



Developing Material for Teaching Paragraph Writing Using Technological Pedagogical and Content Knowledge (TPACK)

Farikah

farikahfaradisa@untidar.ac.id

Universitas Tidar

Received: 15 October 2020 Accepted: 02 December 2021

DOI: 10.24256/ideas.v9i2.1609

Abstract

This design based research was aimed to to develop materials for teaching paragraph writing using TPACK approach. The students of English Department of Tidar University (UNTIDAR) were involved as the subject of the research. This research was conducted in four phases. They were analysis of practical problems, development of solutions, iterative cycles of testing and refinement of solution, and reflection to produce design and principles. The results of the research indicated that technological pedagogical and content knowledge approach material was needed for teaching paragraph writing. These findings recommended this TPACK approach-based material could be adopted as materials for teaching paragraph writing.

Keywords: Content Knowledge Approach, Design-based Research, Paragraph Writing, Technological Pedagogical

Introduction

Writing in educational setting is increasingly important since it is one of the productive skills that should be mastered in using a language. Writing skill is an important indicator of success of the students in learning the language since it provides the students with basic knowledge and skill of writing. As a compulsory and skill subject, writing provides the students with basic knowledge and skill. Writing has been widely believed as the most difficult skill among the four language skills It involves several components which have to be considered for example,

contents, rhetoric, vocabularies, grammatical structure and writing mechanics such as punctuation and capitalization (Wahyuni, 2017).

In line with the implementation of KKNI (Indonesian Qualifications Framework), it gives opportunities for the university (high education/department) to develop their creativity in teaching-learning process including teaching-learning process of writing subject. Along with the development of information technology, it is a necessity that lecturers must master technology to be used as a supporting medium in teaching-learning activities of writing class. In the era of the Industrial Revolution 4.0 and the challenges of the 21st century, students need to master new literacy, namely data Literacy, technology literacy and human literacy. Mastering old literacy, namely reading, writing and mathematics is not enough. In other words, it needs for a learning approach that combines material, pedagogy and technology to support the cultivation of thinking skills, developing a "sense of inquiry" and students' creative thinking skills. The TPACK (Technological Pedagogical And Content Knowledge) approach is one of the solutions. The TPACK framework was adopted from Chai C.S, Koh, Tsai, & Tan's theory (2011).

This research was intended to develop paragraph writing material using TPACK approach. As stated by Hidayat and Setiawan (2020), the development of technology in education affects the teaching-learning process in the classroom. The combination of technology and face-to-face strategy (blended learning) in educational level becomes popular. TPACK (technological pedagogical and content knowledge) framework was needed for developing paragraph writing materials. The integration of three aspects, i.e technology, pedagogy, and content knowledge in developing materials was in line with the demands of new literacy era. This is in line with Ahmad's statement (2018), the now generations are expected to master new literacy. The ability to write and read is not enough. We are required to master new literacy, they are data, technology, and human literacy.

The main objectives of this study were to find the qualities of the existing of paragraph materials, and to what extent the students need paragraph writing materials that are based on technological, pedagogical and content knowledge approach (TPACK). This material was expected to facilitate the students of paragraph writing classes in developing the writing competence. The TPACK framework, then, not only will aid teachers in delivering content in new interesting ways but also help students engage in more authentic and meaningful learning experiences to acquire better understanding of the content of the subject area.

Method

The design-based research was applied in conducting the study. The purpose of this study was to describe to find the qualities of the existing of paragraph materials, and to what extent the students need paragraph writing materials that are based on technological, pedagogical and content knowledge approach (TPACK). The writer implemented the design-based research approach since the writer wanted to to develop paragraph writing material using TPACK approach. This material was expected to facilitate the students of paragraph writing classes in developing the writing competence.

This design based research was used to develop materials for teaching paragraph writing using TPACK (Technological Pedagogical And Content Knowledge) approach. Barab and Squire (2004) in Herrington, et.al (2007) stated that design-based research as “a series of approaches, with the intent of producing new theories, artifacts, and practices that account for and potentially impact learning and teaching in naturalistic settings

This research was conducted in four phases. They were analysis of practical problems, development of solutions, iterative cycles of testing and refinement of solution, and reflection to produce design and principles. Analysis of practical problems was done based on previous research, shared experiences researchers and practitioners, exploratory studies and defining design principles. Development of solutions stage was done based on analysis of the problem informed by existing design principles. Iterative cycles of testing and refinement of solution was done through the implementation in natural setting, empirical evaluation, and revision of material. Reflection to produce design and principles was done based on findings in evaluation studies and development of prototype theories. The figure can be seen below.

