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## Project-Based Learning Model with Hybrid Learning in EFL Critical Reading: Need Analysis

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### Abstract

Critical reading skills encompass the ability to understand, analyze, evaluate, and reflect on information critically and objectively. The research aims to identify and describe the students' needs for a project-based learning model through hybrid learning in EFL critical reading. This study was conducted as survey research within the English Education Study Program at Muhammadiyah University of Mataram, Muhammadiyah University of Purworejo, and Education University of Yogyakarta. The questionnaire used for data collection comprised 63 statements across 11 factors. The research result indicates that all of the students expressed a need for these eleven factors; learning objectives, topic needs, teaching material requirements, assessment needs, the need for Pjbl syntax, need for hybrid learning, social system needs, requirement principle of reaction, need of support system, learning impact needs, and need for impact accompanying learning. We recommended further studies to implement these factors in teaching critical reading in English foreign language.

### Keywords

Critical reading; hybrid learning; need analysis; project-based learning.

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## Introduction

Critical reading skills are an important aspect (Abrami et al., 2015; Din, 2020; Holm, 2020; Phimpimon et al., 2024; Wilson, 2016; Yang et al., 2022) of literacy that allows individuals to critically evaluate, analyze, and understanding complex texts (Abrami et al., 2015). Critical reading involves analyzing, synthesizing, and evaluating texts to understand and interpret deeper meanings and implications. For EFL learners, mastering these skills is challenging yet crucial (Grabe & Stoller, 2013). In an era of information that continues to develop rapidly, where access to information is abundant, critical reading skills are the key to dealing with information that is often contradictory and sometimes misleading (Abrami et al., 2015).

Research conducted by Abrami et al. (2015) highlighted the importance of critical reading skills in building a deep understanding of information. They found that students who were skilled in critical reading tended to have better analytical skills and were able to take a broader perspective on the texts they read. However, challenges arise when trying to integrate the teaching of critical reading skills into existing curricula (Abrami et al., 2015), deficiencies in students' critical thinking skills necessary for effective critical reading, inadequate mastery of English vocabulary, and the inappropriate selection of reading materials that fail to align with students' academic needs (Hartshorn et al., 2017; Liang & Fung, 2021; Muñoz & Valenzuela, 2020).

Project Based Learning (PJBL) has been recognized as a promising approach in the context of modern education to develop critical thinking (Kim & Lee, 2022; Lee et al., 2023) in higher education (Guo et al., 2020). The study by Bosch et al. (2021) also shows that PJBL provides contextual and meaningful learning experiences for students, which can improve their mastery of learning material and also strengthen their critical reading skills. Through PJBL, students are invited to be actively involved in authentic projects that require analysis, synthesis, and evaluation of essential skills in critical reading. The synthesis of PBL and hybrid learning has been shown to effectively develop these critical reading skills by providing diverse, interactive, and dynamic learning experiences (Assiddiq & Sasmayunita, 2022; Sun & Zhu, 2023). The implementation of PJBL in critical reading in this research was implemented through hybrid learning.

Hybrid learning is a learning process that integrates online and offline learning (Bergdahl & Bond, 2021; Ismail, 2022; Ismail & Edi, 2023; Yang, 2020) which has been proven to have a positive impact on learning (Yang, 2020) because it maximizes student involvement in learning (Halverson & Graham, 2019; Ismail & Edi, 2022; Manwaring et al., 2017) and educators serve as facilitators in learning (Boelens et al., 2018). According to Xiao et al. (2020), hybrid learning environments can enhance the learning experience by combining the strengths of both traditional and online learning. Gutiérrez-Braojos et al. (2019) and Raes et al., (2020) found that students in hybrid learning conditions performed better than those in purely face-to-face or online environments. Therefore, the formulation of this research is what the students need regarding PJBL model through hybrid learning in EFL critical reading.

## Literature Review

### *Critical reading*

Critical reading is becoming crucial (Salmerón et al., 2020) in enhancing comprehension and cognitive skills in second language acquisition. Similarly, Grabe and Stoller (2013) emphasize that critical reading is not just about understanding texts but also about questioning and critiquing them. Critical reading is a multifaceted skill that involves analyzing, synthesizing, and evaluating texts to grasp deeper meanings and implications. It is essential for EFL learners as it improves not only language proficiency but also cognitive skills necessary for academic success and informed engagement with content (Grabe & Stoller, 2013).

