

## Development of a Scientific Writing Book based on TPACK to Support the *Merdeka Belajar-Kampus Merdeka* Program

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### ARTICLE INFO

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#### Keywords:

Book;  
TPACK;  
Writing article;  
MBKM

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#### Article history:

Received 2022-10-06

Revised 2023-01-14

Accepted 2023-03-08

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### ABSTRACT

This study aimed to develop a book for writing research articles based on TPACK that were valid, practical, and effective in supporting Merdeka Belajar-Kampus Merdeka (MBKM) program. This book contains technology recommendations that can be used in writing scientific articles and tutorials on how to use them. This development research used the Plomp development model, which consists of three stages, namely the preliminary research phase (early research phase), the development or prototype development phase (development phase), and the assessment phase (assessment phase). The data of this study were collected through observation, interviews, questionnaires, and tests of writing scientific articles for undergraduate students. Several documents used were questionnaires, observation sheets, and validation sheets. The data were analyzed by using Likert Scale. The result showed that Scientific Writing Book based on TPACK had met the validity, practicality, and effectiveness requirement to support Merdeka Belajar-Kampus Merdeka (MBKM) program.

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## 1. INTRODUCTION

Merdeka Belajar-Kampus Merdeka (MBKM), or freedom to learn-independent campus, has eight learning activities. One form of these learning activities is research to build students' critical thinking (Nugroho & Ediyono, 2021; Rahman et al., 2021; Suhartono, 2021). For undergraduate students, basic skills in scientific writing are essential. The framework of scientific articles consists of structured abstracts (Almugbel et al., 2019; Bahadoran et al., 2020; Silva et al., 2020; Tullu, 2019), an introduction, methodology, research results, and conclusions (Lazarides et al., 2020). Constraints faced by students when writing scientific articles are writing errors (Franco et al., 2021; Hasanuddin et al., 2019) which include common words (Jamilah, 2017), determining research topics (Adelia et al., 2018), difficulties in finding literature and empirical data (Aisiah & Firza, 2018), errors in writing paraphrased quotes/sites (Agathokleous, 2021; Chen, 2021; Hafiar et al., 2019) and difficulty in making appropriate references to

citations (Goyal et al., 2020; Tang et al., 2021). In general, scientific writing is one of the learning activities which has several issues to deal with the student’s critical thinking to support this program in many ways.

The problem described above can be overcome by teaching students to use technology (Magulod & Ramada, 2020; Yang et al., 2018). Utilizing this technology will improve students' technological abilities through the TPACK learning framework to support the MBKM program (Koehler & Mishra, 2009). The book that was developed contains recommendations along with tutorials on using applications that can be used to help students in writing scientific articles. The design of the book writing articles is organized as follows.

**Table 1.** Draft Book Contents for Writing Articles

Problems Faced by Students in Writing Scientific Articles	Recommended Technology
Difficulty in writing common words and typing errors.	
Difficulty in finding references related to research topics.	 
Difficulty in paraphrasing the quotations used.	
Difficulty in making citations and bibliography.	

This research aimed to develop a valid, practical, and effective scientific writing book based on TPACK to support the MBKM program. The urgency of this research was to support the MBKM program regulated in Permendikbud No. 3 of 2020 Article 15 Paragraph 1. One of them is in the form of research or learning activities. Coupled with 8 Indikator Kerja Utama (IKU) or key performance indicators, the results of lecturers' research were used by the community, in this case, lecturers' students. This research was also in line with Permendiknas No. 17 of 2010 concerning preventing and controlling plagiarism in universities. Based on this urgency, this research was critical to support the Minister of Education program, especially in the MBKM program. The relevance of this research was in line with the Asahan University research strategic plan for 2021-2025, which focuses on advancing innovative education following the era of digital society 5.0.

Education and skill-promoting innovation play a crucial role. Higher education helps people develop their innovative skills, but there are still many important questions about the types of higher education teaching that can help people improve their innovative skills (Hoidn & Kärkkäinen, 2014). The impact of digital technologies on education has been minimal, despite the enormous potential of digitalization for fostering and enhancing learning (OECD, 2016). In addition, in advancing innovative education in accordance with the digital era, it must have encountered many problems. There are many obstacles students face when writing scientific articles, which ultimately makes the student's writing less qualified. The quality of scientific articles is determined from several aspects, namely grammatical writing

(Franco et al., 2021; Hasanuddin et al., 2019), which includes standard words (Jamilah, 2017), research topics (Adelia et al., 2018), literature and empirical data (Aisiah & Firza, 2018), paraphrased quotes (Agathokleous, 2021; Chen, 2021; Hafiar et al., 2019), and bibliography (Goyal et al., 2020). Researchers also usually face difficulties finding scientific articles relevant to their research interests (Tang et al., 2021). These problems can be overcome by teaching students to use technology. Learning by using technology in the form of applications or websites that are available for free or paid is very necessary. Technology-based tools can help improve the quality of student articles and reduce the level of stress experienced by students when writing (Magulod et al., 2020; Yang et al., 2018). Thus, it is necessary to take the appropriate solution to overcome the students' problem in writing scientific articles.

