Agreed
3	Somewhat agree
2	Disagree
1	Strongly disagree

Evaluation Stage

The evaluation stage is the final stage in the E-Module development model, which involves product assessment based on the results of product trials in small groups and large groups. The goal is to get optimal

product results that can be disseminated to the wider community.

Result and Discussion

The result of this development research is a Canva application-based e-module specifically designed for Nanotechnology material in grade X high school. This e-module serves as a learning resource for grade X students at SMA Negeri 5 Malinau who are studying Nanotechnology material. The resulting e-module consists of various parts, including the cover page, preparation page, concept map, glossary, table of contents, and introduction which includes e-module identity, basic competencies and indicators, instructions for using e-modules, material descriptions, and learning materials.

In addition, this module also includes learning activities 1 and 2, which consist of learning objectives, material descriptions, summaries, learning video links, exercises, and exercise answers. Finally, the e-module is completed with a bibliography. Before being tested, this e-module went through a validation stage by three experts, namely learning material experts, content experts, and learning practitioners. The validation trial resulted in several revisions from each expert so that the e-module was ready to be tested. The trial was conducted in stages, including small group trials and large group trials, to assess students' responses to the e-modules produced. The results of students' responses became the basis for improving the e-module so that it can be effectively integrated into the realm of education.

Results of Student Needs Analysis

Student needs analysis was conducted by distributing questionnaires to all grade X students at SMA Negeri 5 Malinau. This school has two X classes, X-1 and X-2, with 36 students in each class. The questionnaire filling process was carried out on September 4, 2023. The total respondents who participated in the student needs analysis reached 33 out of 36 students in class X-1 and 34 out of 36 students in class X-2. The results of the questionnaire given to all grade X students at SMA Negeri 5 Malinau can be seen in Figure 1.

Based on the data analysis depicted in Figure 1, the learning material expert gave a validation score of 92.5%, categorized as very good, and suggested minor improvements by correcting the wrong words in the e-module to improve product quality. Making e-modules requires high accuracy and validation to produce products that are tested and ready to be tested (Nurdyansyah et al., 2021). Furthermore, the material expert gave an assessment of the e-module of 96.5% with the criteria very good and suggested adding references

to strengthen the source. Accurate references support the accuracy of the content or points presented in the e-module, in accordance with the material being taught (Malahayati & Zunaidah, 2021). Learning practitioners gave an assessment of 94.3 with the criteria of very good and suggested increasing the difficulty level of the questions in the e-module to better train students' thinking skills. This opinion is in line with the view of Kurniawati et al. (2019) and Putra et al. (2019) which emphasizes that increasing the difficulty of questions can help students develop analytical thinking skills.

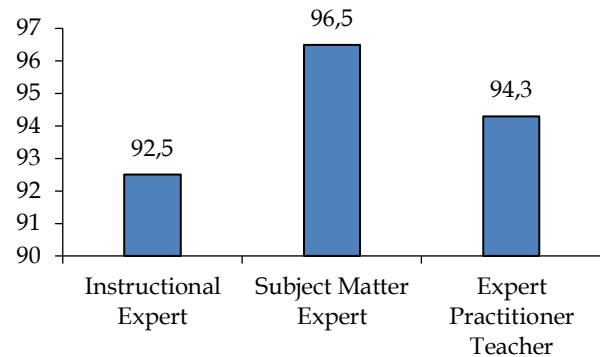


Figure 1. Graph of percentage of e-module validation results

Validity is an important step in ensuring the acceptability of a work or product and is a guarantee that the product has passed the quality test (Hayashi et al., 2019). The average score of the three validators was 94.4%, with the category very good. These results confirm that the e-module as a teaching material product has met the standards and is suitable for testing. This is in line with other studies, such as research by Syahrizaldy et al. (2023), which made teaching materials based on the Canva application with a validity level of 81.09%, with a very feasible category. Another study by Puspita et al. (2021) concluded that Canva-based e-modules are very feasible to use as learning support. The e-module product has been improved according to the input and suggestions from each validator, following the principle that a good product must go through a revision stage to improve its quality based on the input provided by the validator (Himang et al., 2019).

Student Response Results

E-modules as teaching materials were tested on grade X students at SMA Negeri 5 Malinau through two stages, namely small group trials and large group trials. The results of student responses during the trial in detail can be seen in Figure 2.

Based on the data depicted in Figure 2, the level of student response in the small class trial reached 92.5%, while in the large class trial it scored 91.3%. This value is included in the very good student response category.

