Teachers' Perspectives on CLIL Implementation in Indonesian Primary Schools: Challenges and Classroom Strategies

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Abstract: This study explores teachers' perspectives on the implementation of Content and Language Integrated Learning (CLIL) in science and math classrooms at SD Al Azhar Pati, a primary school in Indonesia. While CLIL is acknowledged as a bilingual instructional strategy that enhances both language and subject knowledge, limited research has explored its implementation in non-international, resource-limited school contexts. Using a qualitative case study approach, data were collected from five teachers through structured questionnaires and semi-structured interviews via WhatsApp. Findings reveal that teachers view CLIL as effective for fostering academic vocabulary and meaningful learning. However, challenges such as language barriers, limited materials, and varied student engagement persist. Teachers employed bilingual strategies, interactive activities, and collaboration with English teachers to overcome these challenges. This study underscores the need for professional development and localized resources to strengthen CLIL practices in similar settings.

Key words: CLIL implementation, teacher perspectives, challenges, classroom strategies, Indonesian primary schools

INTRODUCTION

Content and Language Integrated Learning (CLIL) has become an increasingly relevant pedagogical approach, particularly in bilingual and multilingual education. CLIL enables students to acquire subject knowledge while simultaneously improving their language proficiency through the use of a target language, often English, in teaching academic content (Coyle & Meyer, 2021; Lasagabaster & Sierra, 2019). In Indonesia, where English is taught as a foreign language and bilingual education is gaining popularity, CLIL is viewed as a promising strategy. However, its practical implementation in local contexts, particularly in non-international schools, remains underexplored.

One such context is SD Al Azhar Pati, a private primary school in Central Java, Indonesia, that implements the Cambridge curriculum and uses CLIL to teach science and math from grades 1 to 6. Most students at the school come from middle to upper socioeconomic backgrounds and participate in additional English enrichment programs. Despite these favorable conditions, CLIL implementation at the school still presents practical challenges for teachers. These include balancing language and content, addressing the diverse proficiency levels of students, and developing suitable teaching materials. The objective of this research is to explore the

perspectives and experiences of CLIL teachers at SD Al Azhar Pati. This study seeks to answer the following research questions:

1. What are teachers' perspectives on CLIL's effectiveness in Science and Math classes?

2. What challenges do teachers encounter in CLIL implementation?

3. How do teachers address these challenges?

Focusing on these questions, the study attempts to contribute to more understanding about how teachers navigate the challenges of implementing CLIL. It is anticipated that findings of this research will help to inform the development of practicable approaches to promoting teaching and learning in the CLIL manner in Indonesian primary schools, especially in classrooms where multiple languages are used.

Although existing studies have reported both benefits and drawbacks of CLIL in European contexts (Dalton-Puffer & Smit, 2020), relatively few have focused on how primary teachers in Indonesian settings experience and navigate CLIL-related challenges. Research by Waloyo et al. (2021) and Aflahatun et al. (2022) began to examine these issues locally, but there remains a need to capture in-depth perspectives from educators working in multilingual, resource-limited contexts. This study responds to that gap by exploring teachers' lived experiences, strategies, and challenges in implementing CLIL at SD Al Azhar Pati. By highlighting practical insights from the ground, this research contributes to a more nuanced understanding of how CLIL can be adapted and sustained in Indonesian primary education

RESEARCH METHOD

This section consists of the study design, participants, instruments, data collection procedures and data analysis.

Research Design

This study employed a qualitative case study design (Kállay, 2019; Milla Lara & Casas Pedrosa, 2018) to investigate the lived experiences and teaching strategies of primary school teachers in implementing Content and Language Integrated Learning (CLIL). A qualitative approach was appropriate for gaining a deep, contextual understanding of how teachers perceive and respond to the challenges of CLIL in real educational settings. The case study method allows the researcher to explore complex phenomena within bounded systems—in this case, one particular school in Indonesia using CLIL.

