



## Problem-based Learning Pedagogy in Writing Research Proposal

Moh. Yamin<sup>1\*</sup>, Vivi Aulia<sup>2</sup>, Dian Novita<sup>3</sup> 

<sup>1</sup> English Department, Universitas Lambung Mangkurat, Banjarmasin, Indonesia

<sup>2</sup> English Department, Universitas PGRI Kalimantan Selatan, Banjarmasin, Indonesia

<sup>3</sup> English Department, Universitas Muhammadiyah Sidoarjo, Sidoarjo, Indonesia

### ARTICLE INFO

#### Article history:

Received May 13, 2024

Accepted July 28, 2024

Available online August 25, 2024

#### Kata Kunci:

pembelajaran berbasis masalah; pedagogi; menulis; proposal penelitian

#### Keywords:

problem-based learning; pedagogy; writing; research proposal.

#### DOI:

<https://doi.org/10.23887/jpbi.v12i2.80520>

### ABSTRAK

Mengajarkan siswa menulis proposal penelitian memerlukan pendekatan pengajaran yang mengarahkan kesadaran siswa terhadap suatu permasalahan. Pedagogi berbasis masalah dianggap sebagai cara yang tepat untuk diterapkan di kelas proposal penelitian. Penelitian ini bertujuan untuk mengeksplorasi proses pedagogi pembelajaran berbasis masalah dalam pengajaran menulis proposal penelitian dan mengidentifikasi permasalahan dalam menulis proposal penelitian. Penelitian ini merupakan penelitian kualitatif dengan pendekatan studi deskriptif. Pertimbangan menggunakan pendekatan kualitatif karena data yang digunakan berasal dari observasi dan komentar naskah. Sampel yang dipilih sebanyak 37 siswa. Analisis data dilakukan dengan membuat kesimpulan yang dapat direplikasi dan valid dari teks atau hal bermakna lainnya sesuai dengan konteks penggunaannya. Dalam penerapan analisis isi, penerapannya dimulai dengan usulan pertanyaan penelitian, isi teks atau kode data, dan konteks untuk memahami isi teks. Temuannya mengatakan bahwa kegiatan mengajar melalui pembelajaran berbasis masalah berjalan dengan baik. Dari hasil lembar observasi, siswa diajarkan dan dibimbing untuk merumuskan masalah penelitian, menceritakan latar belakang penelitian, tinjauan literatur terkait, dan desain penelitian berdasarkan topik pertanyaan penelitian yang diajukan. Dari naskah proposal penelitian yang dikomentari, guru memberikan catatan kepada siswa untuk dapat menentukan dan merumuskan masalah penelitian dengan tepat berdasarkan topik yang dipilih, mencari referensi yang relevan secara tertulis, dan mendukung penelaahan.

### ABSTRACT

Teaching students to write research proposals requires a teaching approach that directs students' awareness of a problem. Problem-based pedagogy is considered an appropriate way to apply in research proposal classes. This study aims to explore the process of problem-based learning pedagogy in teaching research proposal writing and identifying problems in writing research proposals. This study is a qualitative study with a descriptive study approach. The consideration of using a qualitative approach because the data used comes from observations and comments on the script. The sample selected was 37 students. Data analysis was carried out by making conclusions that can be replicated and valid from the text or other meaningful things according to the context of its use. In the application of content analysis, its application begins with the proposal of research questions, text content or data codes, and the context for understanding the contents of the text. The findings say that teaching activities through problem-based learning went well. From the results of the observation sheet, students were taught and guided to formulate research problems, tell the background of the research, review related literature, and design research based on the topic of the research question proposed. From the commented research proposal script, the teacher gave notes to students to be able to determine and formulate research problems appropriately based on the chosen topic, search for relevant references in writing, and support the review.

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.  
Copyright © 2024 by Author. Published by Universitas Pendidikan Ganesha.



## 1. INTRODUCTION

A research proposal is a paper that contains the blueprint or basic concept of what to do in research. A research proposal is a document that proposes a research project, dealing with the issue or topic to conduct (Lawrence et al., 2019; Sudirman et al., 2020). A proposal is evaluated on the cost and potential impact of the proposed research, and on the soundness of the proposed plan for carrying it out. The thing to remember is that a research proposal is a series of plans that will be carried out to answer the research problem(s). Previous study state when students write a research proposal, they need to consider the importance of stating the research problem, the research problem background, a review of related literature to support the background of the research, and the research design used in the research proposal (Monrroy et al., 2022; Sudheesh et al., 2016). All components should be complete and support the goal of research and data collection of the research problem. A research proposal

should be defined as a document that illustrates how the research and path of the research are outlined well. It means that a research proposal is a reflection of thinking about the issue, a way of thinking critically.