One way to overcome students' difficulties in writing scientific articles is by using appropriate article writing books. The article writing book was based on Technological Pedagogical Content Knowledge (TPACK). The TPACK framework is a process by educators to integrate technology (Brantley-Dias & Ertmer, 2013; Koehler & Mishra, 2009). The TPACK concept includes knowing when, where, and how to use specific knowledge and strategies to guide students in properly using information and communication technology (Niess, 2011). TPACK has attracted the interest of researchers in educational technology worldwide who are interested in issues related to technology integration (Graham, 2011; Nelson et al., 2009). TPACK is a knowledge concept that effectively integrates technology into learning. The knowledge discussed includes 1) technical knowledge, namely knowledge about the operation of existing technologies; 2) managing students' knowledge in classroom learning and knowledge of teaching materials provided to students (Fajero et al., 2021). The essence of the TPACK framework is a complex interaction of three primary forms of knowledge: content, pedagogy, and technology (Koehler & Mishra, 2009). This fact shows the need for technology in an educational environment and innovative solutions.

Difficulties in writing and standard grammar can take advantage of technology, namely Google Documents. Writing and grammatical errors usually occur due to a lack of mastery of standard vocabulary, Indonesian Spelling (EBI), errors in word formation, and errors in typing. It can be avoided by using technology, namely Google Documents (Raharjana, 2017). This tool provides easy-to-use tools to help check and improve your writing and grammar in Indonesian. Based on the study's results, it was found that most students showed a positive attitude toward using the online writing system of Google document device (Lin & Yang, 2013). Google document not only makes it easier to check writing and grammar but also can make it easier to type using a voice which supports pedagogical practice (Alharbi, 2020). In another study, the technology that can be used to write citations and bibliography automatically is by using the Mendeley (Hudriati et al., 2018; Khairina et al., 2020; Pramiasuti et al., 2020) application, Zotero, Endnote (Nuraini, 2020), or the insert citation menu available in Microsoft Word. Many videos on YouTube, Instagram, and TikTok cover tutorials on how to install the app and how to use it. A lot of research and dedication has been done so that students use the Mendeley, Zotero, and Endnote applications (Faisal et al., 2020; Fuada, 2021; Ngibad, 2020). Thus, this technology functioned as a source of information in improving the students' writing quality.

According to the Ministry of Education and Culture regulations in producing scientific work, in article 2 paragraph 1, academics are required to uphold the value of Academic Integrity in producing scientific work, namely by avoiding things that are violated such as plagiarism (Depdiknas, 2021). When students find relevant articles as references, students must paraphrase the quote (Shang, 2019). One way to avoid plagiarism is by paraphrasing a quote from the quoted article. Currently, there are many paid and free online paraphrasing technologies. These technologies are Smoodin, Spinner id, paraphrasing tools, Quillbot, and others. However, the available technology must be checked for logic because the paraphrasing results of the technology sometimes still find ambiguous sentences that require users to be more careful when using them. The paraphrasing method is a process of recognizing, generating or extracting phrases and sentences in different languages, longer or shorter, by conveying almost the same information (Androustopoulos & Malakasiotis, 2010; Siddique et al., 2020). All of these applications require reading comprehension to improve students' paraphrasing skills (Hagaman et al., 2010). By combining paraphrasing technology and reading comprehension skills, students can avoid plagiarism.

In recent years, interest in the topic of TPACK has increased. Related to the topic of this research, several previous researchers have an interest in this topic. The first topic was about the development of teaching material for writing by using TPACK, the result of this research showed that TPACK approach material was needed. It makes it easier for the students to construct coherent paragraphs by providing clear instructions, and it introduces technology to the teaching-learning process of paragraph writing class (Farikah, 2021). The second research was conducted by Oakley, this research reported on an investigation of pre-service teachers' views on creating digital storybooks for use in early childhood classrooms, and how this activity helped them develop TPACK for teaching literacy. The result indicated that it was useful to develop their TPACK in the early years (Oakley, 2020). Another research was proposed by Adipat. In his study the result showed that Technology-Enhanced Content and Language-Integrated Learning (T-CLIL) instruction enhances the TPACK of preservice teachers as indicated by the consistent increase in the mean scores for all seven TPACK elements (Adipat, 2021). In addition, developing an interactive electronic book based on TPACK to increase creative thinking skills was conducted (Siregar et al., 2021). The result of the data analysis of this e-book has met the requirements of validity, practicality, and effectiveness. Thus, there was a significant improvement in the students' critical thinking.

Based on the results of previous research, no one has combined technology that can help students write articles in book form. So researchers were interested in conducting this research to assist students in writing scientific articles by developing scientific writing books based on TPACK with functions and tutorials for its use. This research was also a form of support for the freedom to learn-independent campus program which is regulated in Permendikbud No. 3 of 2020 Article 15 Paragraph 1, one of which is a form of research/research learning activities.

## 2. METHODS

This research was a development to produce a valid, practical, and effective TPACK-based article-writing book to support the MBKM or freedom to a learn-independent campus program. This research is said to be research and development because this research produces a product. The product produced in this research is in the form of an article writing book. The resulting book was also validated and tested, so this research resulted in a book suitable for use in the learning process of writing scientific articles. This development research uses the Plomp development model (Plomp, 2013), which consists of three stages, namely the preliminary research phase (initial research phase), the development or prototyping phase (development phase), assessment phase (assessment phase). The Plomp model was chosen because this development model is seen as more flexible, relatively simple, and practical. The data of this study were collected through observation, interviews, questionnaires, and tests of writing scientific articles for undergraduate students. Observation sheets were used to see students' activeness in constructing their knowledge, understanding lessons, communicating the results of their thoughts, and being active in reflective thinking. In addition, the interview used was unstructured. The interviews were used to analyze student characters using interview guide sheets with lecturers and students. It focused on the students' views of the learning process, understanding of the material, opinions about variations in learning models and resources, and opinions of students about learning technology. Interviews were also held for lecturers to see the lecturer's opinion about the learning process in class, the curriculum used, the presentation of teaching concepts and materials, the character of students, the teaching materials used, and the technology needed by students.

