

Development of Accounting E-module Based on Contextual Learning to Increase Student Interest in Learning

Kusumadyahdewi^{a,1,*}, Yona Octiani Lestari², Farah Ramadhani^{b,3}

^a State Islamic University of Maulana Malik Ibrahim Malang, Jl. Gajayana No.50, Kota Malang 65144, Indonesia


^b Monash University Melbourne, Wellington Rd, Clayton VIC 3800, Australia

¹kusumadyahdewi@pips.uin-malang.ac.id *; ²yona.octiani@gmail.com; ³fram0005@student.monash.edu

* corresponding author

ARTICLE INFO	ABSTRACT
Article history Received Feb 03, 2024 Revised March 02, 2024 Accepted June 19, 2024	This research aims to develop an accounting e-module for contextual-based learning to increase students' interest in accounting. This contextual learning connects accounting with the application of financial literacy, particularly in financial planning. The development research method utilizes the ADDIE development procedure model. Validation by media, material, and language experts, as well as feasibility trials, targets students from the class of 2022/2023 of the Social Sciences Education Study Program (<i>Program Studi Pendidikan Ilmu Sosial - PIPS</i>) at UIN Maulana Malik Ibrahim. Interest was measured using a questionnaire administered to both the experimental and control classes. The research results indicate that the interest of the experimental class was higher than that of the control class, demonstrating the effectiveness of using contextual-based e-modules in learning.
Keywords ADDIE E-modul Akuntansi Pips	

This is an open-access article under the [CC-BY](#) license.



I. Introduction

Interest is the process by which activities directed toward learning goals are initiated and maintained (Harefa et al., 2023; Susanti et al., 2020). In expectancy-value theory, interest in learning is a function of expectations of success and perceived value in the learning process (Cook & Artino Jr, 2016; Harefa et al., 2023; Nasution, 2018). Attribution theory focuses on the causal attributions that learners create to explain the results of activity and classify them based on their locus, stability, and controllability. The social-cognitive theory emphasizes self-efficacy as a primary driver of action of interest and identifies cues that influence future self-efficacy and support self-regulated learning (Cook & Artino Jr, 2016; Elmunsyah et al., 2022).

Students' interest in learning is crucial for studying materials, as it is essential for achieving satisfactory results. In addition to focusing on learning outcomes, the application of knowledge to daily life is also imperative (Frazier et al., 2021; Lee, 2022). The success of learning depends on students, educators, and available learning resources. A two-way communication process between students and educators is essential to meet learning objectives. This communication must be accompanied by using media to facilitate information delivery and enhance the effectiveness of the learning process. Learning materials must be tailored to current conditions to capture

students' attention effectively. Students are also expected to actively engage in implementing the curriculum independently in their daily lives. Contextual learning, which encourages students to relate studied materials to real-world situations (Afriani, 2018), is highly suitable for this purpose. This approach provides valuable learning experiences that students can apply in society.

The Accounting course taught in the Social Sciences Education Study Program (*Program Studi Pendidikan Ilmu Sosial - PIPS*) is often considered challenging for many students to grasp, as revealed in pre-lecture interviews. Accounting entails the study of recording transactions within a company for the preparation of financial reports, serving as management accountability and a foundation for decision-making. This discipline demands precision in adhering to the accounting cycle. According to interviews, this precision requirement may discourage students from enjoying the subject, as errors made in one cycle can cascade into subsequent ones. Additionally, some students perceive accounting as applicable only in businesses with a significant financial magnitude.

Accounting can also be practiced in personal finance for financial planning. This financial planning is part of financial literacy which is part of the Financial Services

Authority in Indonesia (*Otoritas Jasa Keuangan - OJK*) policy. Accounting is a solution to strengthen financial literacy (Budiutono, 2023). Financial literacy is very important for various groups to understand, including students. Students like the young generation who are preparing themselves to become independent individuals, must also be able to take responsibility for their finances. Financial literacy, numeracy skills, and the quality of education greatly influence financial behavior (Grohmann et al., 2015). Financial behavior is the treatment, management, and use of a person's financial resources (Suryanto, 2017).

