PROJECT-BASED LEARNING MODEL WITH BLENDED LEARNING IN ACADEMIC WRITING: A NEED ANALYSIS

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Abstract

Conducting a need analysis is crucial for tailoring academic writing instruction to meet the students' need. Need analysis serve as systematic tool for developing relevant learning materials that align with students' learning needs. This research hold significant importance in adressing the integration of project-based learning (PjBL) and blended learning within the context of academic writing. By identifying the needs of students, it provides valuable insight for culliculum designers and educators in English education program. The research aims to identify the students' need for project-based learning with blended learning in academic writing. This study is conducted as survey research at the English education study program at Muhammadiyah University of Mataram and Mandalika University of Education. The questionnaire of collecting data consists of 61 statements with 11 factors. The result of the research shows that all of the students need eleven factors such as learning objectives, topic needs, teaching material requirements, needs assessment, the need of PJBL syntax, blended learning, social system need, requirement principle of reaction, need of support system, learning impact need, and need for impact accompanying learning. The results of this research are expected contributing to the lecturers, stakeholders, and curriculum development of project-based blended learning in academic writting at the English Education department.

INTRODUCTION

Academic writing is one of the important skills that students in higher education need to acquire. Control over academic writing gives students and scholars capital, power, and agency in knowledge building, disciplinary practices, and identity formation, social positioning, and career advancement (Fang, 2021, p.3). In a similar vein, (Flowerdew, 2016); (Lillis & Scott, 2007) highlighted writing is an essential academic skill that is valued highly in the academy, whether one seeks a career in higher education as a researcher, administrator, teacher, or student. Writing plays a crucial role in higher education, with good writing contributing to success and poor writing to failure. Furthermore, the centrality of academic writing is due to its role as one of the evaluative tools in higher education (Guarino, 2003).

Blended learning is a strategic and systematic method that incorporates face-to-face and virtual methods of learning for education (Hassan et al., 2021), fully exploiting and integrating synchronous and asynchronous modes (Heilporn et al., 2021a), untuk meningkatkan kemampuan mahasiswa secara signifikan (Abdul Rahman et al., 2020); (López-Pellisa et al., 2021). Project-based learning is a method that allows students to design, plan, and carry out an extended project that produces a publicly exhibited output such as a product, publication, or presentation. Project-based learning allows learners to learn in an integrated way which enables them to take responsibility for their own learning in a

collaborative environment. PjBL activities promote students' attitude toward learning in EFL classes, develop their motivation to use, and encourage students to use reflective thinking, which benefits students' competencies in EFL ((Aghayani & Hajmohammadi, 2019); (Praba'et al., 2018). PjBL can improve a deep understanding of knowledge, and a high level of learning, and promote motivation to learn (Al-Busaidi & Al-Seyabi, 2021); (Alotaibi, 2020); (Kemaloglu-er, 2022); (Kemaloglu-er & Sahin, 2022); (Kimsesiz et al., 2017); (Muhammad, 2020); (Santhi et al., 2019); (Shin, 2018); (Wongdaeng & Hajihama, 2018); (Ilham, 2024). It supports the attitude needed in the writing process, including active, reflective, collaborative, solutive, predictive, effective, responsible, intellectual, social, and communicative (Ernawati et al, 2022; (Padmadewi et al., 2023).

Need analysis is the process of finding and accumulating information about students' language learning needs in the form of conditions that exist between what students receive, what students expect, and what students should receive in the language (Huhta et al., 2013). Need analysis refers to identifying what learners should do when learning a language in the target situation and how they could master the target language during the learning period (Kim, 2013). Thus, the purpose of this study is to provide an analysis of the needs of English study program students toward developing a blended learning model combined with project-based learning on academic writing subjects. This model is utilized as a reference to design a learning model suitable for students' needs.