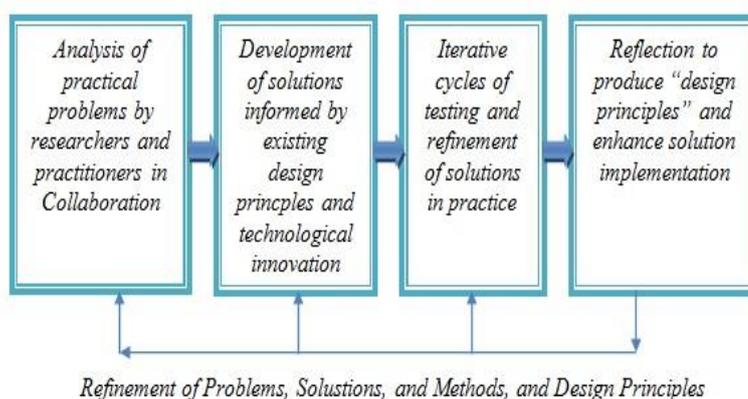


Figure 1. Design-based Research, based on Reeves (2006).

The study involved a total of 25 participants of the students of English Department of Tidar University (Untidar). It took place in the context of the paragraph writing class of class B. All of those B class students were involved in this design-based research. Participants were selected randomly based on their class. All of them have joined paragraph writing of B class using blended learning for four semesters.

Two instruments were utilized to collect the data, namely interview, and observation. The interview guide was used to collect the data of the students' perception on existing of paragraph writing material applied in paragraph writing courses. Off line and virtual observation were applied in collecting the data of classroom and the students' condition. The virtual interview was used to collect the students' opinion and perception on paragraph writing class.

Both virtual observation and interviews took place at the end of first semester of virtual learning. The virtual interviews were conducted in a casual manner and followed the procedures of Reissman (2008). In analyzing the results of observation and interview as qualitative data, the writer followed Miles and Huberman's theory (1994). This method consisted of three stages. They were data reduction, data display, and drawing conclusion. The interviews were started by asking some questions about her general experience during joining teaching-learning process at paragraph writing material.

Results

The purpose of this design based research was used to develop materials for teaching paragraph writing using TPACK (Technological Pedagogical And Content Knowledge) approach. The aims of this study were to find the qualities of the existing of paragraph materials, and to what extent the students need paragraph writing materials that are based on technological, pedagogical and content knowledge approach (TPACK). The research was conducted in one class of second semester students of English Department of Tidar University from in 2019/2020 academic year. Based on observation and virtual interview data, the lecturers used "Introduction to Academic Writing" book as the main book.

Profile and Quality of the Existing Paragraph Writing Material

In this first study, it was the analysis of practical problems. It was concerning the profile and Quality of the Existing Paragraph Writing Material It relates to the quality of the book that was implemented by the paragraph writing lecturer. The writer implemented four criteria in evaluating the quality of the book.

The research was conducted in one class of second semester students of English Department of Tidar University in 2019/2020 academic year. Based on observation and interview data, the lecturers used "Introduction to Academic

Writing” book as the students’ book. Concerning the quality of the book, the writer implemented four criteria in evaluating the quality of the book. From the aims and approaches, it can be concluded that 5 students (20%) state that the book was excellent, 25 (80%) state that it is good. Related to design and organization, 8 students (32%) state excellent,14 students (56%) state good and 3 students (12%) state fair. The next criteria is skill. According to the students’ opinion, 4 students (16%) state excellent,20 students (80%) state good and 1 student (4%) states fair. The last criteria is vocabulary and grammar. Based on the data, 11 students (44%) state excellent and 14 students (56%) state good. The results of questionnaire could be seen in the following table and chart.

Table 1. The tabulation of the quality of the present textbooks

Textbook Titles	Textbook Criteria	Rating			
		Excellent	Good	Fair	Poor
Introduction to Academic Writing by Alice Oshima	Aims and Approaches	5	20	0	0
	Design and Organization	8	14	3	0
Ann Hogue	Skill	4	20	1	0
	Vocabulary and Grammar	11	14	0	0

The table 1 can also be clearly seen in the following figure.