The instruments used were scientific writing book materials, media validation sheets, lesson plan validation sheets, and lecturer and students' response sheets. Furthermore, the assessment indicators for the proficiency test for writing scientific articles were adapted from Fauziya because her research was in line with the objectives of this study (Fauziya, 2020). For details information, it can be shown in the following table.

**Table 2.** Research Instruments

Variables	Data Sources	Methods	Research Instruments
Lesson Plan (RPS)	Material expert	Questionnaire	Validation sheets
Scientific Writing Book based on TPACK	Media expert, material expert, practitioner	Questionnaire	Validation sheets
Students' writing scientific articles	Undergraduate students	Test	Pre-test and Post-test

From the table above, the data analysis consists of two. They were qualitative and quantitative. Qualitative data was obtained from observations, interviews, and suggestions from experts and practitioners after using scientific writing books based on TPACK. Then this data was analyzed descriptively (Foley et al., 2021). While quantitative data was obtained from the validation results by media experts and material experts, the results of the response of lecturers and students to scientific writing books were based on TPACK and the proficiency test for writing scientific articles. The research subjects consisted of second-semester students taking Indonesian language courses, and those selected were the Informatics Engineering study program as the control class and the Mathematics Education study program as the experimental class. The research subjects were selected by purposive sampling, meaning that the sample was selected with certain criteria. The criteria used in selecting the sample as research subjects are as follows. First, at Asahan University, Indonesian language courses are regulated, for the first-semester Indonesian language courses are applied to the Faculty of Economics and Law. Whereas for the second semester, it is applied to the Faculty of Engineering, Agriculture, and FKIP. Second, students are open to learning innovations. Third, the number of students consists of 25-30 people.

Three aspects determine the success of this research; validity, practicality, and effectiveness. The validity of the scientific book, lesson plan, and teacher and student response questionnaire was analysed with some steps. The first was validity data analysis techniques using scores obtained based on Likert Scale with five scales; excellent (5), good(4), middle (3) Average (2), and poor (1). The indicator of validity, practicality, and effectiveness assessment of learning outcomes used was modified from Riduwan (Riduwan, 2007). In addition, the practicality test also analyzes the questionnaire that lecturers and students have filled in. The collected practicality data is then tabulated. Thus, it was calculated the average score of the total fill of the instrument using the formula  $x = \frac{\sum x}{N}$ . For more details, the procedure for this research can be seen in the following figure:

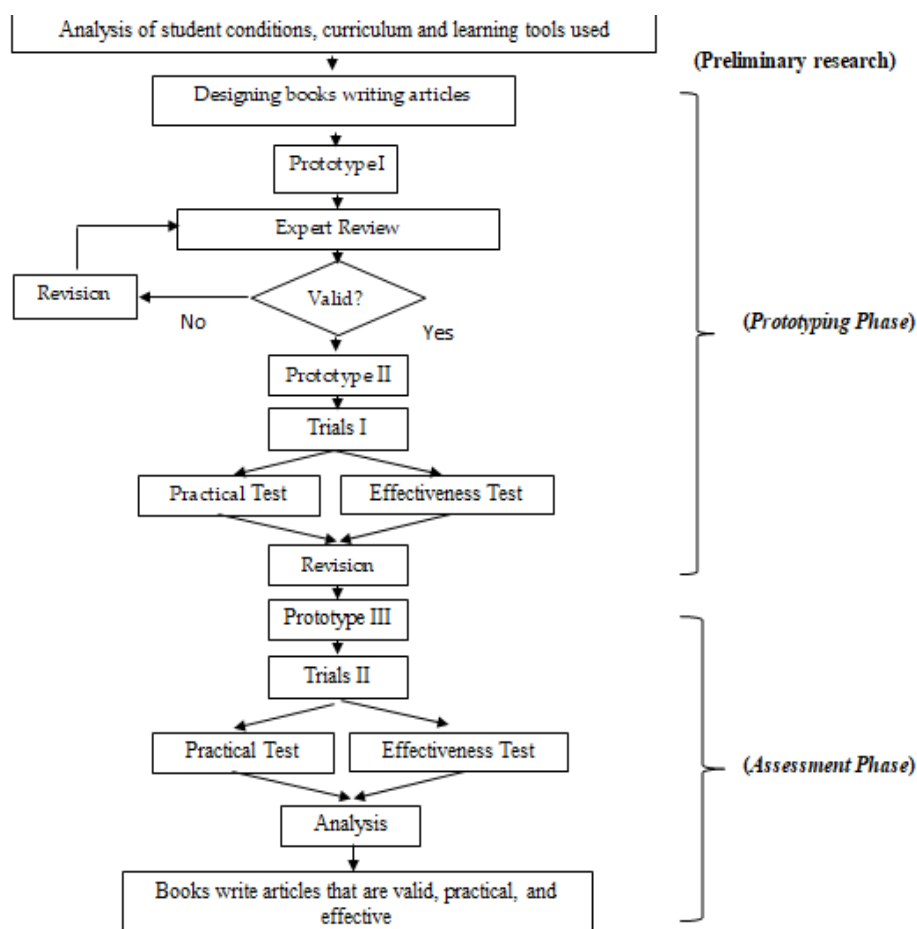


Figure 1. Plomp Model Development Chart

### 3. FINDINGS AND DISCUSSION

#### 3.1. Findings

Developing a book in writing scientific articles based on TPACK to support Merdeka Belajar-Kampus Merdeka (MBKM) program using the Plomp development model, namely the initial research phase, development phase, and assessment phase.