Because a research proposal should be complete and fulfill all criteria of a research project, the student's ability to design their written thoughts on the research problem should be increased. They should learn to formulate the research problem and it has the effect of determining the steps of conducting the research (Espino-Díaz et al., 2020; Kivunja, 2018). A research proposal should be interpreted as a way of thinking to respond to the issue. Because a research proposal is considered the result of thinking to be able to answer the research problem proposed, it is important to say that writing a research proposal should be elaborated well with full concentration and analysis. The thing to remember is that a research proposal should reflect what to research and analyze (García-Merino et al., 2020; Murillo-Zamorano et al., 2019). It means that writing a research proposal involves all elements supporting the goal of writing the research proposal.

Driving the students to be able to write a paper should give them preparation for knowledge and experiences. They will get both of them when there is a process of learning and practicing the students undergo either in or outside the classroom. In the classroom, the teacher facilitates them with a series of theories and practices to make them familiar with the concept. Outside the classroom, the teacher assigns the students to do research activities dealing with the topic the students choose. This way is effective in creating their motion and passion to be active so that they have such experiences. The ability to write should be rich in experience and knowledge (Sahib et al., 2020; Starfield, 2018). Experience is gained when the students undergo themselves in learning and in practice. Experience in writing a paper should be dug and felt as the long process of learning itself (Maruti, 2022; Sudirman et al., 2020). Consequently, writing a paper means writing about the students' experiences in their papers while dealing with their academic tasks. Whereas knowledge appears as the result of reading and analyzing the substance of the text in theory. It means that experience and knowledge are the two things that complete each other in the process of practicing and undergoing (Setia & Panda, 2017; Sudirman et al., 2020). Therefore, completing a series of practice and drills to write is a necessity. It is important to state that the ability to write a paper starts from the students' way of learning.

Whatever the condition is, a research proposal should confirm and affirm the firmness of a way of thinking and it indicates the path of answering the research problem posed. A good research proposal should contain three keywords dealing with what, why, and how questions (Malik, 2022; Padmanabha, 2018; Wu, 2021). It means that three keywords determine the path of research steps and what to do in the next step. The use of what, why, and how in research questions opens the potential for answers to get deep findings and discussions. Good questions in research proposals require the researchers or students to work hard (LaMarre & Chamberlain, 2022; Saeed et al., 2021; Sanganyado et al., 2023). The curiosity to see and read is the step for the students to be able to be involved in any issues they would like to. Therefore, writing a research proposal is not only about the ability to write but also about critical thinking skills that are shaped and sharpened to make the writing work meaningful. As a result, to write a research proposal is also to think, to try to find something new and interesting to discuss in a scientific manner. Writing a research proposal means thinking to formulate and narrate the issues in the written document (Di Leo & Sardanelli, 2020; Sudirman et al., 2020). It is in line with what other study said that writing a research proposal provides a structured way to engage with the topic (Sudirman et al., 2020). Furthermore, a research proposal helps the researcher to discover exactly what it is to do have a similar perspective dealing with a way of increasing the student's ability to write a research proposal (Nguyen, 2020; Oteng Acheampong, 2021). Both of them view the importance of having sufficient knowledge of what to write on their topic and also skills of writing. Previous study support and strengthen this by stating that the biggest problem in writing a research problem appears in the introduction, composing the background well, introducing and reviewing items of previous research in the area, finding a gap in the previous research and student's fewer references to quote (Suryatiningsih, 2019).

When dealing with writing a research proposal, it is important to say that teaching students to write a research proposal should consider the way of teaching called pedagogy. The pedagogy used determines what and how the students learn to write a research proposal (Southworth, 2021; Sun, 2022; Wijayanti et al., 2017). Pedagogy is the theory of teaching in which the teacher is required to be able to deliver the material of the subject to the students well and clearly (Fernando & Marikar, 2017). There is a process of delivering the material done by the teacher to students. The interaction between the teacher and students also runs by answering the research question and achieving the goal. It means that in teaching activities, the teacher should pay attention to the students' characteristics and also be able to manage the class (Alsaleh, 2020; Hussain, 2019). As a result, teaching is based on the way of communication among the teacher and students. Teaching done by a teacher in the class should have an approach that makes the students feel at home so that they are enthusiastic and interested in participating in the class. The teaching approach used by the teacher makes the students conducive, interactive, and challenged to learn (Al Qunayeer, 2020; Selvianiresa & Prabawanto, 2017).