To achieve a prosperous life in the future, students need to understand financial planning through accounting courses. Financial planning can start by recording income and expenditure on the available funds. This practice is useful in fostering disciplined expenditure management. Learning Accounting can provide an understanding of the concept of skills in managing personal finances and being accountable for monthly calculations as control and supervision (Islamita & Nugroho, 2023). With this background, it is important to develop an E-module to support lectures on "Introduction to Accounting for Service and Trading Companies Based on Contextual Learning" to increase student interest in learning. The uniqueness of this product is that it integrates introductory accounting material for service and trade companies, rooted in the Al-Qur'an and Hadith.

II. Method

The research used development research as a method. It is a systematic study to design, develop, and evaluate programs, processes, and learning outcomes according to internally determined criteria (Setyosari, 2020). This development research employs the ADDIE development research procedure model, as illustrated in Figure 1, which stands for Analysis, Design, Development, Implementation, and Evaluation, developed by Dick and Carey in 1996.

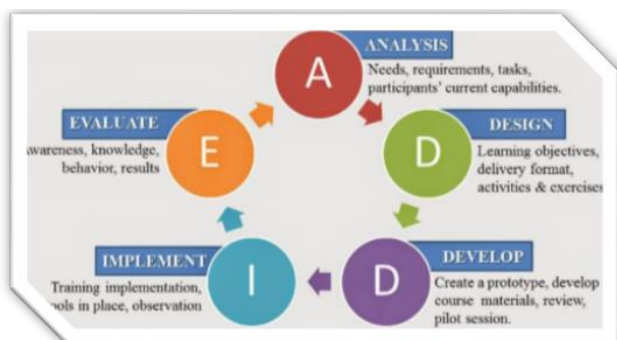


Fig. 1. ADDIE Development Research Procedure Model

This learning media product was constructed using the Flipbook application, which offers three advantages. First, it allows the presentation of learning material in the form of words, sentences, and images, and can be enhanced

with colors to capture students' attention. Moreover, it is cost-effective, easy to create, portable, and facilitates learning activities. Lastly, the development process utilized the Windows Operating System, enabling users to access the material using mobile devices such as smartphones or tablets.

The product feasibility assessment utilizes a questionnaire as an assessment instrument. The trials conducted were divided into three stages: validation by a team of experts consisting of both learning media and accounting material experts, a feasibility trial involving 30 students, and an experiment measuring interest in learning Accounting with 44 students from two classes of the 2022/2023 Social Sciences Education Study Program (PIPS) at UIN Maulana Malik Ibrahim, Malang.

The validation process by the expert team included learning media lecturers from the Electrical Engineering department at the State University of Malang and accounting course instructors at UIN Maliki Malang. Subsequently, the data collected from the questionnaire during the trials was analyzed to draw research conclusions. The data analysis technique employed is descriptive percentage analysis, which converts quantitative data into percentage form and interprets it using qualitative sentences.

III. Results and Discussion

The results of the e-module development comprise a cover, table of contents, initial practice questions to assess student competency, material descriptions, integration of the Al-Qur'an and Hadith, presentation of the material in YouTube format, assignments, and a bibliography. Below are detailed descriptions of each section of the e-module under development.

1) Cover Page (cover)

This cover page contains the e-module title and author's name, as in Figure 2.



Fig. 2. e-Module cover design

2) Inside cover and foreword

The inside cover displays the ISBN and Publisher in addition to the title and author's name.

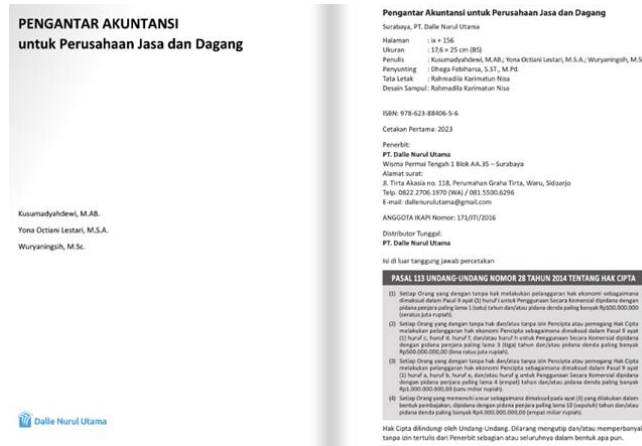


Fig. 3. Cover page in e-Module

3) Material Description

This e-module consists of 13 chapters, which discuss Introduction to Accounting material, for service and trading companies, namely:

- Chapter 1 Scope of accounting.
- Chapter 2 accounting cycle.
- Chapter 3 ledger and trial balance.
- Chapter 4 adjusting journals and working papers.
- Chapter 5 track balance.
- Chapter 6 financial reports.
- Chapter 7 closing journals and reversing journals.
- Chapter 8 application of accounting in profit and loss financial arrangements.
- Chapter 9 trading company accounting.
- Chapter 10 special journal.
- Chapter 11 methods for recording and calculating merchandise inventory.
- Chapter 12 application of accounting in financial management profit and loss.
- Chapter 13 application of accounting to small and medium enterprises.

4) Integration of the Al-Qur'an and Hadith.

This e-book also integrates investment material with verses in the Al-Qur'an and Hadith because it is aimed at students in Islamic universities. These verses from the Qur'an are displayed in connection with accounting material and Financial Literacy material.

5) Presentation of supplementary material in the form of YouTube videos.

This e-module is also equipped with material in the form of videos taken from YouTube, so students can also learn it visually. Each chapter contains material from YouTube videos by adapting the material discussed. The following image shows a page that contains a display of material in video form with a link from YouTube.

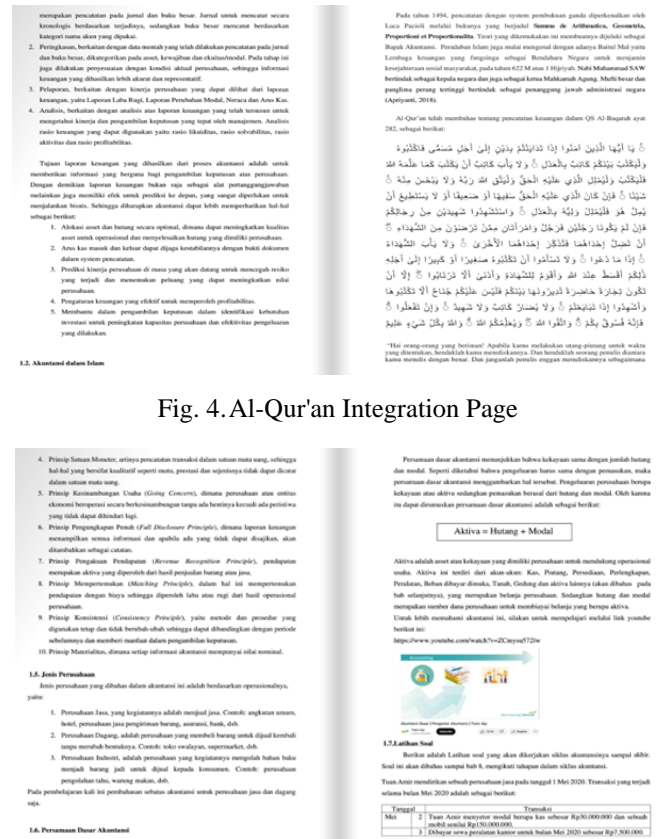


Fig. 4. AI-Qur'an Integration Page

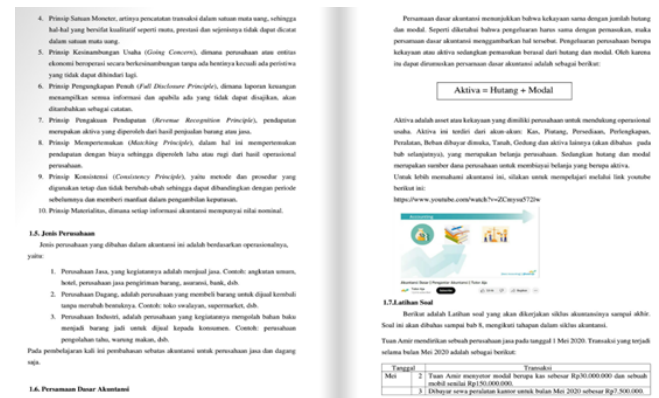


Fig. 5. Page with YouTube Link

6) Practice questions to deepen the material.