The initial research phase analyzed the student's condition, curriculum, and equipment. This phase was a product pre-planning stage in the form of a book writing scientific articles based on TPACK to support the Merdeka Belajar-Kampus Merdeka program. Needs analysis begins with identifying the condition of students in writing scientific articles, curriculum, and learning tools used by lecturers using interview instruments. Based on the analysis, it was found that lecturers teaching writing scientific articles only directed students to dissect articles in accredited journals and read article templates in journals.

At the development stage, books were designed and compiled, and formative assessments were carried out by experts with the aim that the draft 1 book that has been compiled is valid or not based on the assessment of experts. This book was structured and referred to steps based on TPACK. Experts carry out a formative assessment to see the contents of draft 1. Expert assessment is an activity to validate the book before it is tested. The trials were carried out on material and media experts. This evaluation stage is carried out to assess the results of implementing teaching materials in the form of textbooks. It is also necessary for improvement and determining the developed book. Furthermore, validation was carried out by giving books and validation sheets to two lecturers of Language

Education at Padang State University and one lecturer of Indonesian Language and Literature Education at the University of Peradaban. Based on the validation results from the experts, the following results were obtained:

**Table 3.** Quantitative Data of Material Expert Validation

No	Indicators	Eligibility Percentage (%)	Category	Conclusion
1.	Scientific articles writing	82.4	Very Valid	Very Eligible
2.	Mendeley	94.2	Very Valid	Very Eligible
3.	Quillbot	86.8	Very Valid	Very Eligible
4.	Google Doc	95.2	Very Valid	Very Eligible
5.	Publish or Perish	92.7	Very Valid	Very Eligible
6.	Google Scholar	87.5	Very Valid	Very Eligible
	Average Score	90.15		Very valid and decent with a little revision according to suggestions

Based on Table 3, it is known that the book on writing scientific articles is in the "very valid" category. It means that the book writing scientific articles, which is the initial product, is suitable for trials after improvements have been made based on suggestions and input from experts in Indonesian language education and practitioners as a lecturer in Indonesia. Qualitative data from material experts will be shown in Table 4 as follows.

**Table 4.** Qualitative Data of Material Expert Validation

Validator	Criticism/Suggestions
Material Expert	<ol style="list-style-type: none"> <li>It is necessary to simplify the design table for the combination of TPACK, 5E learning cycle, and PBL to make it easy to understand.</li> <li>Add a table of critical thinking stages to be achieved.</li> <li>There need to be indicators in performance, attitude, and achievement assessment.</li> </ol>

Table 4 shows the validation results from material experts who stated that the recommendation book for writing scientific articles for students was feasible. These results are obtained from the percentage of eligibility by material experts as a whole of 90.15%. Obtaining the eligibility percentage shows that the book writing articles is feasible with little revision and advice from material experts.

Furthermore, after getting the eligible percentage of material validation, the media expert was validated. The presentation of quantitative data related to the results of the media expert's validation and suggestions will be shown in Table 5.

**Table 5.** Presentation of Quantitative Data from Media Expert Validation Results

No	Indicators	Eligibility Percentage (%)	Category	Conclusion
1.	Book Cover Design	92.3	Very Valid	Very Eligible
2.	Book content <i>layout</i> design	86	Very Valid	Very Eligible
3.	Writing Rules	85.7	Very Valid	Very Eligible
4.	Language Eligibility	93	Very Valid	Very Eligible
5.	Serving Eligibility	88	Very Valid	Very Eligible
	Average amount	89	Very Valid	Very valid and decent with a little revision

**Table 6.** Qualitative Data of Media Expert Validation Results

Validator	Criticism/Suggestions
Media Expert	<ol style="list-style-type: none"> <li>1. The colours and images are unclear, so the image is not legible.</li> <li>2. Need to pay attention to the layout to make it more attractive.</li> </ol>

Table 5 shows that the percentage results of each assessment indicator by media experts are in the very valid and feasible category, with a feasibility percentage of 89%. Obtaining the feasibility score shows that the book writing scientific articles is feasible even with little revision, according to the suggestions presented in Table 6. It refers to the appearance of the book *layout design*, and the suggestions are constructive so that the book is feasible when used later.

Then, at the assessment stage, a trial was conducted. There were two trials conducted, namely Trial I and Trial II. Trial I was conducted on a limited basis with a few students. Meanwhile, Trial II was carried out to study scientific articles. The trial in this study tested the recommendation book for writing scientific articles for first-semester students developed at the development stage. After validating the media, individual trials were carried out so that the book was appropriate to use or not. This trial was carried out after obtaining the percentage value of eligibility from media experts. At this stage, 20 Indonesian language study program students participated. The results of individual trials by students are shown in Table 7.