Many researchers conducted extensive research on critical reading, encompassing various methodologies such as the implementation of discovery learning to enhance critical reading proficiency (Elhefni et al., 2020), and the utilization of eye-movement modelling examples to augment student engagement in critical reading activities (Salmerón et al., 2020). Furthermore, investigations have explored the nexus between students' critical reading capabilities and their critical thinking faculties (Wikanengsih et al., 2020), as well as the integration of Content and Language Integrated Learning (CLIL) into critical reading curricula (Fitrawati et al., 2023). Additionally, the formulation of a critical reading intention scale for university students through exploratory and confirmatory factor analysis has been examined (Anuar et al., 2023). Despite these comprehensive studies, a review of the literature reveals a discernible paucity of research focused on the application of Project-Based Learning (PJBL) within the realm of critical reading pedagogy.

### *PJBL model and hybrid learning*

PJBL stands as an instructional methodology that advocates for students to glean knowledge through immersion in authentic, real-world projects. Garmendia et al. (2021) and Sukacké et al. (2022) expound upon PBL as a pedagogical framework that orchestrates learning experiences around multifaceted projects. These projects, characterized by intricate inquiries or challenges, compel students to engage in design, problem-solving, decision-making, and investigative endeavors. Demonstrably, PJBL has exhibited the capacity to heighten student motivation and engrossment (Wijnia et al., 2024) while concurrently fostering profound levels of comprehension (Almulla, 2020).

Hybrid learning, integrating both face-to-face and online instruction, epitomizes adaptability and inclusivity, catering to diverse learning predilections and schedules (Kazu & Yalcin, 2022; Rorimpandey & Midun, 2021; Xiao et al., 2020; Yang, 2020). It amalgamates conventional classroom methodologies with digital educational resources and activities, striving to amalgamate the strengths of in-person and virtual learning to furnish a more personalized, versatile, and captivating educational milieu. Central to its framework are synchronous (real-time) and asynchronous (self-directed) learning modalities, facilitated through the adept utilization of technologies such as Learning Management Systems (LMS),

online discussion forums, and virtual collaboration tools (Assiddiq & Sasmayunita, 2022; Raes et al., 2020).

## Methodology

### *Research design, site, and participants*

This study employs a descriptive survey design to conduct a comprehensive need analysis for a PJBL model through hybrid learning in EFL critical reading. The research was conducted within the English Education Study Program at Muhammadiyah University of Mataram, Muhammadiyah University of Purworejo, and Muhammadiyah University of Yogyakarta. The participants included 450 students who were either currently enrolled in or had completed EFL reading courses within the English Education Program, comprising 240 males and 110 females.

### *Data collection and analysis*

Data were collected using a structured questionnaire designed to assess various aspects of students' needs related to the PJBL model through hybrid learning in EFL critical reading. The questionnaire comprised 63 statements categorized into 11 factors, including learning objectives needs, topic needs, teaching material requirements, assessment needs, PJBL syntax needs, hybrid learning needs, reaction principle needs, support system's needs, learning impacts needs, and accompanying learning impact needs.

Quantitative data from the questionnaires were analyzed using descriptive statistics to summarize the frequency and percentage of responses for each statement. The analysis aimed to identify common trends and specific needs across the different factors.

## Findings

The analysis of the survey data revealed significant insights into the students' needs for a PJBL model integrated with hybrid learning in EFL critical reading. The findings are categorized based on the eleven identified factors.

### *Learning objectives needs*

The need for learning objectives is encapsulated within six distinct statements, with the findings elegantly presented in Table 1.

**Table 1.** *Need for learning objectives*

No	Statements	Average	Information
1	Students understand the concept of critical reading	4.6	Very needed
2	Students understand the purpose of critical reading	4.8	Very needed
3	Students understand the types of critical reading	4.0	Needed
4	Students have the ability to answer questions related to English reading texts	4.6	Very needed
5	Students have the ability to evaluate questions related to English reading texts	4.5	Very needed
6	Students have the ability to criticize English reading texts	4.3	Needed

Table 1 shows that students highly prioritize understanding the concept of and purpose of critical reading, along with the ability to answer and evaluate questions related to English reading text. Meanwhile, only two statements, understanding related to comprehending and criticizing the English reading text, are considered necessary.

### *Topic needs*

The result of topic needs is visually represented in Table 2.

**Table 2.** *Topics needs*

No	Statements	Average	Information
1	Students need critical reading topics related to language skills.	4.6	Very needed
2	Students need critical reading topics related to culture.	2.4	Less needed
3	Students need critical reading topics related to politics.	2.5	Less needed
4	Students need critical reading topics related to education.	3	Just needed
5	Students need critical reading topics related to sports	2,4	Less needed
6	Students need critical reading topics related to social issues.	2,3	Less needed

Table 2 exhibits that only the topic of language skills falls under the ‘very needed “category. Additionally, topics related to education are categorized as “just needed”. Meanwhile, topics related to cultural, political, sports, and social issues are considered less needed. Therefore, only topics related to language skills are utilized as critical reading topics.