Participants

The participants were five teachers at SD Al Azhar Pati, a private primary school in Central Java, Indonesia. All five were selected using purposive sampling, which is suitable for qualitative research where participants are chosen for their relevance to the research topic (Moore & Nikula, 2020; Tomlinson & Masuhara, 2021). The selected teachers had direct experience teaching science and/or math using the CLIL approach across grades 1 to 6. Three of the five teachers were selected for follow-up interviews based on their varied teaching experience, grade level taught, and openness to share detailed classroom strategies.

This sampling approach ensured that participants could provide rich, relevant data. While the small sample size may limit generalizability, the goal of this qualitative study was depth over breadth. Potential bias due to self-selection and familiarity with the researcher was minimized through maintaining reflexivity and anonymity during data analysis.

Instruments

Two main instruments were used to collect data:

1. **Structured Questionnaire**: A 7-item closed-ended questionnaire was created using Google Forms to gather general data on teachers' perceptions of CLIL, challenges faced, and strategies used. To ensure content validity, the questionnaire was reviewed by two English language education experts and revised based on their feedback regarding clarity and alignment with the research objectives.

2. **Semi-Structured Interview Guide**: Follow-up interviews were conducted using semi-structured questions designed to explore the topics in more depth, including specific classroom experiences, strategies for overcoming CLIL challenges, and reflections on effectiveness. The guide was piloted with one non-participant teacher and revised for clarity and flow. This triangulation of instruments enhances data reliability.

Data Collection Procedures

Data were collected in two phases:

First, all five participants completed the online questionnaire asynchronously.

Second, three of the five participants took part in voice-note interviews conducted via WhatsApp, lasting approximately 15 minutes each. This method was chosen for its accessibility and convenience for busy teachers.

Participants were informed about the purpose of the study, and verbal consent was obtained before data collection. Anonymity was preserved using pseudonyms (e.g., Teacher A, B, C), and participants were told they could withdraw at any time.

Data Analysis

Thematic analysis (de Graaff et al., 2019) was employed to analyze the qualitative data. The process included:

1. Transcribing interview recordings and compiling questionnaire responses.
2. Coding meaningful phrases and categorizing them based on relevance to the research questions.
3. Organizing codes into broader themes such as "perceived effectiveness," "barriers to CLIL," and "teacher strategies."
4. Reviewing and refining the themes to ensure internal coherence and accurate representation of the data.

To improve the credibility of findings, themes were cross-checked with the raw data multiple times and peer-reviewed by an academic colleague for validation.

FINDINGS AND DISCUSSION

Findings

Teachers' Perspectives on CLIL's Effectiveness

Teachers described CLIL as effective for building students' academic vocabulary and improving contextual understanding. They observed improved confidence in students' use of

English when content was linked with real-life topics. However, 60% indicated students struggled with full-English instruction, especially with scientific or abstract terminology.

Table 1. Key Findings from Questionnaires on CLIL

Aspects	Key Findings	Percentage
Effectiveness	Not all students understand material well when English is used exclusively.	60% struggle with full-English materiall
Effectiveness	Students require interactive and visual aids to engage with CLIL materials.	40.7% agree and rely on visual aids
Effectiveness	Teachers feel confident using the CLIL approach, but simplifying content is necessary.	100% confident (Agree or Strongly Agree)
Challenges	Language barriers, including specialized vocabulary in Science and Math, remain a challenge.	74.1% face language barriers
Challenges	Maintaining student engagement, especially among older students, is difficult.	59.3% lack engagement
Challenges	Limited availability of localized CLIL teaching materials.	80% need better materials
How to Overcome Challenges	Mixing English and Indonesian helps scaffold understanding for students.	92.6% agree mixing languages helps
How to Overcome Challenges	Collaborating with English teachers aids in designing effective materials.	80% agree collaboration helps
How to Overcome Challenges	Interactive methods, such as games and group activities, reduce student anxiety.	96.3% agree interactive methods help.