**Table 7.** Individual Trial Results from Students

No.	Indicator	Eligibility Percentage (%)	Category	Conclusion
1.	Convenience	82.3	Very Valid	Very Eligible
2.	attractiveness	87.1	Very Valid	Very Eligible
3.	understanding	83.4	Very Valid	Very Eligible
4.	Renewal	89.5	Very Valid	Very Eligible
	Average amount	85.57	Very Valid	Very valid and decent with a little revision

**Table 8.** Qualitative Data from Individual Trials Results by Students

Validator	Criticism/Suggestions/Comments
Individual test	<ol style="list-style-type: none"> <li>1. More attention needs to the writing section in this book because there are still some typos in words.</li> <li>2. The book's content is good. It is suitable for students to increase their understanding of technology that can be used in compiling scientific works, especially the thesis.</li> <li>3. Some pictures in this book are difficult to see. It would be nice to be enlarged and clarified again.</li> <li>4. The appearance of the book is attractive, and the material is easy to understand</li> </ol>

Table 8 shows that students' assessments of books on writing scientific papers are in the very valid and appropriate category to use. The results of individual trials by students stated that the recommendation book for writing scientific articles was considered attractive in terms of appearance; instructions for using the book are clear and easy to understand in writing scientific articles. However, some inputs become the basis for revision before Trial II. In Trial II in this scientific article writing book, there were several suggestions; namely, the writing system in the book should be paid more attention to in the future. Furthermore, to determine the effectiveness of this book, it is necessary to determine the N-Gain score.

**Table 8.** Achievement of Writing Scientific Skills based on the N-gain score

N-Gain	Category	Number of students	Percentage	Average of gain
$g > 0,7$	High	35	64%	0,74
$0,3 \leq g \leq 0,7$	Moderate	18	33%	
$g < 0,3$	Low	2	3%	
Total		55	100%	

Table 8 showed 35,38, and 2 students in the high, moderate, and low categories with an average N-gain score was 0,74 (high category). It can be concluded that draft III has met the requirements for effectiveness.

### 3.2. Discussion

#### a. Product Validity

Based on the results of expert validation with various improvements, it can be seen that the technology recommendation book for writing scientific articles has reached the "very valid" category. The results of validation data from material experts, media experts, and individual trials conducted by students show that this book was very valid and feasible, with an average percentage of 88.24% eligibility. The data description showed that based on the validation of 2 experts and 1 practitioner, the technology recommendation book for writing scientific articles produced was feasible to be used for field trials. This is in line with previous research on the final version of the EFL-TPACK questionnaire. Therefore, consisting of 36 items after final checking for the validity, consistency, and reliability of the final EFL-TPACK questionnaire indicates that it was a valid and reliable tool to use (Bostancioğlu & Handley, 2018). On the other hand, These different points of view emerge from prospective teachers to perceive TCK items as independent from the pedagogical and educational context. However, it is important to note that only two of the last TCK items have clear loadings, with the third item showing weaker loadings. Perhaps foreign language teacher candidates still struggle to regard TCK as a separate and distinct factor despite researchers' efforts to increase the construct's clarity (Baser et al., 2015).

#### b. Product Practicality

Based on the test results on the material for writing scientific articles in class, it was found that the technology recommendation books for writing scientific articles had reached the "practical" category. It can be seen from the lecturers' assessment results, observations of the implementation of learning, and student assessments. The data description shows that the technology recommendation book for writing scientific articles works well in learning activities. Thus, the practical aspect has been met, this is supported by another researcher based on their research, they found that the responses of prospective teachers and lecturers to electronic books are in the very practical category with the score of 93,1% and 94,3%, respectively (Siregar et al., 2021). In similar with previous research by Baihaqi, the result indicated that created electronic book satisfies eligibility requirements (expert validation) and was useful in the 21st century (learning feasibility). The preparation of materials based on CoRe, which illustrates the fundamental idea of thermodynamic laws, the presentation of HOTS, and this e-progress book's in the advancement of science and technology in education under the banner of TPACK were some of its strong points. PCK is used to understand the interaction of teachers' knowledge and practices and knowledge for planning to teach a particular topic to improve student outcomes in a particular way, for a particular purpose, and for a particular student. Core was used to conceptualize PCK in this way (Baihaqi et al., 2022).

### c. Product Effectiveness

The results of trials on learning to write scientific articles in a class show that the technology recommendation books for writing scientific articles have met the "effective" criteria. This can be seen from the competency test and technology recommendation questionnaire for writing scientific articles. Based on the competency test results, it can be concluded that the technology recommendation book for writing scientific articles was declared "effective" with the achievement of classical learning mastery reaching 90.15%. Based on student assessment questionnaires on this book for writing scientific articles, it can be concluded that developing a scientific article book based on TPACK was declared "effective" with achievement in the high category reaching 85.57%. The data description showed that this book could be used as an alternative book for writing student scientific articles in Indonesian language courses or courses requiring scientific article output. This research is in line with the results of research conducted by Darkwa and Agyei where the study reveals the essence of teacher TPACK for effective integration of technology in teaching. This highlight is a clear indication that teacher TPACK is a requirement for the effective use of ICT in teaching and that in preparing teachers to teach with technology, the framework has the potential to develop teacher experience and the set of competencies they need to integrate technology successfully in their educational practice (Darkwa & Agyei, 2021).