In writing a research proposal, it is necessary for the teacher to consider the effective way of teaching because the issue taught relates to how the students find the problem, and the issue to narrate. Problem-based

learning pedagogy is the teaching approach that is stated effective in teaching writing a research proposal. Through their research findings, previous study said that problem-based learning has the main role of increasing and changing the student's critical thinking skills by improving their ability to solve problems and making conclusions through critical thinking processes (Shandy Narmaditya et al., 2018). The presence of problem-based learning as a pedagogy encourages students to think critically in the form of questioning, discussing problems, and making solutions related to the issues proposed. When this skill is correlated to the skill of writing a research proposal, problem-based learning is the approach to teaching students to pose a problem. The other research results say that the students taught with problem-based learning showed good performance in their essays and they were richer in terms of support and arguments for each point. Besides that, problem-based learning improves and builds the student's capacity in problem-solving skills, academic skills, social skills, and language skills. In other words, problem-based learning is an instructional approach that offers the potential to help students develop flexible understanding and lifelong learning skills (Kök & Duman, 2023; Sholihah & Lastariwati, 2020).

The student's activities in the group are guided and involved in learning social facts. They learn about motivation, teamwork, problem-solving, and engagement with the task (Ali, 2019: 73). Problem-based learning, according to previous study is an approach that guides students in the learning process, pushing them to think deeply, and models the kinds of questions that students need to be asking themselves, thus forming a cognitive apprenticeship (Ansarian & Teoh, 2018). The teaching process that is built through problem-based learning facilitates the students to think openly. Through problem-based learning, students are guided to train to be able to be active and participative in looking at the issue. It means that the problem-based learning approach as a pedagogy is aimed at teaching students to solve the problems they face. In problem-based activities, the students are led to develop their critical thinking skills, problem-solving activities, and communication skills. Besides that, problem-based learning assigns the students to work in groups to build collaboration, find research materials, and develop their skills in self-monitoring and self-evaluation (Hasibuan et al., 2019; Wirantaka & Sukarno, 2022). In a word, problem-based learning in teaching English should be based on the goal of teaching.

When this teaching approach is related to teaching writing a research proposal, it is important to pay attention to the principle of problem-based learning as a pedagogy, according to previous study this step starts from identifying which students are required to be able to clarify any terms and concepts considered not clear, defining the research problem, and analyzing it (Liu & Pásztor, 2022). In a number of previous studies being elaborated, all research results only deal with aiming at writing a paper, proposing a research proposal, and the implementation of problem-based learning to critical thinking separately. Through this gap, this paper proposed the novelty of problem-based pedagogy being correlated with teaching to write a research proposal that is expected helpful and contribute to the student's learning to write a research proposal. In a word, this research aims to analyze the process of problem-based learning pedagogy in teaching to write a research proposal.

## 2. METHOD

This study uses a qualitative approach with a case study method to explore in depth the phenomenon being studied (Saldana, 2013). This approach was chosen because it allows researchers to understand the context and meaning from the perspective of the participants. Case studies are used because the focus of the study lies in the in-depth exploration of one specific case, which provides a holistic picture of the observed phenomenon. This study was designed systematically to explore data from various sources and triangulation, so that the results can provide high validity and accuracy. Data were collected through in-depth interviews, direct observation, and document analysis. Interviews were conducted in a semi-structured manner, allowing the researcher to explore in-depth information while being flexible in developing questions based on participant responses. Observations were conducted at the research location to observe the phenomenon directly, providing data that supported and complemented the interview results. In addition, relevant documents, such as related reports or archives, were analyzed to provide additional perspectives and strengthen the research findings. Data analysis was conducted through systematic steps, starting with the transcription of interview and observation data. The data were then analyzed using a thematic approach, where key patterns and themes relevant to the research questions were identified. The researcher also triangulated the data by comparing the results of interviews, observations, and documents to ensure consistency of findings. This process ended with the interpretation of the findings in the context of relevant theories to answer the research questions and provide meaningful insights.

## 3. RESULT AND DISCUSSION

### Result

There were two data that need to be reported here. The first one was dealing with the observation sheet. The first meeting started by opening the class and the teacher delivered the topic "What is research?". The teacher began by giving that question to trigger the students to think and question. Thinking and questioning mean that the

students were required to be able to find the answer. Finding the answer illustrated the student's curiosity to obtain detailed information on what to do and to say. In problem-based learning pedagogy, when the students had been enhanced with such questions, this drives the students to identify and determine what the right and reasonable answer is. In the class, the teacher gave the students a timeline and deadline to collect the references and resources to be able to answer the question. The teaching-learning activity took place in 100 minutes in which the students interacted with each other to find the answer; the teacher facilitated the class in a good manner. The teaching activities showed the students' interaction with the teacher. However, every student had different response while the teacher explained and gave feedback. It depended on the students' sensitivity. Besides that, it was supported by different atmosphere psychologically so that every student has different perspective to respond to the teacher's utterances.