To check students' understanding, there is a quiz at the end of each chapter, which students can complete via e-module. Practicing multiple-choice questions will display a notification of wrong or correct answers, accompanied by the final score, as shown in Figure 6.

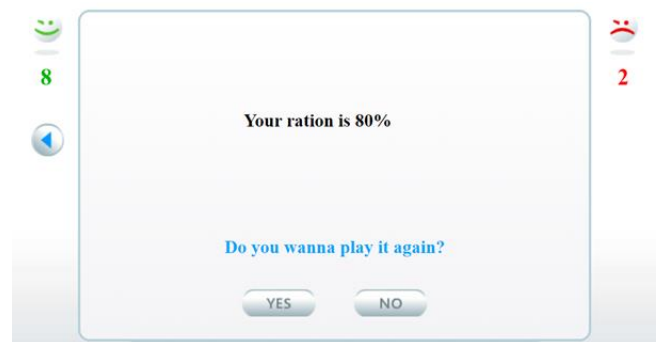


Fig. 6. Page of Values Resulting from Practice Questions

7) Understanding the Material with Games

Games are also used in class so that students will not be bored while increasing their understanding of the material discussed. The game is played in predetermined groups, which also trains students in teamwork.

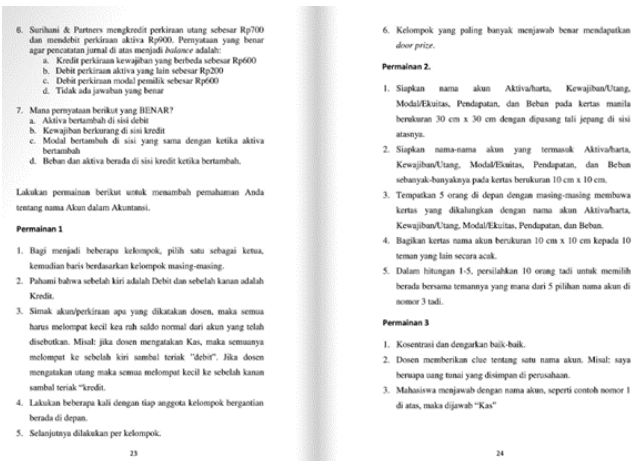


Fig. 7. Page for deepening material with games

B. Expert Assessment Results

The validation by media experts took place on June 20, 2023, conducted by a learning media lecturer from the Department of Electrical Engineering at Universitas Negeri Malang (Malang State University—UM). The validation criteria for learning media encompass several aspects, including (1) Software Engineering; (2) Content Quality; (3) Presentation Design; (4) Interaction Usability; and (5) Accessibility. Based on an overall data management formula adjusted to meet validity criteria, the results are presented in Table 1. These results are largely favorable, as the software used aligns well with the material being designed, with only minor notes for presentation development. Expert assessments suggest that effective media can enhance learning interest, thus contributing to achieving lecture objectives (Husmildin et al., 2020; Susanti et al., 2020).

Table 1. Data from Media Expert Validation Results

No	Assessment Aspects	ΣT_{se}	ΣT_{sh}	P (%)	Category
1	Software Engineering	11	12	91,7	Very Valid
2	Content Quality	20	20	100	Very Valid
3	Visual Communication	22	24	91,7	Very Valid
4	Presentation Design	12	12	100	Very Valid
5	Accessibility	12	12	100	Very Valid
Average				96,69	Very Valid

^a Source: Results of researcher data processing

Material expert validation was conducted by a lecturer at the Faculty of Economics, Department of Accounting, at the State Islamic University of Malang on July 15, 2023. The criteria for material validation in the Introduction to Accounting e-module include (1) Material Suitability; (2) Learning Design; (3) Language Eligibility; and (4) Media Use. Based on the overall data processing formula adjusted to meet validity criteria, as shown in Table 2, the

results of the material expert assessment fall within the 'very valid' category. This alignment is attributed to its adherence to the curriculum scope used in this course. Research findings assert that material alignment with the curriculum enhances students' readiness for the subjects they study, thereby fostering interest in learning (Astuti & Santosa, 2017; Hidayat et al., 2022).