Recent studies highlight the importance of needs analysis in developing effective project-based learning (PBL) models with blended learning (BL) for academic writing and reading. Research indicates that students require clear learning objectives, individual and group exercises, and project-based approaches in writing courses (Ilham, 2024). For academic reading, students need comprehension-to-evaluation exercises and a learning system that emphasizes problem-solving skills (Ismail & Edi, 2023). The integration of PBL with BL has shown promise in improving 21st-century skills during the COVID-19 pandemic (Nurhayati et al., 2021). Students express a need for BL and PBL structures to enhance creativity and productivity in scientific writing (Oktarina et al., 2023). These findings suggest that designing teaching materials based on PBL and BL can effectively meet student needs in academic writing and reading courses, potentially bridging the gap between current practices and student requirements.

However, there is still relatively limited research on need anaslysis of project-based learning models with blended learning for academic writing. Furthermore, a more comprehensive need analysis of students need is needed to identify specific gaps between students' current experiences, expectations, and ideal learning outcome, tailoring the proposed model to the unique needs of English education students. By bridging theoretical framework with practical applications, the research not only advances pedagogical strategies in academic writing but also provides a replicable model for other educational context, making a significant contribution to the field of language education. After presenting the background, the present research aims to answer to the following question: What are the students' needs of project-based learning model with blended learning in academic writing?

RESEARCH METHOD
Research Design
This study adopted a survey research design to explore the need for a project-based learning model of academic writing that incorporates blended learning from students' perspectives. The survey approach was chosen for its effectiveness in gathering extensive data from a sizable group of participants, allowing for a detailed analysis of student needs and preferences. By combining quantitative and qualitative methods, the study ensured a comprehensive assessment of the issues under investigation. The mixed-method approach

allowed the researchers to balance the strengths of both approaches: the quantitative data provided measurable, statistical insights, while the qualitative aspect offered a deeper understanding of students' experiences and expectations. The descriptive qualitative element of the research was instrumental in capturing the nuanced perspectives of the participants. This approach facilitated an exploration of individual and collective needs, uncovering specific aspects of academic writing that students deemed critical. On the other hand, the quantitative analysis employed numerical data to identify patterns and trends, providing a structured overview of the responses. Together, these methods complemented each other, enabling the researchers to validate qualitative insights with quantitative evidence. This integrated design not only enhanced the reliability and validity of the findings but also ensured that the study outcomes were both detailed and broadly applicable to similar educational contexts.

Research Participants

The participants in this study consisted of 70 students who were actively enrolled in academic writing courses within the English Education Study Program at Muhammadiyah University of Mataram and Mandalika University of Education. These participants represented a diverse group of learners, contributing to a comprehensive understanding of the needs and preferences of students in academic writing. The selection of these participants was purposive, ensuring that the sample reflected the population of English department students taking the course. This sampling approach was crucial for capturing the specific academic and pedagogical requirements of students who are directly engaged in learning academic writing. By focusing on this group, the study aimed to provide insights into how a project-based learning model with blended learning could be tailored to meet their needs effectively.

The participants were chosen with careful consideration of the research objectives, ensuring that the data collected would be relevant and applicable to similar contexts. Their inclusion was based on their current enrollment in academic writing courses, which positioned them as ideal respondents for identifying the strengths and gaps in existing instructional models. This alignment ensured that the findings could be generalized to other English education programs with similar characteristics, thereby enhancing the study's external validity. In conducting the study, the researchers were mindful of the ethical considerations involved in engaging students as research participants. Each participant's consent was sought after a detailed explanation of the study's purpose, procedures, and potential implications. Participation was entirely voluntary, and students were assured of their right to withdraw at any time without any negative consequences.

Ethical considerations were paramount in this study, particularly given the involvement of student participants. Informed consent was obtained from all participants before data collection commenced. The researchers provided a clear explanation of the study's aims, the nature of their participation, and how the data would be used. This ensured that students had a comprehensive understanding of the research and could make an informed decision about their involvement. To maintain confidentiality, all personal data were anonymized, and the responses were securely stored. Students were assured that their participation or responses would not impact their academic standing or relationships with faculty members. The researchers also took care to avoid any form of coercion, ensuring that students felt no pressure to participate. Ethical oversight was integrated throughout the study to safeguard the rights and well-being of the participants, demonstrating a commitment to conducting research responsibly and with integrity.