In the second meeting, the class began with the question "How to formulate the research question". From the answers the students obtained in the first meeting, they worked on formulating the research question. Every student in their activity had a different way of answering the research question. The different answers they did were obtained from the students' perspectives they built dealing with the research question. Some students were able to formulate the research questions well; others did not formulate the research question well because of different input to process the teacher's explanation. At the end of the meeting, the teacher helped the students formulate the research question in an effort to assist them better in making a research question. In the third meeting, the students were encouraged to write a background of the study dealing with what to prepare and write. While the class ran, the interaction took place. A number of questions from the students to the teacher occurred. One of them was their difficulty in tying one sentence to another sentence in a text smoothly. This problem drove the teacher to give a clue to discuss among the students. The teaching approach the teacher used to deliver the material supported the classroom activities interactive and interesting. In the fourth meeting, the teaching process was shifted to a way of presenting the proposal the students wrote. The goal of this class was to drive every student to be able to write, produce, and present their proposals; the teacher gave the comments dealing with the proposals they did.

The second data were obtained from commented manuscripts. The students' problems in writing proposals commonly occurred in writing the background of study that was not united, coherent, and strong giving argumentation through relevant and updated references. Their ability to find the gap among the relevant references as the resources written and discussed in the background of the study, the students seemed confused in taking and deciding the main points as the consideration to do this research. As a result, the research gap was blurry and unclear to do. Formulating a research question was the main problem the students underwent in which they were weak in giving analysis and interpretation of the theories the students used in the review of related literature. The students were not able to determine the research question relevant to their passion. Although one of them was able to narrate his or her research question, they were not firm on what to write in detail. It was proven when they wrote their research objective between them. During the background of the study, the teacher gave comments dealing with the importance of relating the background of the study to the topic of the research written and discussed. The students needed to focus on all references relevant to the topic of the research. It also happened to the aspect of a research question and research objective. The teacher gave important notes to the students' manuscripts to be sharp in writing the research question; it should be in line with to research objective.

Writing the review of related literature was another aspect that the students did during the classes. The teacher gave notes to the students' manuscripts. Commonly, they were weak in presenting their original ideas and composing their thoughts into organized sentences. They could not write regularly with unity and coherence. Their skill to compose the text strong, reasonable, and logical is fragile. Because of this condition, the teacher asked the students with commented manuscripts to revise their way of thinking in writing a review of related literature. The notes the teacher delivered in their manuscript so that the students paid attention to what to write and discuss in their review of related literature. The research topic proposed in the background of the study should be the keyword and the detailed narration should appear in the next text to make the path of discussion flow and run well. Therefore, a review of related studies is the reflection of the used theories as the tool for the research study.

Dealing with the research method containing research design, population and sample, data collection tools, techniques of data collection, and analysis becomes the other points the students paid attention to because they did not focus and give detail elaboration regularly. The students were not able to differentiate the meaning in use between quantitative and qualitative approaches. This condition made the research design unclear and the path of the research was also not stated clearly. The commented manuscript said that the students were not firm in stating their position in narrating the research design. Besides that, the students also failed to give detailed explanations dealing with population and sample. Data collection tools and techniques of data collection are the other variations that were not consistent in use by the students. They did not use those correctly. The teacher in commented manuscripts told the students to train in using so that they knew in practice. The last one is analysis in which the students also had problems with what to say and narrate in analysis. Either in qualitative or quantitative, the students did not explain and display thoroughly the way of analysis. From the observation result and

commented manuscripts, those data had answered the research question “to explore the process of problem-based learning pedagogy in teaching to write a research proposal and identify problems in writing a research proposal”.

## Discussion

Problem-based learning pedagogy used in teaching to write a research proposal gives the effect of change toward the way of thinking and narrating the ideas. The way of teaching conducted was understood to make clear what should be done (Dwi Saputra et al., 2022; Suprpto et al., 2017). Teaching writing a research proposal closes the students to the real problems; the real problems are those that make learning and teaching meaningful. The student's ability to formulate the issue, and the research problem, and develop it into the discussion determines the student's thinking (Gooda, 2016; Sholihah & Lastariwati, 2020). What should be highlighted in this context is that problem-based learning pedagogy becomes the way of teaching students to have a way of life in looking at the issue and facts. Their capacity to read and give analysis from reality and fact opens the perspective in writing the issue in a written document. The students become more and more familiar with the way of reading and finding the issue on what to write and discuss. Hidajat (2023) says that when the students are involved in teaching to write a research proposal through problem-based learning pedagogy, it drives them to be able to think critically. The previous research findings conducted by previous studies only focus on the student's ability in writing; teaching approach was not observed in teaching (Setia & Panda, 2017; Sudirman et al., 2020). Compared with the present research, it is more detailed and illustrates the total process of problem-based learning pedagogy to teach students in writing proposal.