### *Teaching material requirements*

The result of this factor, comprising six statements, is displayed in Table 3.

**Tabel 3.** *Teaching material requirements*

No	Statements	Average	Information
1	Students need learning materials related to critical reading objectives.	5.6	Very needed
2	Students need learning materials related to types of critical reading.	4.0	Needed
3	Students need learning materials related to critical reading steps.	4.0	Needed
4	Students need learning materials related to critical reading methods.	4,3	Needed
5	Students need learning materials that come from scientific articles.	4,5	very needed
6	Students need learning materials sourced from scientific articles related to writing titles, abstracts, keywords, introductions, literature reviews, research methods, results and discussions, conclusions, and references.	4,5	Very needed

Table 3 displays three statements that are included in the “very needed” category; students need material related to the purpose of reading criticism, articles, and article structure. Meanwhile, three statements are categorized as “needed”: material related to critical reading steps, types of critical reading, and critical reading methods.

***Assessment Needs***

The result of this factor, consisting of four statements, can be seen Table 4.

**Table 4.** *Needs of assessment*

No	Statements	Average	Information
1	Students understand the concept of assessing the critical reading learning process	4.5	Very needed
2	Students understand the concept of assessing learning outcomes through rubrics in academic reading learning.	4.5	Very needed
3	Students understand the concepts of assessment of learning, assessment for learning, and assessment as learning.	4	Needed
4	Students understand the concepts of summative and formative.	4	Needed

Table 4 presents that two statements regarding students' understanding concept of process assessment and assessment using rubrics are categorized as "very needed". Meanwhile, two statements related to understanding summative and formative concepts as well as assessment of learning, assessment of learning, and assessment as learning, are included in the "needed" category.

***PJBL Syntax Needs***

The result of need for PJBL syntax factor consisting of twelve statements can be seen in Table 5.

**Table 5.** *The need for PJBL syntax*

No	Statements	Average	Information
1	The lecturer begins the learning process by reviewing the lessons learned.	4.3	Needed
2	The lecturer conveys the learning objectives at the beginning of each lecture.	4.5	Very needed
3	The lecturer explains the lecture content to be studied.	4.1	Needed
4	Students are given a text to study before starting project-based learning.	4.1	Needed
5	Students determine the main question or problem to be used as a project.	4.0	Needed
6	Students plan projects.	4.5	Very needed
7	Students create a project completion schedule.	4.1	Needed
8	Lecturers monitor the progress of project completion progress.	4.3	Needed
9	Students present and test on the project completion results.	4.1	Needed
10	Students evaluate and reflect on the project process and results.	4.3	Needed
11	Group evaluation is conducted by each group member.	4.1	Needed
12	Assessment is carried out by the lecturer during the learning process.	4,3	Needed

Table 5 illustrates that students highly prioritize lecturers who convey learning objectives at the beginning of each lecture and assist students in planning projects. Additionally, students need lecturers who review previous material, explain the material, provide texts as references, monitor the project completion process, and assess the learning process. Furthermore, students also require time to determine the problem formulation, work on, present, evaluate, and reflect on the project completion process.

***Hybrid learning needs***

The result of this factor consisting of three statements can be seen in Table 6.

**Table 6.** *Need for hybrid learning*

No	Statements	Average	Information
1	Students need a hybrid learning concept	3,3	Just needed
2	Students need knowledge of the types of hybrid learning	3	Just needed
3	Students need steps to implement hybrid learning	4	Needed

Table 6 indicates that one statement related to the steps for implementing hybrid learning is in the needed category, while two statements related to the concept and type of hybrid learning are in the just needed categories.

***Social system needs***

The result of this factor that consisting of eight statements can be seen in Table 7.

**Table 7.** *Social system needs*

No	Statements	Average	Information
1	Lecturers motivate students at the beginning of the learning process.	4.6	Very needed
2	Lecturers build interactions with students during learning process.	4.5	Very needed
3	The lecturers act as a guides and facilitators in study group activities.	4.6	Very needed
4	Lecturers provide time for students consultations about their learning needs.	4.0	Needed
5	Lecturers give assignments according to students' needs and abilities.	4.0	Needed
6	Lecturers position students as subjects or centers of learning.	4.6	Very needed
7	Lecturers provide necessary information related to the material.	4,5	Very needed
8	Lecturers, together with students establish norms for the learning process.	4,3	Needed

Table 7 shows that students highly prioritize lecturers who motivate, interact, facilitate, and treat students as learning subjects. Additionally, students need lecturers who provide consultation time, assign tasks as needed, and lay down norms for the learning process.