Research Instruments and Data Collection Technique

The primary instrument for data collection was a questionnaire consisting of 61 multiple-choice questions, divided into eleven variables. These variables covered aspects such

as the goals of learning academic writing, learning materials, topics, project-based learning syntax, blended learning integration, the social system, learning evaluation, principles of reaction, support systems, learning impacts, and the need for accompanying learning. Each question offered four response options: "the most needed," "needed," "not yet needed," and "not needed." The questionnaire was distributed online using Google Forms, allowing students to complete it conveniently. To ensure accurate responses and address any immediate questions, the researcher accompanied the respondents during the questionnaire completion process. This monitoring enhanced the reliability of the collected data by mitigating potential misunderstandings of the questions.

Data Analysis

The collected data were analyzed using a quantitative approach. Responses were processed using descriptive statistics, specifically a percentage formula, to determine the frequency and proportion of students' preferences and needs for each variable. The findings were then interpreted and presented in tabular form, accompanied by descriptive narratives. The quantitative results were further contextualized through qualitative descriptions to provide a comprehensive understanding of the students' needs. These findings served as a foundation for developing content materials for academic writing courses that integrate project-based learning with blended learning.

RESEARCH FINDINGS AND DISCUSSION
Research Findings

The following section presents the results of needs analysis on eleven aspects such as learning objectives, topics needs, teaching materials needs, assessment needs, PJBL syntax needs, blended learning needs, social system needs, learning impact needs, and learning needs of the impact which accompanies learning. The first finding is about the learning objectives the students need during their study. The illustration is based on the students' response.

Need of Learning Objectives

Table 1
Need for Learning Objectives

No	Statements	Percentage of Needs	Category
1	Students understand the concept of academic writing	62.1 %	needed
2	Students understand the unity and coherence that they need in academic writing	51.7 %	needed
3	Students have the ability to distinguish academic writing text types	58.6 %	needed
4	Students can write text using appropriate language and mechanics	50 %	needed
5	Students are able to identify and evaluate academic writing	53.4%	needed

Table 1 shows that most of the students preferred the course goal on knowledge of understanding the concept of academic writing, distinguishing academic writing text types, and identifying and evaluating academic writing. The other preferences of understanding unity and coherence in academic writing and writing text using appropriate language and mechanics. This finding implies that the students do aware of the need to learn academic writing from its basic knowledge namely the unity and coherence, text types, and language and mechanics.

Need of Learning Materials
The following Table 2 will illustrate the results of the need analysis on materials for learning academic writing that are needed by students.

Table 2
The Result of the Need Analysis on Learning Materials

No	Statements	Percentage of Needs	Category
1	Students need materials on the structure of academic writing	58.6%	needed
2	Students need materials on types of academic writing	46.6%	needed
3	Students need material on unity and coherence	50%	needed
4	Students need materials on the linguistic features of academic writing	50 %	needed
5	Students need materials on the pattern of essay organization	51.7	needed
6	Students need materials on vocabulary	65.5%	needed

Table 2 shows that students most preferred learning material of academic writing on vocabulary, organization of academic writing, and pattern of essay organization. Additionally, material unity and coherence, linguistics features of academic writing are also needed by students.

Needs of Learning Topic

Table 3
The Result of the Need Analysis on Learning Topics

No	Statements	Percentage of Needs	Category
1	Students need academic writing topics related to the paragraph element	51.7%	needed
2	Students need academic writing topics related to part of an essay	44.8%	needed
3	Students need academic writing topics related to writing descriptive text	50 %	needed
4	Students need academic writing topics related to comparison and contrast essay	53.4 %	needed
5	Students need academic writing topics related to cause and effect essay	46.6%	needed
6	Students need academic writing topics related to argumentative essay	48.3%	needed

Table 3 reveals key insights into students' preferences regarding academic writing topics. The data highlights that topics related to paragraph elements, such as structure, coherence, and transitions, are highly prioritized by students, reflecting a fundamental need to strengthen their foundational writing skills. This preference suggests that students recognize the importance of mastering paragraph-level elements as building blocks for effective academic writing. Understanding these components enables them to construct clear, cohesive, and logically organized essays, which are essential for academic success.