Writing a background of study that is rich with the experience in which the learners have to make preface in the background of the study is the important aspect easier to go forward in the next step. In other words, the background of the study in a research proposal should have a wide preface and be combined with several variations of relevant references to make it stronger in argumentation (Mali, 2023; Pringle Barnes & Cheng, 2019). The consideration to take the topic to write and research must be rational, logical, and tight in argumentation. Besides that, the students need to add and enrich their considerations with previous studies meaning that the research topic is available to study. Furthermore, the background of the study is the future framework describing how the research will be conducted. Because of this condition, it is important to say that the background of the study that is written should reflect the richness of previous studies (Henry & Austin, 2021). In such a situation, the student's ability will be more and more living and interesting. Other study dealing with that issue did not discuss it in detail so that this study adds and completes the other side of importance of writing a background critically (Suryatiningsih, 2019). In a problem-based learning pedagogy implemented, the students learned to discuss and formulate the topic to discuss. By using this clue, the students become more focused on what to research and study. Such a condition is not easy to learn when there is no discussion space between the students and the teacher (Yew & Goh, 2016; Yildirim, 2016). Because of problem-based learning pedagogy, it changes the students' interaction and teacher in the classroom. Previous study said that the learners are interested and enthusiastic to learn and participate in the class (Kivunja, 2018). Finally, when they decide to write (a) research problem(s), students have a firm topic to narrate and this condition makes the research topic clear to discuss.

Writing a background of study is different from writing a review of related literature. It means that while teaching students with problem-based learning pedagogy, the students are enhanced with problem-solving. In this context, they learn to find and collect all relevant references used to discuss dealing with the research topic. They have (a) problem(s) what to do because of not having relevant references to support their research topic; the students share the problem and discuss how to solve it (Muñoz, 2017; Sudirman et al., 2020). Such a way is effective to help them because it drives them to try to find by discussing. Discussing becomes the way to bridge and find the solution. The openness to welcome differences in way of thinking among them paves the way for the discussion to solve a problem is a necessity (Shandy Narmaditya et al., 2018; Wirantaka & Sukarno, 2022). As a result, the skill of communication that is built through a written document proves the way of narrating the points in the text. Delivering the relevant ideas to support the discussion in a review of related literature should be given an example so that the students learn from the facts. Besides that, it pushes the students to think more critically about what to do in the next step. Therefore, it is important to say that writing a review of related literature signals the width of knowledge and experiences the learners undergo. Problem-based learning pedagogy the teacher uses in the class takes the students to be able to participate with togetherness (Major & Mulvihill, 2018; Maruti, 2022). There is the effort the students made as the practical step to go forward. What was done through problem-based learning is to drive the students to be able to write a review of related literature giving change effect to the students' writing in this case. Whether the change is big or not, problem-based learning pedagogy bears the way of thinking in composing and arranging the students' thoughts in their review of related literature.

While the students were considered to be able to write the background of the study and a review of related literature, they should also compose the research method as the other part of a research proposal. It is not easy to make a research method if the students are not trained to write and have knowledge of research methodology (Eve, 2009; Sudirman et al., 2020). The ingredients that must be in a research method deal with research design, data collection methods, and data analysis techniques (Al Qunayeer, 2020; Arifani, 2016; Lê & Schmid, 2022). During

the class, the teacher with the students discussed those points indicating that the teacher delivered and displayed the material. Previous study mention the importance of stating the research problem, the research problem background, a review of related literature, and research design in general; did not show the effectivity of problem-based learning pedagogy (Monrroy et al., 2022). The present research brings out the effectivity of problem-based learning in teaching a research proposal. The teaching approach the teacher used during the class tried to enhance the students' practice in writing the research method. Through problem-based learning, the students get their knowledge from practice because they learn by doing. As a result, there is a process of learning that drives the students to experience themselves in designing their research method (Nguyen, 2020). Therefore, the attendance of problem-based learning implemented during the class is supposed successful in producing the teaching-learning activity well.

The thing to remember in problem-based learning pedagogy used in writing a research proposal is that the teaching-learning design should encourage the students to be active and participate actively in which the student's involvement in writing a research proposal needs to be activated as interactive as possible (Alharbi, 2017; Hussain, 2019). The class facilitates the students with problems, selects the relevant topic to discuss and solve openly, and presents the class situation interesting one. The student's interest in the topic of learning is the basic principle in problem-based learning pedagogy (Al-kadi, 2018; Hairuddin et al., 2018). Scaffolding the student's knowledge of the topic is the strategy used in the class. When this strategy is chosen, such a way will help the students to find their way of writing in writing a research proposal. In a word, problem-based learning pedagogy implimented in a research proposal class helps the students to order their way of thinking and narrating their ideas in a well organized proposal.