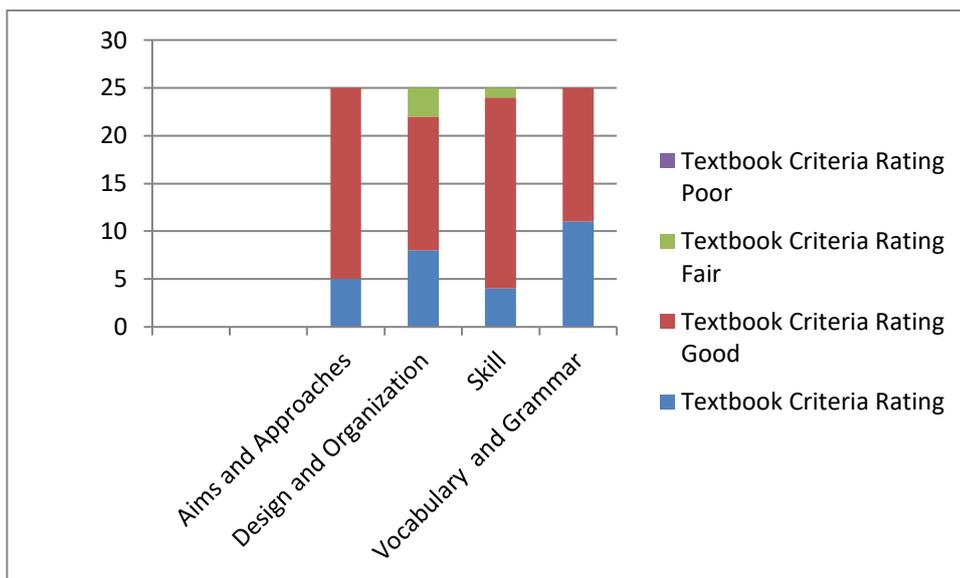


Figure 2. The quality of the present textbooks

From the above findings, it is strongly suggested that the new model of teaching writing materials that make the students easier to organize and develop paragraphs (texts) besides introducing them technology in teaching learning process of paragraph writing class.. Besides, the model of paragraph writing materials should make the instruction clear and focus, and it can also facilitate the students to recognize technology. Finally, the paragraph writing materials is expected to be able to create effective teaching.

The Need of Paragraph Writing Material using TPACK (Technological Pedagogical And Content Knowledge)

Related to the Need of Paragraph Writing Material using TPACK (Technological Pedagogical And Content Knowledge), based on virtual interview data, it can be inferred that the students need the writing material which is used TPACK based Model. It can be seen from the students' opinion. 95% of the students state that this material is needed. They state that in writing class, they do not only learn how to write coherent paragraph, but they also need to learn how to access the material using technology in order to be able to face globalization era. Besides, it is in line with Universitas Tidar vision as entrepreneurship-based university in developing science, technology, and art

Conclusion

The results of the research indicated that TPACK (technological pedagogical and content knowledge) approach material was needed for teaching paragraph writing.

These findings recommended this TPACK approach-based material could be adopted as materials for teaching paragraph writing. It facilitates the students with ability to learn how to write coherent paragraph with clear and focus of the instruction. Besides, it also introduces them with technology in teaching-learning process of paragraph writing class. It can also motivate the students to recognize technology. Finally, this TPACK approach-based materials is expected to be able to create effective teaching.

References

- Ahmad, I. (2018). *Pendidikan Tinggi "4.0" Yang Mampu Meningkatkan Daya Saing Bangsa*. Direktorat Jenderal Pembelajaran dan Kemahasiswaan Kementerian Riset, Teknologi, dan Pendidikan Tinggi.
- Chai C.S, Koh, Tsai, & Tan (2011). "Modeling primary school pre-service teachers' Technological Pedagogical Content Knowledge (TPACK)". *Computers & Education*, 57(2011), 1184-1193.
- Herrington, J., et. al. (2007). *Design-based research and doctoral students: Guidelines for preparing a dissertation proposal*. In C. Montgomerie & J. Seale (Eds.) , *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2007* (pp.4089-4097). Tersedia: <http://ro.ecu.edu.au/ecuworks/1612> [12 Januari 2013]
- Hidayat, N. & Setiawan, S. (2020). Developing Supporting Reading Materials for English Subject. *IDEAS Journal of Language Teaching and Learning, Linguistics and Literature* ISSN 2338-4778 (Print) ISSN 2548-4192 (Online) Volume 8, Number 1, June 2020 pp. 175 – 188
- Miles, M. B., and Huberman, A. M.. (1994) *Qualitative Data Analysis*. Thousand Oaks: Sage Publication.
- Reeves, T. C. (2006). Design research from a technology perspective. In J. V. den Akker, K. Gravemeijer, S. McKenney, & N. Nieveen (Eds.), *Educational design research* (pp. 52–66). London: Routledge.
- Sianturi, A. (2021). Developing Culture-Based Supplementary Reading Material for the Eighth Grade Students of Junior High School. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 9(1). doi:<https://doi.org/10.24256/ideas.v9i1.1915>
- Wahyuni, S. (2017). Developing Writing Materials Based on CTL Approach for Indonesian EFL Learners. *Journal on English as a Foreign Language* <http://e-journal.iain-palangkaraya.ac.id/index.php/jefl> Vol. 7, No. 1. March 2017