Following closely, students expressed a strong need for learning specific essay types, including descriptive, comparison and contrast, and argumentative essays. The high response rate for these topics indicates that students value guidance on crafting essays that align with academic standards and expectations. Descriptive essays allow them to convey vivid details and engage readers, while comparison and contrast essays help develop critical thinking and analytical skills. Argumentative essays, in particular, equip students with the ability to present and support their perspectives effectively, a skill highly relevant in academic discourse. These findings underscore the importance of addressing students' needs for practical and targeted writing instruction. They also suggest that a project-based learning model emphasizing these

areas, integrated with blended learning strategies, could significantly enhance students' writing proficiency and confidence.

Need analysis on the Assessment of Learning

Table 4
The Result of the Need Analysis on Assessment of Learning

No	Statements	Percentage of Needs	Category
1	Students understand the concept of assessment of learning participation during the learning process	48.3%	needed
2	students understand the concept of assessing learning outcomes through academic writing learning rubrics	44.8%	needed
3	Students understand the concept of summative and formative assessment	44.8 %	needed
4	Students understand the concepts of assessment of learning, assessment for learning, and assessment as learning	64.7 %	needed

Table 4 shows that the highest need from the student's point of view are students to understand the concept of assessment of learning, assessment for learning and assessment as learning and students understand the concept of assessment of learning participation during the learning process. Moreover, the students also preferred to understand the concept of assessing learning outcomes through academic writing learning rubrics, and students understand the concepts of summative and formative assessment.

The Syntax of Project-Based Learning

Table 5
The Result of the Need Analysis on the Syntax of Project-Based Learning

No	Statements	Percentage of Needs	Category
1	Lecturers start the learning process by reviewing the lesson that has been learned before	50%	needed
2	Lecturers discuss learning objectives at the beginning of each lesson	53.4%	needed
3	The lecturer explains at the beginning of the lecture the content that will be studied	59.9 %	needed
4	Students are given a text to study before learning project-based learning.	50 %	needed
5	Students determine the main question or problem to be used as a project	51.7 %	needed
6	Students plan project	41.4 %	Needed
7	Students create a project completion schedule	43.1 %	needed
8	The lecturer monitors the progress of project completion	46.6 %	needed
9	Students present and test the results of the project completion	48.3%	needed
10	Students evaluate and reflect on the process and results of the project.	53.4%	needed
11	group evaluation is carried out by each group member	50 %	needed
12	Assessment is carried out by lecturers during the learning process	50%	needed

Table 5 shows that the highest percentage of students' responses are the lecturer explain at the beginning of the lecture content that will be studied, the lecture discussing the learning objective at the beginning of each lesson, students evaluating and reflecting on the process and results of the project, students determine the main questions or problem to be used as a project. Meanwhile, lecturers start the learning process by reviewing the lesson that has been learned before, students are given a text to study, group evaluation is carried out by each group member and assessment is carried out by lectures during the learning process are less preferable by the learners.

Need of Blended Learning

Table 6
The Result of Need Analysis on the Need of Blended Learning

No	Statements	Percentage of Needs	Category
1	students need a blended learning concept	50%	needed
2	students need the learning process to be done through a blended	43.1%	needed
3	Students need knowledge about blended learning types	43.4 %	needed
4	Blended learning is conducted as a reinforcement	41.4 %	needed
5	students need blended learning implementation steps	44.8 %	needed

Table 6 shows that majority of students highly preferred a blended learning concept, and blended learning implementation step, students need the learning process to be done through blended, and students need knowledge about blended learning types. However, the lowest one is blended learning is conducted as a reinforcement of learning.