#### 4. CONCLUSION

Problem-based learning pedagogy used in this way is helpful to make the students learn conceptually and practically. Through problem-based learning pedagogy, students are faced with problems and they are required to solve the problem they face. The students learn to choose the topic relevant to formulate and narrate in a research proposal. What has been done by using problem-based learning pedagogy proves that students should be taught problem-based so that they know to find, explore, select, and formulate the research problem as the keyword in preparing the research proposal. From the research problem chosen as the topic, the students are taken to discuss to widen it into a detailed discussion dealing with the background of the study, review of related literature, and research design that should be used and conducted. Principally, problem-based learning pedagogy used by the teacher in teaching research proposals assists the students to have a better way of thinking to make and present their research proposal well.

#### 5. REFERENCES

- Al-kadi, A. (2018). Language teaching and educational research. *Language Teaching and Educational Research*, 1(1), 1–12. [https://www.academia.edu/download/62843290/A\\_sample\\_of\\_my\\_publication\\_420200406-79627-oiuts2.pdf](https://www.academia.edu/download/62843290/A_sample_of_my_publication_420200406-79627-oiuts2.pdf).
- Al Qunayeer, H. S. (2020). Supporting postgraduates in research proposals through peer feedback in a Malaysian university. *Journal of Further and Higher Education*, 44(7). <https://doi.org/10.1080/0309877X.2019.1627299>.
- Alharbi, S. H. (2017). Principled eclecticism: Approach and application in teaching writing to ESL/EFL students. *English Language Teaching*, 10(2), 33. <https://doi.org/10.5539/elt.v10n2p33>.
- Alsaleh, N. J. (2020). Teaching critical thinking skills: Literature review. *TOJET: The Turkish Online Journal of Educational Technology*, 19(1), 21–39. <https://eric.ed.gov/?id=EJ1239945>.
- Ansarian, L., & Teoh, M. L. (2018). *Problem-based language learning and teaching: An innovative approach to learn a new language*. Springer. [https://doi.org/10.1007/978-981-13-0941-0\\_2](https://doi.org/10.1007/978-981-13-0941-0_2).
- Arifani, Y. (2016). The implementation of team-based discovery learning to improve students' ability in writing research proposal. *International Education Studies*, 9(2), 111. <https://doi.org/10.5539/ies.v9n2p111>.
- Di Leo, G., & Sardanelli, F. (2020). Statistical significance: p value, 0.05 threshold, and applications to radiomics—reasons for a conservative approach. *European Radiology Experimental*, 4(1), 18. <https://doi.org/10.1186/s41747-020-0145-y>.
- Dwi Saputra, A., Nurul Fauziah, F., Suwandi, S., & Artikel, S. (2022). Pemanfaatan materi ajar bahasa Indonesia bermuatan kearifan lokal di SMA Negeri 1 Karanganyar (Utilization of Indonesian language teaching materials containing local wisdom at SMA Negeri 1 Karanganyar. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, Dan Pengajarannya*, 8(2), 335–348. <https://doi.org/http://ejournal.umm.ac.id/index.php/kembara>.
- Espino-Díaz, L., Fernandez-Caminero, G., Hernandez-Lloret, C. M., Gonzalez-Gonzalez, H., & Alvarez-Castillo,