Table 2. Data from Material Expert Validation Results

No	Assessment Aspects	ΣT_{se}	ΣT_{sh}	P (%)	Category
1	Material Feasibility	19	20	95	Very Valid
2	Learning Design	16	16	100	Very Valid
3	Language Eligibility	7	8	87,5	Very Valid
4	Media Use	15	16	93,75	Very Valid
Average				92,81	Very Valid

^b Source: Results of researcher data processing

C. Product Test Results

The trial for this e-module was conducted on August 23-24, 2023, involving 30 students from the class of 2022/2023 who had previously reviewed the e-module. Assessment criteria for this product trial encompassed (1) Learning Design; (2) Software Engineering; and (3) Visual Communication. Upon processing the data using an overall formula adjusted for validity and reliability criteria for the question items, the results are presented in Table 3.

Table 3. Large Group Validation Results Data

No	Assessment Aspects	ΣT_{se}	ΣT_{sh}	P (%)	Category
1	Learning Design	588	502	85,4	Very Valid
2	Software Design	252	223	88,5	Very Valid
3	Visual Communication	336	292	86,9	Very Valid
Average				86,9	Very Valid

The material presented in the e-module has undergone testing with students, resulting in assessments that deem the material suitable for achieving learning objectives and easy to comprehend. This is attributed to the inclusion of pictures and videos, resulting in a learning design score of 85.4%, indicating high validity. Students find the e-module learning media easy to use, effective, efficient, and simple to navigate, resulting in a software engineering score of 88.5%, also indicating high validity. The language used is both easily understandable and communicative, while the layout, featuring attractive colors, enhances visual communication, resulting in a score of 86.9%, indicating a very satisfactory performance. Overall, the

resulting score is 86.9%, indicating a highly satisfactory outcome.

The material presented in e-module format has been subjected to testing with students, resulting in assessments that deem the material appropriate for achieving learning objectives and easy to comprehend due to the inclusion of pictures and videos. This evaluation yielded a learning design score of 80.7%, indicating high validity. Students find the e-module learning media easy to use, effective, efficient, and simple to operate, resulting in a software engineering score of 82.2%, also indicating high validity. The language used is both easily understandable and communicative. Furthermore, the layout features attractive colors, enhancing visual communication and resulting in a score of 87.5%, indicating a very satisfactory performance. The overall resulting score is 84.7%, indicating a highly satisfactory outcome. Overall, the response from this feasibility trial suggests that the product, in terms of Learning Design, software design, and visual communication, is very feasible. This aligns with research findings indicating that products falling within the feasible category demonstrate achievement of learning objectives (Abi Hamid et al., 2018; Amin et al., 2021; Dwijayanti et al., 2022; Latief et al., 2022).

Overall qualitative assessments from students indicated that the e-module was highly engaging due to its inclusion of pictures, videos, and games, sparking students' interest in studying Accounting. However, there were suggestions to enhance the layout by adding more images to enhance its appeal.

D. Test Interest in Learning Accounting through Experiments

The e-module developed and validated, underwent testing in two classes: class A, with 21 students as the experimental group, and class C, with 23 students as the control group, from the 2022/2023 cohort of the Social Sciences Education Study Program (PIPS) at UIN Maulana Malik Ibrahim. The teaching sessions for both the experimental and control classes were conducted from August 7 to August 31, 2023. In the experimental class, accounting concepts were explained using contextual methods, which included:

- Daily journal recording in accounting can be applied to record daily income and expenditure for personal money.
- The balance sheet consists of assets and liabilities, which must always balance because liabilities represent a source of funds and assets represent the company's expenditure. Therefore, the company's spending should not exceed its existing funding sources. Managing personal finances follows a similar principle, where expenditure should not exceed income.
- The liabilities or sources of funds on the balance sheet consist of liabilities (debt) and capital. We

don't always buy products using our own money; purchases can also be made on credit for a certain period. The decision to purchase on credit is made considering that it entails an obligation to pay interest and principal on the loan, thereby increasing expenses in the next period.

- The Assets side of the balance sheet represents the company's expenditure to support business operations. This involves purchasing goods that are useful and related to operations. Similarly, in personal finance, spending is directed towards items related to daily life and even productive ones. Productive goods are those that can generate income for their owners.
- Financial reports are the result of accounting, for the evaluation of business operations carried out during one period. Likewise, when recording income and expenses in personal finances, they can be used to evaluate whether spending decisions are effective and whether they align with income.