This conclusion is reinforced by positive responses from students in the student response questionnaire, where they stated this e-module is interesting to read because it contains many pictures and the language used in this e-module is easy to understand. These results identify that this product has achieved very high quality and can be developed for wider use. This statement is also in line with the view of Nurhairunnisah et al. (2018) that effective e-modules must meet the needs of students in the learning process and include complete and relevant material to the curriculum. Products that meet these criteria are considered to be able to answer students' needs in overcoming learning challenges. The findings of this study show that students show high enthusiasm for e-module literacy, as done in learning activities (Yulaika et al., 2020).

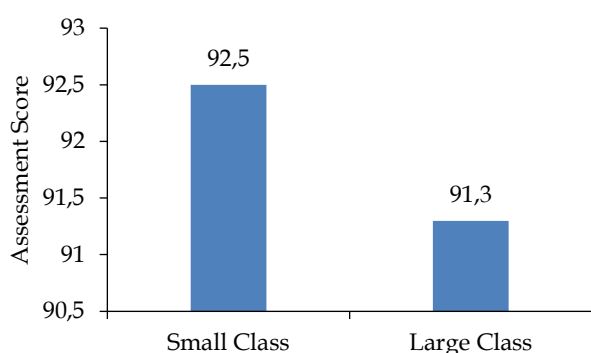


Figure 2. Graph of student response results

Conclusion

An interactive e-module based on the Canva application for Nanotechnology material has been successfully developed using the PPE development model. This product can be used as an innovative teaching material for students. The validation process was carried out by learning experts with a score of 92.5%, material validation with a score of 96.5%, and learning practitioner validation with a score of 94.3%. The average validation score of the three validators was 94.4% which was categorized as "very good". This shows that the e-module has passed the validation stage well. This e-module teaching material was then tested on students with some suggestions and input from the validators to be revised. The student response trial in the small class obtained a score of 92.5, while in the large class obtained a score of 91.3. The score shows that students gave a positive response to the e-module that was prepared. With the results of the validation test and satisfactory student responses, this e-module can be developed for wider use, so that it can provide benefits for students in various learning contexts.

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Author Contributions

I. Y. A.: writing-original draft preparation, result, discussion, methodology, conclusion; I. S. Y. L.: analysis, proofreading, review, and editing.

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Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

References

- Arini, W., & Lovisia, E. (2019). Respon Siswa terhadap Media Pembelajaran Alat Pirolisis Sampah Plastik Berbasis Lingkungan di SMP Kabupaten Musi Rawas. *Thabiea: Jurnal Pengajaran Ilmu Pengetahuan Alam*, 2(2), 95-104. <https://doi.org/10.21043/thabiea.v2i2.5950>
- Astutik, S., & Prahani, B. K. (2018). Kepraktisan dan Keefektifan Model Collaborative Creativity Learning (CCL) dengan Menggunakan Simulasi PhET untuk Meningkatkan Kreativitas Ilmiah Siswa. *Jurnal Ilmiah Pembelajaran*, 11(4), 409-424. <https://doi.org/10.12973/iji.2018.11426a>
- Ceria, R. E., Afgani, M. W., & Paradesa, R. (2022). Pengembangan Bahan Ajar Elektronik Berbasis Canva pada Materi Kubus dan Balok dengan Pendekatan PMRI Berorientasi Konteks Islam Melayu. *Sains, dan Teknologi*, 5(2), 82-94. Retrieved from <http://jemst.ftk.uinjambi.ac.id/>
- Hapsari, G. P. P., & Zulherman, Z. (2021). Pengembangan Media Video Animasi Berbasis Aplikasi Canva untuk Meningkatkan Motivasi dan Prestasi Belajar Siswa. *Jurnal Basicedu*, 5(4), 2384-2394. Retrieved from <https://jbasic.org/index.php/basicedu/article/view/1237>
- Hayashi, P., Abib, G., & Hoppen, N. (2019). Validitas dalam Penelitian Kualitatif: Sebuah Pendekatan Prosesual. *Qualitative Report*, 24(1), 98-112. <https://doi.org/10.46743/2160-3715/2019.3443>
- Herawati, N. S., & Muhtadi, A. (2018). Pengembangan Modul Elektronik (E-Modul) Interaktif pada Mata Pelajaran Kimia Kelas XI SMA. *Jurnal Inovasi Teknologi Pendidikan*, 5(2), 180-191. <https://doi.org/10.21831/jitp.v5i2.15424>
- Himang, V. H., Mulawarman, W. G., & Ilyas, M. (2019). Pengembangan Bahan Ajar Menulis Cerpen Berbasis Pengalaman Siswa Kelas XI SMK. *Diglosia: Jurnal Kajian Bahasa, Sastra, dan*