- J. L. (2020). Analyzing the impact of COVID-19 on education professionals. Toward a paradigm shift: ICT and neuroeducation as a binomial of action. *Sustainability (Switzerland)*, 12(14), 1–10. <https://doi.org/10.3390/su12145646>.
- Eve, J. (2009). Writing a research proposal: planning and communicating your research ideas effectively. *Library and Information Research*, 32(102). <https://doi.org/10.29173/lirg92>.
- Fernando, S. Y., & Marikar, F. M. (2017). Constructivist teaching/learning theory and participatory teaching methods. *Journal of Curriculum and Teaching*, 6(1), 110. <https://doi.org/10.5430/jct.v6n1p110>.
- García-Merino, J. D., Urionabarrenetxea, S., & Fernández-Sainz, A. (2020). Does PBL improve student performance in a multidimensional way? A proposal for a moderated mediation model. *Higher Education Research and Development*, 39(7), 1454–1473. <https://doi.org/10.1080/07294360.2020.1732878>.
- Gooda, T. (2016). If we teach writing, we should write. *English in Education*, 50(3), 270–279. <https://doi.org/10.1111/eie.12114>.
- Hairuddin, N. H., Machmoed, H. A., & Jubhari, R. R. (2018). The use of problem based learning (PBL) method in teaching English writing. *Scope of English Language Teaching, Literature and Linguistics Program*, 1(1). <http://ejournals.umma.ac.id/index.php/seltics/article/view/75>.
- Hasibuan, A. M., Saragih, S., & Amry, Z. (2019). Development of Learning Materials Based on Realistic Mathematics Education Approach to Improve Students' Mathematical Problem Solving Ability and Self-Efficacy. *International Electronic Journal of Mathematics Education*, 14(2), 331–340. <https://eric.ed.gov/?id=EJ1227202>.
- Henry, C., & Austin, M. J. (2021). Social work as a writing-intensive profession: Exploring the relationship between academic and practice writing. *Journal of Teaching in Social Work*, 41(3), 230–256. <https://doi.org/10.1080/08841233.2021.1932015>.
- Hussain, S. S. (2019). Strategies for teaching academic writing to Saudi L2 learners. *English Language Teaching*, 12(12), 1. <https://doi.org/10.5539/elt.v12n12p1>.
- Kivunja, C. (2018). Distinguishing between theory, theoretical framework, and conceptual framework: A systematic review of lessons from the field. *International Journal of Higher Education*, 7(6). <https://doi.org/10.5430/ijhe.v7n6p44>.
- Kök, F. Z., & Duman, B. (2023). The effect of problem-based learning on problem solving skills in English language teaching. *Journal of Pedagogical Research*, 7(1). <https://doi.org/10.33902/JPR.202318642>.
- LaMarre, A., & Chamberlain, K. (2022). Innovating qualitative research methods: Proposals and possibilities. *Methods in Psychology*, 6. <https://doi.org/10.1016/j.metip.2021.100083>.
- Lawrence, H. Y., Lussos, R. G., & Clark, J. A. (2019). Rhetorics of proposal writing: Lessons for pedagogy in research and real-world practice. *Journal of Technical Writing and Communication*, 49(1), 33–50. <https://doi.org/10.1177/0047281617743016>.
- Lê, J. K., & Schmid, T. (2022). The practice of innovating research methods. *Organizational Research Methods*, 25(2). <https://doi.org/10.1177/1094428120935498>.
- Liu, Y., & Pásztor, A. (2022). Effects of Problem-Based Learning Instructional Intervention on Critical Thinking in Higher Education: A Meta-Analysis. *Thinking Skills and Creativity*, 45, 1–21. <https://doi.org/10.1016/j.tsc.2022.101069>.
- Major, T., & Mulvihill, T. M. (2018). Problem-based learning pedagogies in teacher education: The case of Botswana. *Interdisciplinary Journal of Problem-Based Learning*, 12(1). <https://doi.org/10.7771/1541-5015.1543>.
- Mali, Y. C. G. (2023). EFL Students' challenges in writing research proposals. *LLT Journal: Journal on Language and Language Teaching*, 26(1). <https://doi.org/10.24071/llt.v26i1.5296>.
- Malik, M. M. (2022). *What is critical thinking?* <https://doi.org/10.13140/RG.2.2.35191.96165>.
- Maruti, E. S. (2022). Ketahanan Literasi Anak-Anak di Masa Pandemi melalui Aplikasi Let's Read (Children's Literacy Resilience in a Pandemic Period Through the Let's Read Application). *Indonesian Language Education and Literature*, 7(2), 247. <https://doi.org/10.24235/ileal.v7i2.9298>.
- Monrroy, M., Franco, H., & García, J. R. (2022). Criteria of formality and structural elements of research proposals. In *Education Research International* (Vol. 2022). <https://doi.org/10.1155/2022/9447931>.
- Muñoz, D. (2017). Problem-based learning: An experiential strategy for English language teacher education in Chile. *Profile Issues in Teachers' Professional Development*, 19(1), 29–40. [http://www.scielo.org.co/scielo.php?pid=S1657-07902017000100003&script=sci\\_arttext&tlng=en](http://www.scielo.org.co/scielo.php?pid=S1657-07902017000100003&script=sci_arttext&tlng=en).
- Murillo-Zamorano, L. R., López Sánchez, J. Á., & Godoy-Caballero, A. L. (2019). How the flipped classroom affects knowledge, skills, and engagement in higher education: Effects on students' satisfaction. *Computers & Education*, 141, 103608. <https://doi.org/https://doi.org/10.1016/j.compedu.2019.103608>.
- Nguyen, H. T. M. (2020). Ways of improving students' writing a research proposal. *The Scientific Journal of Tra Vinh University*, 1(39). <https://doi.org/10.35382/18594816.1.39.2020.569>.
- Oteng Acheampong, D. (2021). Perception of the difficulties of international postgraduate students writing research proposal. *International Journal of Humanities and Innovation (IJHI)*, 4(1).