## 4. CONCLUSION

This research showed that the development of technology recommendation books for writing scientific articles reinforces previous research that other researchers have carried out that using TPACK learning can increase student interest in writing. Based on the data above, it can be concluded that the development of a scientific writing book based on TPACK to support Merdeka Belajar – Kampus Merdeka has been met for validity, practicality, and effectiveness. Thus, this book was suitable to use in learning activities on the material of writing scientific articles. The results also provide further support for approaches to Indonesian language teacher education that attempt to integrate technology in teaching scientific writing rather than introduce them separately and highlight how emerging and established technologies can be employed to provide opportunities for communication that are known to make students easier in writing to convey their research to society or scholar.

**Acknowledgement:** The drafting team would like to thank the Directorate of Research, Technology, and Community Service.

## REFERENCES

- Adelia, F., Wahyuli, D., Imanda, T., & Perdana, A. (2018). Analisis Promethee II Pada Faktor Penyebab Mahasiswa Sulit Menemukan Judul Artikel Ilmiah. *Jurnal Ilmiah Komputasi*, 17(2). <https://doi.org/10.32409/jikstik.17.2.2362>
- Adipat, S. (2021). Developing Technological Pedagogical Content Knowledge (TPACK) through Technology-Enhanced Content and Language-Integrated Learning (T-CLIL) Instruction. *Education and Information Technologies*, 6461–6477. <https://doi.org/10.1007/s10639-021-10648-3>
- Agathokleous, E. (2021). Mastering the scientific peer review process: tips for young authors from a young senior editor. *Journal of Forestry Research*, 0123456789. <https://doi.org/10.1007/s11676-021-01388-8>
- Aisiah, A., & Firza, F. (2018). Kendala yang Dihadapi Mahasiswa Jurusan Sejarah dalam Menulis Proposal Skripsi. *Diakronika*, 18(2), 90–104.
- Alharbi, M. A. (2020). Exploring the potential of Google Doc in facilitating innovative teaching and learning practices in an EFL writing course. *Innovation in Language Learning and Teaching*, 14(3), 227–242.

- Almugbel, Z., El, N., & Bugshan, N. (2019). Automatic Structured Abstract for Research Papers Supported by Tabular Format using NLP. *International Journal of Advanced Computer Science and Applications*, 10(2), 233–240. <https://doi.org/10.14569/IJACSA.2019.0100231>
- Androutopoulos, I., & Malakasiotis, P. (2010). A survey of paraphrasing and textual entailment methods. *Journal of Artificial Intelligence Research*, 38, 135–187.
- Bahadoran, Z., Mirmiran, P., Kashfi, K., & Ghasemi, A. (2020). The principles of biomedical scientific writing: Abstract and keywords. *International Journal of Endocrinology and Metabolism*, 18(1), 4–10. <https://doi.org/10.5812/ijem.100159>
- Baihaqi, H. K., Purwaningsih, E., Sulur, & Sutopo. (2022). Development of Physics E-book Based on Technological Pedagogical Content Knowledge (TPACK) on Thermodynamic Laws Topic. *Jurnal Pendidikan Fisika Indonesia*, 18(1), 67–74. <https://doi.org/10.15294/jpfi.v18i1.28924>
- Baser, D., Kopcha, T. J., & Ozden, M. Y. (2015). *Developing a technological pedagogical content knowledge (TPACK) assessment for preservice teachers learning to teach English as a foreign language*. <https://doi.org/10.1080/09588221.2015.1047456>
- Bostancioğlu, A., & Handley, Z. (2018). Developing and validating a questionnaire for evaluating the EFL ‘Total PACKage’: Technological Pedagogical Content Knowledge (TPACK) for English as a Foreign Language (EFL). *Computer Assisted Language Learning*. <https://doi.org/10.1080/09588221.2017.1422524>
- Brantley-Dias, L., & Ertmer, P. A. (2013). Goldilocks and TPACK: Is the construct ‘just right?’ *Journal of Research on Technology in Education*, 46(2), 103–128.
- Chen, H. (2021). A New Citation Recommendation Strategy Based on Term Functions in Related Studies Section. *Journal of Data and Information Science*, 6(3), 75–98. <https://doi.org/10.2478/jdis-2021-0022>
- Darkwa, B. F., & Agyei, D. D. (2021). Developing Technology Pedagogical and Content Knowledge in Pre-Service Accounting Teachers with the Use of Audio-Visuals : A Ghanaian Perspective. *Journal of Social Sciences*, 9, 431–451. <https://doi.org/10.4236/jss.2021.97031>
- Depdiknas. (2021). *Peraturan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia*.
- Faisal, M., Challen, A. E., & Sari, I. (2020). Meningkatkan Efektifitas dan Kualitas Karya Ilmiah Melalui Pelatihan Manajemen Referensi Bagi Dosen dan Mahasiswa. *Humanism: Jurnal Pengabdian Masyarakat*, 1(2).
- Fajero, T., Festiawan, R., Anggraeni, D., & Budi, D. R. (2021). Analisis Technological Pedagogical Content Knowledge (TPACK) dalam Implementasi Metode Pembelajaran Daring pada Era Covid-19 di SMA Negeri se-Kota Tegal. *Jurnal Pendidikan Kesehatan Rekreasi*, 7(2), 342–353.
- Farikah. (2021). Developing Material for Teaching Paragraph Writing Using Technological Pedagogical and Content Knowledge (TPACK). *IDEAS: Journal of Language Teaching and Learning Linguistics and Literature*, 9(2), 1–7. <https://doi.org/10.24256/ideas.v9i2.1609>
- Fauziya, D. S. (2020). Penilaian Artikel Ilmiah Mahasiswa Berdasarkan Instrumen Evaluasi Arjuna. *Diglosia: Jurnal Pendidikan, Kebahasaan, Dan Kesusastraan Indonesia*, 4(2), 232–240.
- Foley, G., Timonen, V., Conlon, C., & Dare, C. E. O. (2021). Interviewing as a Vehicle for Theoretical Sampling in Grounded Theory. *International Journal of Qualitative Methods*, 20, 1–10. <https://doi.org/10.1177/1609406920980957>
- Franco, M. C., Rice, D. B., Schuch, H. S., Dellagostin, O. A., Cenci, M. S., & Moher, D. (2021). The impact of gender on scientific writing: An observational study of grant proposals. *Journal of Clinical Epidemiology*, 136, 37–43. <https://doi.org/10.1016/j.jclinepi.2021.01.018>
- Fuada, S. (2021). Pelatihan Zotero Guna Menunjang Luaran KKN Tematik Mahasiswa Universitas Pendidikan Indonesia Melalui Whatsapp Group. *ABDIMAS: Jurnal Pengabdian Masyarakat*, 4(1), 451–466.
- Goyal, M., Dua, A., Kedia, A. K., Misra, D. P., Santhanam, S., & Ravindran, V. (2020). Usefulness of a workshop on scientific writing and publication in improving the baseline knowledge deficit among postgraduates education. *Journal of the Royal College of Physicians of Edinburgh*, 50(3), 316–