Meanwhile, in the control class, students received accounting material based on existing theory. Subsequently, they are asked to complete a questionnaire regarding their interest in studying Accounting. The scores obtained from the questionnaire are then used to calculate the mean and standard deviation, as shown in Table 4. Research suggests that utilizing effective and appropriate media in experimental classes can enhance students' interest in learning (Pangestika & Rusliati, 2019; Ulandari & Sujana, 2022; Zulfarina et al., 2021).

Table 4. Calculation of Mean and Standard Deviation

	Experiment Class	Control Class
Mean	3,52	2,49
Standard Deviation	0,26	0,45

The experimental class achieved a higher mean score than the control class, with scores of 3.52 and 2.49. Similarly, the standard deviation for the experimental class was smaller than that of the control class, indicating a distribution closer to the mean in the experimental group. This suggests that students in the experimental class, who received accounting material linked to everyday life, became more interested in learning accounting. In contrast, the control class exhibited a higher standard deviation, indicating more diverse response scores when provided with accounting material based solely on theory. Using the t-test formula and a t-test Calculator, the calculated t-value of 9.14 exceeded the t-table value of 1.68, indicating a significant difference in mean scores between the experimental and control classes.

IV. Conclusion

Research and development using the ADDIE model has resulted in the creation of an Introduction to Accounting e-module, which has been validated by

material experts, media experts, language experts, and students. The validation results from media experts were 96.68%, material experts 92.81%, language experts 84.7%, small-group students 84.7%, and large-group students 86.9%. Based on the obtained results, it can be concluded that the research and development of this Introduction to Accounting e-module successfully achieved the objectives set by the researchers. These objectives include: 1). Developing an Accounting e-module for the Introduction to Accounting course for students of the PIPS FITK UIN Malang Study Program. 2). The development of the Introduction to Accounting e-module was deemed highly suitable and valid to be used as a learning medium for students of the PIPS FITK UIN Malang Study Program. However, some revisions to the e-module were noted. 3). The development of this accounting module effectively enhances students' interest in learning at PIPS FITK UIN Malang, particularly in studying Accounting. This is attributed to its integration with everyday life practices, such as recording and managing personal finances.