Social System Needs
The result of this factor which involves eight statements can be seen in the table below.

Table 7
Social System Needs

No	Statements	Percentage of Needs	Category
1	Lecturer motivate students at the beginning of the learning process	48.3 %	needed
2	Lectures always build interaction with students during the learning process	58.6%	needed
3	The lecture acts as a guide and facilitator in study group activities	51.7%	needed
4	Lecturers provide time for students who want to discuss their learning needs	53.4%	needed
5	In the learning process, lecturers always give assignments according to the student's needs and ability level	53.4%	needed
6	Lecturers position students as subjects and not as objects of learning	55.2%	needed
7	Lecturers always provide the information students need related to the material of the subject matter	55.2%	needed
8	Lectures together with students lay down the norms that must be obeyed in the learning process	51.7%	needed

As can be seen from Table 7, the highest percentage of responses are given by students to the lecturers always build interaction with students during the learning process, position students as subjects and not as objects of learning, provide the information students need related to the material of subject matter, provide time for students who want to consult the

students need, always give assignment based on the student's need and ability level in the learning process.

Discussion

This study identifies students' needs of a project-based learning academic writing learning model for English students through blended learning by distributing to students consisting of 11 aspects such as learning objectives, topics needed, teaching material requirements, need of assessment, the need for PJBL syntax, need for blended learning, social system need, requirement principle of reaction, need of support system, learning impact need, and need for impact accompanying learning. The learning objective factor encompasses five key elements: students' comprehension of academic writing concepts, students' ability to differentiate between various academic writing text types, students' skill in identifying and evaluating academic writing, students' understanding of unity and coherence essential for academic writing, and their proficiency in composing texts with appropriate language and mechanics. This study in line with Sundari & Leonard (2020) that paragraph and essay development are preferable for academic purposes.

Regarding teaching material needs, students require six key components: materials on vocabulary, the structure of academic writing, essay organization patterns, unity and coherence, linguistic features of academic writing, and the various types of academic writing. This finding is consistent with the finding of Sundari & Leonard (2020) that students' preferences on write various types of well-structured essays. The topic needs include six key areas: academic writing topics related to comparison and contrast essays, paragraph elements, descriptive essays, argumentative essays, cause-and-effect essays, and essay components. This finding was in line with Halim et al., (2024) that suitability of English learning materials is very helpful for students writing skill.

The need for Project-Based Learning (PjBL) syntax comprises twelve key aspects. These include the requirement for lecturers to explain the lecture content at the beginning of the session, discuss learning objectives at the start of the lesson, evaluate and reflect on both the process and outcomes of the project, define the main questions or problems to be addressed in the project, review previously learned material, provide students with texts to study prior to engaging in project-based learning, conduct group evaluations by individual members, and carry out assessments during the learning process. Additionally, it involves presenting and testing the results of project completion and ensuring that lecturers monitor the progress of the project's completion. This study was in line with (Guo et al., 2020); (Cahyono et al., 2024);(Fatmawati et al., 2023); (Argawati & Suryani, 2020) that PjBL involves students solving complex, real-world problems through hands-on and collaborative projects by asking students to create written products, such as reports, proposal, or research papers that are based on real-world problems or situations, which motivate students to write more effectively and to take their writing more seriously.

The assessment factor encompasses the need for students to grasp key assessment concepts, including assessment of learning, assessment for learning, and assessment as learning. Additionally, it involves understanding the concept of assessment during the learning process, recognizing learning outcomes through academic writing rubrics, and comprehending the principles of both summative and formative assessments. This is in line with Tomlinson (2013) that when designing an evaluation, it is essential to consider how to improve the instructional materials and the learning process that comes afterwards.