321. <https://doi.org/10.4997/JRCPE.2020.323>
- Graham, C. R. (2011). Theoretical considerations for understanding technological pedagogical content knowledge (TPACK). *Computers & Education*, 57(3), 1953–1960.
- Hafiar, H., Setianti, Y., Damayanti, T., Ruchiat Nugraha, A., & Anisa, R. (2019). Constraints on the use of citation applications in the making of scientific papers in the teacher community. *Journal of Physics: Conference Series*, 1175(1). <https://doi.org/10.1088/1742-6596/1175/1/012232>
- Hagaman, J. L., Casey, K. J., & Reid, R. (2010). The Effects of the Paraphrasing Strategy on the Reading Comprehension of Young Students. *Remedial and Special Education*, 33(2), 110–123. <https://doi.org/10.1177/0741932510364548>
- Hasanuddin, D., Emzir, E., & Akhadiah, S. (2019). Improving Students' Scientific Writing Ability through Blended learning-Based Collaborative Learning. *International Journal of Emerging Technologies in Learning (IJET)*, 14(20), 34. <https://doi.org/10.3991/ijet.v14i20.11457>
- Hoidn, S., & Kärkkäinen, K. (2014). *Promoting Skills for Innovation in Higher Education: A Literature Review on the Effectiveness of Problem-based Learning and of Teaching Behaviours* (Issue 100). <https://doi.org/http://dx.doi.org/10.1787/5k3tsj671226-en>
- Hudriati, A., Rusdiah, R., Patak, A. A., & Basri, M. (2018). Assessing Indonesian University Students' Preferences on Mendeley Reference Manager for Scientific Writing. *International Journal on Advanced Science, Engineering and Information Technology*, 8(5), 2211. <https://doi.org/10.18517/ijaseit.8.5.6671>
- Jamilah, J. (2017). Penggunaan Bahasa Baku dalam Karya Ilmiah Mahasiswa. *Jurnal Tarbiyah : Jurnal Ilmiah Kependidikan*, 6(2), 41–52. <https://doi.org/10.18592/tarbiyah.v6i2.1603>
- Khairina, N., Perdana, A., Harahap, M. K., & Siambaton, M. Z. (2020). Academic Writing : Optimalisasi Mendeley , Grammarly dan Google Translate dalam Pengabdian Webinar Series IKAPASTI-USU. *Prioritas: Jurnal Pengabdian Kepada Masyarakat*, 2(2), 1–9.
- Koehler, M., & Mishra, P. (2009). What is technological pedagogical content knowledge (TPACK)? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60–70.
- Lazarides, M. K., Georgiadis, G. S., & Papanas, N. (2020). Do's and Don'ts for a Good Reviewer of Scientific Papers: A Beginner's Brief Decalogue. *The International Journal of Lower Extremity Wounds*, 19(3), 227–229. <https://doi.org/10.1177/1534734620924349>
- Lin, W.-C., & Yang, S. C. (2013). Exploring the Roles of Google. doc and Peer e-Tutors in English Writing. *English Teaching: Practice and Critique*, 12(1), 79–90.
- Magulod, G. C., Capulso, L. B., Tabiolo, C. D. L., Luza, M. N., & Ramada, M. G. C. (2020). Use of Technology-Based Tools in Ensuring Quality of Publishable Journal Articles. *International Journal of Learning, Teaching and Educational Research*, 19(11), 145–162. <https://doi.org/10.26803/ijlter.19.11.9>
- Magulod, G. C., & Ramada, M. G. C. (2020). Use of Technology-Based Tools in Ensuring Quality of Publishable Journal Articles. *International Journal of Learning, Teaching and Educational Research*, 19(11), 145–162. <https://doi.org/https://doi.org/10.26803/ijlter.19.11.9> Use
- Nelson, J., Christopher, A., & Mims, C. (2009). TPACK and Web 2.0: Transformation of teaching and learning. *TechTrends*, 53(5), 80.
- Ngibad, K. (2020). Pelatihan Mendeley Secara Online Bagi Mahasiswa Fikes Umaha Di Masa Pandemi Covid-19. *Pengabdian Dan Pemberdayaan Nusantara*, 2(1), 110–116.
- Niess, M. L. (2011). Investigating TPACK: Knowledge Growth in Teaching with Technology. *Journal of Educational Computing Research*, 44(3), 299–317. <https://doi.org/10.2190/EC.44.3.c>
- Nugroho, L. A., & Ediyono, S. (2021). *Kurikulum Pendidikan Tinggi Indonesia: Integrasi Visi Creative Minoritas dalam Kurikulum*. Penerbit Lakeisha.
- Nuraini, M. W. (2020). Analisis Perbandingan Aplikasi Manajemen Referensi Zotero 5.0. 66. dan Endnote X9. *Publication Library and Information Science*, 3(2), 80–86.
- Oakley, G. (2020). Developing pre-service teachers' technological, pedagogical and content knowledge through the creation of digital storybooks for use in early years classrooms use in early years classrooms. *Technology, Pedagogy and Education*, 1–13.