References

- Abi Hamid, M., Nurtanto, M., Rahmat, A., Mutolib, A., Nurhaji, S., Fawaid, M., & Rizal, S. U. (2018). The analysis of the learning implementation plan (LIP) in vocational subjects based on the 2013 curriculum. *International Conference on Issues in Social and Education Research (ICISER 2017)*, 27–32. <https://doi.org/https://doi.org/10.17509/invotec.v14i1.11042>
- Afriani, A. (2018). Pembelajaran kontekstual (cotextual teaching and learning) dan pemahaman konsep siswa. *Jurnal Al-Mutaalimah: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 3(1), 80–88.
- Amin, N., Oviana, W., & Ghassani, F. (2021). Feasibility of Web-Based E-Book Learning Media Using Anyflip Web on Digestive System Materials. *Bioeducation Journal*, 5(2), 99–110.
- Astuti, D., & Santosa, D. (2017). E-Book for problem based learning to improve learning outcome of the students. *International Conference on Teacher Training and Education 2017 (ICTTE 2017)*, 403–410. <https://doi.org/https://doi.org/10.2991/ictte-17.2017.45>
- Budiutono, S. (2023). Analisis penguatan literasi keuangan melalui pendampingan akuntansi UMKM. *Land Journal*, 4(1).
- Cook, D. A., & Artino Jr, A. R. (2016). Motivation to learn: An overview of contemporary theories. *Medical Education*, 50(10), 997–1014. <https://doi.org/https://doi.org/10.1111/medu.13074>
- Dwijayanti, K., Leksono, I. P., & Rohman, U. (2022). Development of Canva-based digital scrapbook learning media using the ADDIE model in Indonesian language learning material writing short story text. *Studies in Philosophy of Science and Education*, 3(3), 113–126. <https://doi.org/https://doi.org/10.46627/sipose.v3i3.299>
- Elmunyah, H., Wibawa, A. P., Suswanto, H., Hidayat, W. N., Dwiyanto, F. A., Chandra, J. A., & Utomo, W. M. (2022). Development of mobile application media to grow students' interest in learning print graphic design at the vocational high school level. *Mathematical Statistician and Engineering Applications*, 71(3s), 1348–1363.
- Frazier, L. D., Schwartz, B. L., & Metcalfe, J. (2021). The MAPS model of self-regulation: Integrating meta-cognition, agency, and possible selves. *Metacognition and Learning*, 16, 297–318. <https://doi.org/https://doi.org/10.1007/s11409-020-09255-3>
- Harefa, D., Sarumaha, M., Telaumbanua, K., Telaumbanua, T., Laia, B., & Hulu, F. (2023). Relationship student learning interest to the learning outcomes of natural sciences. *International Journal of Educational Research and Social Sciences (IJERSC)*, 4(2), 240–246.
- Hidayat, W. N., Elmunsyah, H., Bariroh, L. I., & Sutikno, T. A. (2022). Gamification-based e-learning design for vocational software engineering subjects. *2022 14th International Conference on Information Technology and Electrical Engineering (ICITEE)*, 142–147. <https://doi.org/https://doi.org/10.1109/ICITEE56407.2022.9954090>
- Husmildin, R. S. P. P., Rosyid, H. A., & Elmunsyah, H. (2020). Developing gamified mobile learning to increase student motivation to learn WAN technology for vocational high school students. *2020 4th International Conference on Vocational Education and Training (ICOVET)*, 218–222. <https://doi.org/https://doi.org/10.1109/ICOVET50-258.2020.9229957>
- Islamita, T. P., & Nugroho, P. I. (2023). Pengaruh pembelajaran pendidikan akuntansi dan literasi keuangan terhadap pengelolaan keuangan. *Among Makarti*, 16(1).
- Latief, M., Lahinta, A., & Hasan, M. P. (2022). Pengembangan media pembelajaran interaktif pada mata pelajaran animasi 2 dimensi dan 3 dimensi. *Jurnal Teknik*, 20(1), 77–88. <https://doi.org/https://doi.org/10.37031/jt.v20i1.-234>
- Lee, J. (2022). Unveiling the relationships among adolescents' persistent academic possible selves, academic self-concept, self-regulation, and achievement: A Longitudinal and Moderated Mediation Study. *Self and Identity*, 21(4), 474–498. <https://doi.org/https://doi.org/10.1080/15298868.2021.1930578>
- Nasution, N. C. (2018). Dukungan teman sebaya dalam meningkatkan motivasi belajar. *Al-Hikmah: Jurnal Dakwah*, 12(2), 159–174. <https://doi.org/https://doi.org/10.24260/al-hikmah.v12i2.1135>
- Pangestika, T., & Rusliati, E. (2019). Literasi dan efikasi keuangan terhadap minat mahasiswa berinvestasi di pasar modal. *Jurnal Riset Bisnis Dan Manajemen*, 12(1), 37–42. <https://doi.org/https://doi.org/1979-0600> (print) 2580-9539
- Setyosari, P. (2020). *Desain pembelajaran*. Bumi Aksara.
- Suryanto, S. (2017). Pola perilaku keuangan mahasiswa di perguruan tinggi. *Jurnal Ilmu Politik Dan Komunikasi*, 7(1), 11–20.
- Susanti, E., Ritonga, M., & Bambang, B. (2020). Pengaruh penggunaan media powerpoint terhadap minat belajar bahasa arab siswa. *Arabiyatuna: Jurnal Bahasa Arab*, 4(1), 179–191. <https://doi.org/https://doi.org/10.29240/jba.v4i1.1406>
- Ulandari, N. K. Y., & Sujana, I. W. (2022). The use of project-based digital comics on social science content to improve learning outcomes students at 5th-grade elementary school students. *Journal for Lesson and Learning*

Studies, 5(3), 457–468. <https://doi.org/https://doi.org/10.23887/jlls.v5i3.57208>

Zulfarina, Z., Syafii, W., & Putri, D. G. (2021). E-magazine based on augmented reality digestive as digital learning media for learning interest. *Journal of Education Technology*, 5(3), 417–424.