- <https://doi.org/10.33750/ijhi.v4i1.103>.
- Padmanabha. (2018). Critical thinking: Conceptual framework. *I-Manager's Journal on Educational Psychology*, 11(4), 45–53. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3772743](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3772743).
- Pringle Barnes, G., & Cheng, M. (2019). Working independently on the dissertation proposal: experiences of international Master's students. *Journal of Further and Higher Education*, 43(8), 1120–1132. <https://doi.org/10.1080/0309877X.2018.1450965>.
- Saeed, M. A., Arif, A. A., & Al Qunayeer, H. S. (2021). Integrating research proposal writing into a postgraduate research method course: what does it tell us? *International Journal of Research and Method in Education*, 44(3). <https://doi.org/10.1080/1743727X.2020.1777963>.
- Sahib, R., Miftahul, A., & Mursyid, M. (2020). An analysis of research backgrounds of EFL students' research proposal. *Journal of English Language Studies*, 5(2). <https://jurnal.untirta.ac.id/index.php/JELS/article/view/8129>.
- Saldana, J. (2013). *The coding manual for qualitative researchers* (2nd ed.). SAGE.
- Sanganyado, E., Nunu, W. N., & Sanganyado, S. (2023). Towards a framework for embedding doctorateness in research proposals. *Innovations in Education and Teaching International*, 60(6). <https://doi.org/10.1080/14703297.2022.2124186>.
- Selvianiresa, D., & Prabawanto, S. (2017). Contextual Teaching and Learning Approach of Mathematics in Primary Schools. *Journal of Physics: Conference Series*, 895(1). <https://doi.org/10.1088/1742-6596/895/1/012171>.
- Setia, M. S., & Panda, S. (2017). Summary and synthesis: How to present a research proposal. *Indian Journal of Dermatology*, 62(5). [https://doi.org/10.4103/ijd.IJD\\_405\\_17](https://doi.org/10.4103/ijd.IJD_405_17).
- Shandy Narmaditya, B., Wulandari, D., & Binti Sakarji, S. R. (2018). Does problem-based learning improve critical thinking skills? *Cakrawala Pendidikan*, 37(3). <https://doi.org/10.21831/cp.v38i3.21548>.
- Sholihah, T. M., & Lastariwati, B. (2020). Problem Based Learning to Increase Competence of Critical Thinking and Problem Solving. *Journal of Education and Learning (EduLearn)*, 14(1), 148–154. <https://doi.org/10.11591/edulearn.v14i1.13772>.
- Southworth, J. (2021). How argumentative writing stifles open-mindedness. *Arts and Humanities in Higher Education*, 20(2), 207–227. <https://doi.org/10.1177/1474022220903426>.
- Starfield, S. (2018). Writing a research proposal. In *The Palgrave Handbook of Applied Linguistics Research Methodology*. [https://doi.org/10.1057/978-1-137-59900-1\\_9](https://doi.org/10.1057/978-1-137-59900-1_9).
- Sudheesh, K., Duggappa, D. R., & Nethra, S. S. (2016). How to write a research proposal? *Indian Journal of Anaesthesia*, 60(9). <https://doi.org/10.4103/0019-5049.190617>.
- Sudirman, A., Gemilang, A. V., & Male, H. (2020). Incorporating academic writing phrases into EFL Students' research proposals. *International Journal of Learning, Teaching and Educational Research*, 19(7). <https://doi.org/10.26803/ijlter.19.7.3>.
- Sun, Y. (2022). Implementation of translanguaging pedagogies in EAL writing: A systematic review. *Language Teaching Research*. <https://doi.org/10.1177/13621688221090665>.
- Suprpto, E., Fahrizal, F., Priyono, P., & K., B. (2017). The application of problem-based learning strategy to increase high order thinking skills of senior vocational school students. *International Education Studies*, 10(6), 123. <https://doi.org/10.5539/ies.v10n6p123>.
- Suryatiningsih, N. (2019). EFL students' difficulties in writing a research proposal. *International Journal of Humanities and Innovation (IJHI)*, 2(4). <https://doi.org/10.33750/ijhi.v2i4.49>.
- Wijayanti, M. A., Emilia, E., & Gunawan, W. (2017). Genre pedagogy to the teaching of academic writing in tertiary level and cognitive empowerment. *Journal of English Language Studies*, 2(2). <https://doi.org/10.30870/jels.v2i2.2239>.
- Wirantaka, A., & Sukarno, H. S. R. (2022). Investigating the implementation of problem-based learning (PBL) in English teaching and learning. *Proceedings of the International Conference on Sustainable Innovation on Humanities, Education, and Social Sciences (ICOSI-HESS 2022)*. [https://doi.org/10.2991/978-2-494069-65-7\\_24](https://doi.org/10.2991/978-2-494069-65-7_24).
- Wu, Y. (2021). Critical thinking in argumentative essays. *Business Prospects*, 2(2), 60–65. <https://doi.org/10.52288/bp.27089851.2021.12.10>.
- Yew, E. H. J., & Goh, K. (2016). Problem-Based Learning: An Overview of its Process and Impact on Learning. *Health Professions Education*, 2(2), 75–79. <https://doi.org/10.1016/J.HPE.2016.01.004>.
- Yıldırım, S. (2016). Infographics for educational purposes: Their structure, properties and reader approaches. *Turkish Online Journal of Educational Technology*, 15(3), 98–110. <https://eric.ed.gov/?id=EJ1106376>.