***Principle of reaction needs***

The result of this factor can be seen in table 8.

**Table 8.** *Requirement principle of reaction*

No	Statements	Average	Information
1	Lecturers always respond directly to student questions related to learning material.	4.3	Needed
2	Lecturers respond by providing explanations according to student needs.	4.5	Very needed
3	Lecturers' service process is intended for all students regardless of their background.	4.1	Needed
4	Lecturers' direct students to find the knowledge concepts needed instead of using an evaluative approach.	4.0	Needed

Table 8 exposes that in the reaction principle aspect, one statement is categorized as “very needed”, namely the lecturer responds according to the student's needs. Meanwhile, three statements are in the “needed”, namely the lecturer responds directly to questions related to the material, providing the same service to all students, and the lecturer uses a directive approach instead of an evaluative one.

***Support system needs***

The result of this factors can be seen in Table 9.

**Table 9.** *Need of support system*

No	Statements	Average	Information
1	Lecturers always display their personality as educators and are always supportive.	4.0	Needed
2	Learning material is always presented in alternative Power Point form.	4.1	Needed
3	Lecturers always provide up-to-date teaching materials according to learning needs.	4,3	Needed

Table 9 reveals that three statements regarding the aspect of support system needs are in the category required by students, such as lecturers showing their personality as educators, materials in the form of power points, and preparing teaching materials using up-to-date references and in accordance with needs.



***Learning impact needs***

The result of this factor consisting of six statements can be look at in Table 10.

**Table 10.** *Learning impact needs*

No	Statements	Average	Information
1	At the end of learning, students have the ability to understand the concept of critical reading.	4.6	Very needed
2	Students have the ability to understand the purpose of critical reading.	4.5	Very needed
3	Students have the ability to understand the types of critical reading.	4.0	Needed
4	Students have the ability to answer questions related to reading texts.	4.6	Very needed
5	Students have the ability to evaluate reading texts.	4.1	Needed
6	Students have the ability to criticize reading texts.	4.3	Needed

Table 10 displays that students highly prioritize the impact of learning, such as understanding the concept and purpose of critical reading, as well as having the ability to answer questions related to reading texts. additionally, students also need to understand the types of critical reading, and the ability to evaluate and criticize reading material.

***Impact accompanying learning needs***

The result of this factor consisting of six factors can be seen in Table 11.

**Table 11.** *Need for Impact Accompanying Learning*

No	Statements	Average	Information
1	Students develop a democratic attitude after studying in groups.	4.5	Very Needed
2	Students have an open attitude towards suggestions and criticism, especially from colleagues.	4.6	Very Needed
3	Students have an attitude of accepting other people's opinions.	4.6	Very Needed
4	Students have creativity in the critical reading learning process.	4.5	Very Needed
5	Students exhibit leadership attitude in managing learning groups	4.5	Very Needed

Table 11 shows that in the impact aspect of accompaniment, students very need a democratic attitude, openness to criticism and suggestions, accepting other people's opinions, creativity in the learning process, and a leadership attitude in managing learning groups.

**Discussion**

The research endeavor sought to ascertain the needs of English students regarding a Project-Based Learning (PJBL) approach integrated with hybrid learning for critical reading.

This comprehensive investigation involved the dissemination of questionnaires to students, encompassing eleven key factors. These factors encompassed essential facets such as delineating learning objectives, identifying topic requisites, specifying teaching material prerequisites, assessing the necessity of evaluations, elucidating the need for PjBl syntax, ascertaining requirements for hybrid learning, delineating social system necessities, outlining the principle of reaction requirement, stipulating support system prerequisites, analyzing learning impact necessities, and examining the requisites for accompanying learning impact. The facet of delineating learning objectives encompasses six statements, categorically classified as both "very needed" and "needed". Commencing with the elucidation of the critical reading concept, pivotal for cultivating students' foundational understanding of reading, thereby fostering heightened reading comprehension. This assertion finds resonance in scholarly discourse, with researchers affirming that background knowledge stands as a pivotal determinant in reading comprehension, an extensively explored phenomenon over the preceding four decades (Smith et al., 2021). Further elucidation extends to statements delineating the purpose of critical reading, proficiency in answering queries, and the acumen for evaluation, alongside comprehensive understanding pertaining to comprehension and critique of English reading texts.