The need for blended learning includes several key aspects namely students require an understanding of the blended learning concept, steps for its implementation, the integration of blended approaches into the learning process, and knowledge about various types of blended learning. This finding was in line with other studies on blended learning as an essential factor

in improving the ability to write. Students need the learning process conducted on blended learning such as class collaboration through question-answer about online tasks, making the students interact with each other and realize the link between what they learn traditionally on what they experience on the internet (Castro-Gil & Correa, 2021); (Heilporn et al., 2021b); (Kheiri et al., 2022); (Torabi, 2021); (Prihandoko, 2022); (Mohamed, 2024); (Mohammed & Muhammad, 2023). The learning process of blended learning blended learning can reinforce students to secure information stored in short-term memory and proceed in long-term memory (López-Pellisa et al., 2021). Students need the blended learning concept that is a model of teaching EFL writing in which an instructor uses both models of asynchronous and synchronous models that support each other with adjustments on the need for offline and online upon the consideration of the lesson plan (Turmudi, 2020).

The social system factors include eight key aspects, emphasizing the importance of lecturers fostering interaction with students throughout the learning process, treating students as active participants rather than passive recipients of learning, providing essential information related to the subject matter, allocating time for students to consult about their needs, and assigning tasks tailored to students' needs and ability levels. This study is in agreement with Oktarina et al., (2023) who showed that students desired group-based multidirectional engagement. Furthermore, the significant interaction between lecturer and students is rwquired

The principle of reaction encompasses four key elements: lecturers are expected to actively engage with students during the learning process, treat students as active participants rather than passive objects in their education, provide necessary information related to the subject matter, allocate time for students to consult about their individual needs, and assign tasks that align with students' needs and proficiency levels. Meanwhile, in terms of support system needs, students express a preference for lecturers to consistently demonstrate the qualities of an educator and act as a supportive figure in all language activities. They also value lecturers who provide teaching materials with up-to-date information tailored to learning requirements and deliver learning content in the form of visually appealing PowerPoint presentations. This finding is consistent with some previous researchers (Oktarina et al., 2023) that lecturer can act as facilitators, motivators, managers, and evaluators of learning.

The next section of the needs analysis focuses on the impact of learning. Students prioritize understanding the concepts, variety, and structure of academic writing, as well as developing the skills to compose academic texts in essay form. Additionally, they emphasize the importance of acquiring the ability to write academic texts with strong elements of cohesion and coherence. It is supported by (Argawati & Suryani, 2020); (Fatmawati et al., 2023) state that PjBL improved the field of knowledge and ability of students' writing.

Regarding the needs for accompanying learning, students highlight that the most significant needs include fostering creativity in the academic writing process, maintaining an open attitude toward suggestions and criticism, demonstrating leadership in managing learning groups, and being receptive to others' opinions. It supported by Argawati & Suryani (2020) that student felt PjBL was good to increase students' activeness, motivation, creativity and knowledge during the learning process.

CONCLUSION

The result of the questionnaire of the 11 factors to determine the needs of the students can be concluded that students need all of these factors to be applied in the learning process to write academic writing skills. The eleven factors needed consist of learning objectives, topics needs, teaching materials needs, assessment needs, PJBL syntax needs, blended learning needs, social system needs, learning impact needs, and learning needs of the impact that accompanies learning. Further research regarding the need analysis on project-based learning

of academic writing through blended learning in a wider context involving more students from more universities would be a great help for the improvement of academic writing teaching and learning in the EFL context. Through the implementation of a needs analysis, educators can customize their teaching to address both the individual and collective needs of students, ensuring they receive the necessary support and resources for success in learning English. Additionally, needs analysis enables educators to pinpoint specific challenges faced by English learners, such as differentiating between spoken and written English, organizing ideas before drafting, and identifying the key skills required for effective writing. In conclusion, needs analysis involves not only the perspectives of students but also those of all stakeholders within the educational system and key entities that eventually employ the students. The content, methods, and approaches of needs analysis should be assessed and selected according to the specific teaching and learning contexts and conditions in Indonesia.

ACKNOWLEDGEMENT

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