- Pengajarannya*, 2(2), 93-102. <https://doi.org/10.30872/diglosia.v2i2.pp93-102>
- Irkhamni, I., Izza, A. Z., Salsabila, W. T., & Hidayah, N. (2021). Pemanfaatan Canva sebagai E-Modul Pembelajaran Matematika terhadap Minat Belajar Peserta Didik. *Prosiding Konferensi Ilmiah Pendidikan*, 2, 127-134. Retrieved from <https://proceeding.unikal.ac.id/index.php/kip/article/view/714>
- Kurniawati, K., Noer, S. H., & Gunowibowo, P. (2019). Pengaruh Model Pembelajaran Inkuiri Terbimbing terhadap Kemampuan Berpikir Reflektif dan Self Efficacy. *Jurnal Pendidikan Matematika Universitas Lampung*, 7(1), 65-77. Retrieved from <https://jurnal.fkip.unila.ac.id/index.php/MTK/article/view/17616>
- Malahayati, E. N., & Zunaidah, F. N. (2021). Analisis Kebutuhan Bahan Ajar Mata Kuliah Kurikulum. *Jurnal Basicedu*, 5(6), 6218-6226. <https://doi.org/10.31004/basicedu.v5i6.1802>
- Marpaung, T. M. G. A., Abizar, H., & Nurhaji, S. (2021). Pengembangan Media Pembelajaran Video Tutorial Kompetensi Tune Up Mesin EFI di SMKN 2 Pandeglang. *Jurnal Pendidikan Teknik Mesin*, 21(1). <https://doi.org/10.15294/jptm.v21i1.28614>
- Murjainah, M., Mujib, M. A., Aryaningrum, K., Arisman, A., & Selegi, S. F. (2020). Peningkatan Soft Skills (Kejujuran dan Motivasi) Siswa Menggunakan Edmodo dengan Metode Blended Learning. *Seri Konferensi IOP: Ilmu Kebumihan dan Lingkungan*, 485(1). <https://doi.org/10.1088/1755-1315/485/1/012117>
- Nindiawati, D., Subandowo, M., & Rusmawati, R. (2021). Pengembangan Bahan Ajar Matematika untuk Siswa Kelas V Sekolah Dasar. *Edcomtech Jurnal Kajian Teknologi Pendidikan*, 6(1), 140-150. <https://doi.org/10.17977/um039v6i12021p140>
- Nurdyansyah, N., Udin, B., & Rosid, M. A. (2021). Pengembangan Media Alat Peraga Edukatif Interaktif (APEI) Laboratorium Bengkel Belajar Berbasis Custom by User. *Jurnal Teknologi Pendidikan*, 6(1), 54-71. <https://doi.org/10.32832/educate.v6i1.4047>
- Nurhairunnisah, N., & Sujarwo, S. (2018). Bahan Ajar Interaktif untuk Meningkatkan Pemahaman Konsep Matematika pada Siswa SMA Kelas X. *Jurnal Inovasi Teknologi Pendidikan*, 5(2), 192-203. <https://doi.org/10.21831/jitp.v5i2.15320>
- Oktaviara, R. A., & Pahlevi, T. (2019). Pengembangan E-Modul Berbantuan Kvisoft Flipbook Maker Berbasis Pendekatan Saintifik pada Materi Menerapkan Pengoperasian Aplikasi Pengolah Kata Kelas X OTKP 3 SMKN 2 Blitar. *Jurnal Pendidikan Administrasi Perkantoran*, 7(3), 60-65. Retrieved from <https://ejournal.unesa.ac.id/index.php/JPAPUNESA/article/view/29542>
- Pardede, L. V. S., L, M. N., & Darmadi, D. (2022). Pengembangan Modul Elektronik Berbasis Canva pada Materi Sistem Regulasi. *Biogenesis*, 18(2), 132. <https://doi.org/10.31258/biogenesis.18.2.132-144>
- Pemimaizita, S. P. (2022). Pengembangan E-Modul Berbasis Canva pada Pembelajaran Matematika di Masa Pandemi Covid-19 Siswa Kelas XI MAN 1 Bungo. *Mat-Edukasia*, 7(1), 15-21. Retrieved from <https://journal.universitasmalang.ac.id/index.php/mat-edukasia/article/view/749/489>
- Prasetyo, S., Houtman, B. A. Y., & Yusmiono, B. A. (2020). Analisis Faktor-Faktor Penghambat Guru dalam Pelaksanaan Pembelajaran Geografi Kelas X di SMA Negeri 1 Indralaya. *Jurnal Geografi*, 9(1), 9-18. Retrieved from <http://geografi.pjj.unp.ac.id/index.php/geo/article/view/921>
- Puspita, K., Nazar, M., Hanum, L., & Reza, M. (2021). Pengembangan E-Modul Praktikum Kimia Dasar Menggunakan Aplikasi Canva Design. *Jurnal IPA & Pembelajaran IPA*, 5(2), 151-161. <https://doi.org/10.24815/jipi.v5i2.20334>
- Putra, A., & Syarifuddin, H. (2019). Analisis Kebutuhan Pengembangan Lembar Kerja Siswa Berbasis Penemuan Terbimbing Kelas VIII Sekolah Menengah Pertama. *Jurnal Edukasi Matematika dan Sains*, 6(1), 39. <https://doi.org/10.25273/jems.v6i1.5327>
- Putra, R. P., & Syarifuddin, H. (2019). Pengembangan Bahan Ajar Penyajian Data Berbasis Pendidikan Karakter di Kelas IV Sekolah Dasar. *Jurnal Basicedu*, 2(1), 264-270. <https://doi.org/10.31004/basicedu.v3i2.1>
- Putry, H. M. E., 'Adila, V. N., Sholeha, R., & Hilmi, D. (2020). Video Based Learning sebagai Tren Media Pembelajaran di Era 4.0. *Tarbiyatuna: Jurnal Pendidikan Ilmiah*, 5(1), 1-24. <https://doi.org/10.55187/tarjpi.v5i1.3870>
- Rahmayani, S., & Hendriana, H. (2021). Validitas Bahan Ajar Berbasis Pendekatan Problem Based Learning pada Materi Statistika. *Jurnal Pembelajaran Matematika Inovatif*, 4(4), 867-874. <https://doi.org/10.22460/jpmi.v4i4.867-874>
- Ramadhani, R., & Fitri, Y. (2020). Pembelajaran Berbasis Proyek dalam Flipped Classroom untuk Modul Pembelajaran Matematika Elektronik (ePUB3) Berbasis Desain dan Implementasi. *Jurnal Penelitian Pendidikan Universal*, 8(7), 3119-3135. <https://doi.org/10.13189/ujer.2020.080740>
- Smaldino, S. E., Lowther, D. L., & Russell, J. D. (2007). *Instructional Technology and Media for Learning*. North Asia: Pearson Merrill Prentice Hall.
- Suarsana, I. M. (2013). Pengembangan E-Modul Berorientasi Pemecahan Masalah untuk