- <https://doi.org/10.1080/1475939X.2020.1729234>
- OECD. (2016). *Innovating Education and Educating for Innovation: The Power of Digital Technologies and Skills*. <https://doi.org/http://dx.doi.org/10.1787/9789264265097-en>
- Plomp, T. (2013). Educational design research: An introduction. *Educational Design Research*, 11–50.
- Pramiastuti, O., Rejeki, D. S., & Pratiwi, A. (2020). Pengenalan Dan Pelatihan Sitasi Karya Ilmiah Menggunakan Aplikasi Mendeley. *Jurnal Abdimas Bhakti Indonesia*, 1(1), 24–30.
- Raharjana, I. K. (2017). *Pengembangan Sistem Informasi Menggunakan Metodologi Agile*. Deepublish.
- Rahman, R. A., Astina, C., & Azizah, N. (2021). Understanding Curriculum "Merdeka Belajar-Kampus Merdeka" at PBA UNSIQ: Integration Values between Humanistic Ethics and Local Wisdom Resistance. *Seminar Nasional Kurikulum Merdeka Belajar-Kampus Merdeka Berbasis Integrasi Keilmuan Di Masa Adaptasi Kebiasaan Baru*, 252–268.
- Riduwan, M. B. A. (2007). *Skala Pengukuran Variabel-Variabel Penelitian*. Alfabeta: Bandung.
- Shang, H.-F. (2019). An investigation of plagiarism software use and awareness training on English as a foreign language (EFL) students. *Journal of Computing in Higher Education*, 31(1), 105–120.
- Siddique, A. B., Oymak, S., & Hristidis, V. (2020). Unsupervised paraphrasing via deep reinforcement learning. *Proceedings of the 26th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining*, 1800–1809.
- Silva, A. O., Séllos-Knoerr, V. C. de, Janes, D. dos S., & Martins, J. A. M. (2020). Como Elaborar um Resumo Estruturado Como Instrumento na Disseminação Científica: Um Breve Roteiro. *International Journal of Professional Business Review*, 5(2), IV–XII. <https://doi.org/10.26668/businessreview/2020.v5i2.215>
- Siregar, B. H., Kairuddin, & Mansyur, A. (2021). Developing Interactive Electronic Book Based on TPACK to Increase Creative Thinking Skill. *AL-ISHLAH: Jurnal Pendidikan*, 13(3), 2832–2841. <https://doi.org/DOI: 10.35445/alishlah.v13i3.1286>
- Suhartono, O. (2021). Kebijakan merdeka belajar dalam pelaksanaan pendidikan di masa pandemi COVID-19. *Ar-Rosikhun: Jurnal Manajemen Pendidikan Islam*, 1(1), 8–19.
- Tang, H., Liu, B., & Qian, J. (2021). Content-based and knowledge graph-based paper recommendation: Exploring user preferences with the knowledge graphs for scientific paper recommendation. *Concurrency and Computation: Practice and Experience*, e6227.
- Tullu, M. (2019). Writing the title and abstract for a research paper: Being concise, precise, and meticulous is the key. *Saudi Journal of Anaesthesia*, 13(5), 12. [https://doi.org/10.4103/sja.SJA\\_685\\_18](https://doi.org/10.4103/sja.SJA_685_18)
- Yang, K., Guo, C.-Y., & Glaser, R. E. (2018a). Challenges of Globalization and Successful Adaptation Strategies in Implementing a “Scientific Writing and Authoring” Course in China. *Journal of Chemical Education*, 95(12), 2155–2163. <https://doi.org/10.1021/acs.jchemed.8b00384>
- Yang, K., Guo, C., & Glaser, R. E. (2018b). Challenges of Globalization and Successful Adaptation Strategies in Implementing a “Scientific Writing and Authoring” Course in China. *Journal of Chemical Education*, 95(12), 2155–2163. <https://doi.org/10.1021/acs.jchemed.8b00384>