The factor of topic needs comprises six statements, with language skills emerging as a topic of utmost importance, classified within the "very needed" category. Conversely, the remaining statements are distributed among the "needed" and "less needed" categories. Consequently, it is evident that the topics sought by students predominantly pertain to language skills. Moving forward, the need for teaching materials encompasses three statements, all falling under the "very needed" category. These pertain to materials concerning the purpose of critical reading, articles, and concepts associated with article structure, encompassing titles, abstracts, keywords, introductions, literature reviews, research methods, results and discussions, conclusions, and references. Concurrently, three statements are categorized as "needed", focusing on materials regarding critical reading steps, types of critical reading, and critical reading methods. Subsequently, the need for assessment is underscored by its classification within the "very needed" category, with an additional two statements categorized as "needed".

The need for PjBl syntax, encompassing twelve statements, is delineated into the "very needed" and "needed" categories. Students exhibit a pronounced requirement for educators who articulate learning objectives at the onset of each session and guide them in project planning. Additionally, students necessitate instructors who revisit prior material, provide comprehensive explanations, furnish reference texts for formulating inquiries, oversee project progression, and evaluate the learning process. Furthermore, students require adequate time for formulating problem statements, engaging in project work, presenting findings, evaluating outcomes, and reflecting on the project completion process. These requirements align seamlessly with the six stages of PjBl syntax, as elucidated in scholarly works (Agustina et al., 2017; Ismail, 2022; Warr & West, 2020).

The need factor for hybrid learning, comprising three statements, is explicated to encompass both the "needed" and "just needed" classifications. A statement regarding the steps for implementing hybrid learning is deemed necessary, as the correct execution of these steps is poised to yield positive outcomes for students. This assertion finds validation

in research findings, which indicate that hybrid learning exerts a favorable influence on learning outcomes (Chen & Chiou, 2014; Kazu & Yalcin, 2022; Rorimpandey & Midun, 2021). Conversely, two statements pertaining to the concept and types of hybrid learning are situated within the "just needed" category. Consequently, the statement concerning the implementation steps of hybrid learning assumes paramount importance within this study.

The social system needs factors, comprising eight statements, can be delineated as falling into the "very needed" and "needed" categories. Students exhibit a genuine need for educators who serve as motivators, foster interaction, assume the role of facilitators in learning, prioritize student-centered approaches, and provide pertinent information related to the subject matter. Additionally, students require educators who allocate time for consultations, tailor assignments to suit individual needs, and establish norms conducive to the learning process. Moreover, the reaction factor's principle encompasses four statements, with one statement categorized as "very needed" namely, the provision of responses aligned with student needs. Furthermore, three statements are classified as "mandatory", emphasizing the direct addressing of material-related queries, uniform provision of services to all students, and the adoption of a non-evaluative, straightforward approach by instructors. Additionally, the support system needs factor, consisting of three statements, pertains to aspects essential for students' academic success. These statements fall within the "needed" category, indicating students' need for educators who embody the role of educators, utilize PowerPoint materials, and curate teaching resources incorporating contemporary references tailored to students' needs.

The learning impact factor underscores students' genuine need for the consequential effects of learning, including a comprehensive understanding of critical reading concepts, attainment of learning objectives, and proficiency in answering text-related questions. Additionally, students necessitate comprehension of various critical reading types, along with the capability to evaluate and critique reading materials effectively. Furthermore, the need for impact accompanying learning factor is categorized as "very needed", as students require a myriad of attributes to enrich their learning experiences. These include fostering a democratic attitude, receptiveness to criticism and suggestions, willingness to accept diverse viewpoints, fostering creativity in the learning process, and exhibiting leadership qualities in group management.

The findings of this study align with current trends and developments in educational research, highlighting the importance of student-centered pedagogies, technology integration, and supportive learning environments in promoting student engagement and academic success. By incorporating evidence-based practices and leveraging innovative pedagogical approaches, educators can create inclusive and meaningful learning experiences that empower students to thrive in an ever-changing world.

## **Conclusion**

The results of the distribution encompassing 11 factors to determine needs unequivocally indicate that students necessitate the incorporation of all these factors into the process of learning critical reading in English. The comprehensive list of eleven factors indispensable for effective learning comprises learning objectives, topic needs, teaching

material requirements, assessment criteria, PJBL syntax requisites, hybrid learning essentials, social system prerequisites, reaction principle necessities, support system imperatives, learning impact essentials, and impact-accompanying learning requirements. Among the 63 statements disseminated to students, it is evident that 26 statements fall under the "highly necessary" category, while 30 statements are deemed "necessary". Furthermore, three statements are categorized as "only necessary", and four statements as "less necessary". Consequently, a total of 56 statements are deemed requisite by students for implementation within the PJBL model for English critical reading through hybrid learning.

### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest.

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