- Meningkatkan Keterampilan Berpikir Kritis Mahasiswa. *JPI (Jurnal Pendidikan Indonesia)*, 2(2), 264-275. <https://doi.org/10.23887/jpi-undiksha.v2i2.2171>
- Sutomo, S., Ibrahim, N., & Hartono, R. (2023). Pengembangan E-Modul Berbasis Canva pada Pendidikan dan Pelatihan (Diklat) Balai Besar Guru Penggerak Jawa Barat. *Jurnal Teknologi Pendidikan*, 12(2), 120-128. Retrieved from <https://ejournal.uika-bogor.ac.id/index.php/TEK/article/view/10692>
- Syahrizaldy, A., Subandowo, M., & Karyono, H. (2023). Pengembangan Bahan Ajar Interaktif Blended Learning Melalui Website Canva Mata Pelajaran Penjaskesorkes. *Jurnal Teknologi Pendidikan: Jurnal Penelitian dan Pengembangan Pembelajaran*, 8(1), 41. <https://doi.org/10.33394/jtp.v8i1.5647>
- Tanjung, R. E., & Faiza, D. (2019). Canva sebagai Media Pembelajaran pada Mata Pelajaran Dasar Listrik dan Elektronika. *Voteteknika (Vokasional Teknik Elektronika dan Informatika)*, 7(2), 79. <https://doi.org/10.24036/voteteknika.v7i2.104261>
- Yulaika, N. F., Harti, H., & Sakti, N. C. (2020). Pengembangan Bahan Ajar Elektronik Berbasis Flip Book untuk Meningkatkan Hasil Belajar Peserta Didik. *JPEKA: Jurnal Pendidikan Ekonomi, Manajemen dan Keuangan*, 4(1), 67-76. <https://doi.org/10.26740/jpeka.v4n1.p67-76>