From the Interviews:

The interviews further elaborate on the challenges and strategies teachers use to implement CLIL:

1. Effectiveness

Teachers agreed that CLIL is effective in helping students expand their vocabulary and expose them to English in meaningful ways. However, challenges arise when students struggle to understand both the content and the language simultaneously. For example, Teacher A stated, *"Using CLIL helps students expand their vocabulary and exposes them to English in meaningful ways, but I simplify the material to make it more accessible."* Teacher D added that students often feel overwhelmed by the dual focus, which affects their ability to focus and participate actively in class.

2. Challenges

A major issue highlighted was language barriers. Teacher C noted, *"Teaching Science and Math in English is difficult due to the specialized vocabulary. Many students struggle to grasp key terms, which affects their understanding of the content."* Additionally, Teacher E expressed concerns about time constraints, saying, *"It's hard to balance teaching in English while ensuring comprehension, especially with younger students."* These challenges reflect the need for more time-efficient and linguistically accessible teaching materials.

Challenges in CLIL Implementation

The findings also reveal significant challenges faced by teachers during its implemention. These challenges, as identified in both the questionnaire and interviews, include language barriers, students engagement issues, and limited resources.

1. Language Barriers:

Teachers frequently reported that varying levels of English proficiency among students made it challenging to teach complex topics, particularly in technical subjects like Science and Math (Aflahatun et al., 2022).

Teacher C highlighted, *"Some students struggle with technical terms in Science, especially when we're covering abstract concepts like photosynthesis or energy transfer."*

This finding aligns with the questionnaire data, where 74.1% of respondents identified language barriers as a significant issue.

These findings reflect the need for bilingual strategies to support comprehension, a challenge echoed by Aflahatun et al. (2022), who noted that language barriers are a common issue in primary-level CLIL classrooms.

2. Student Engagement:

Teachers also noted challenges in maintaining student interest, particularly among older students. While younger students were more eager to participate, older students often hesitated to use English due to fear of making mistakes. Older students feared making mistakes, lowering participation (Goris et al., 2021; Lasagabaster, 2021).

Teacher B observed, *"Younger students are more eager to try speaking English, but older students often feel shy or hesitant to participate."*

These findings align with Lasagabaster & Sierra (2019), who argue that psychological barriers, such as fear of errors, can hinder active participation in CLIL settings. Addressing these barriers requires targeted strategies to foster confidence and engagement.

3. Limited Resources:

The lack of localized materials tailored to CLIL was another significant issue identified by teachers. Many relied on self-made resources, which increased their workload and limited the time available for lesson preparation. Teachers often created materials from scratch, increasing workload (Hüttner & Smit, 2021; Waloyo et al., 2021).

Teacher A emphasized, *"We often have to create our own materials because there are no ready-made resources tailored for our context."*

Most teachers responded with Strongly Agree (5) to the importance of collaborating with English teachers to design effective materials, highlighting the need for interdisciplinary teamwork. This aligns with the findings of Waloyo et al. (2021), who emphasize the critical role of resource availability in successful CLIL implementation.

These challenges underscore the importance of addressing both systemic and instructional issues to ensure the successful implementation of CLIL (Langman & Fies, 2021). The next section will discuss strategies identified by teachers to overcome these challenges.

How to Overcome Challenges

Teachers identified several strategies to address these challenges:

1. Bilingual Strategies: Mixing English and Indonesian was widely supported as an effective way to scaffold student understanding. Teacher B emphasized, "I teach in English and Bahasa Indonesia but sometimes I apply direct methods so the students will adapt well as time goes by."

2. Interactive Methods: Teachers highlighted the importance of games, group activities, and visual aids to keep students engaged and reduce anxiety. Teacher D stated, "I make sure to keep lessons simple and break them into smaller steps so the students don't feel too pressured."

3. Collaboration: Partnering with English teachers to design materials was another widely supported strategy. Teacher C shared, "Collaborating with English teachers aids in designing effective materials that are both linguistically appropriate and content-rich."

These findings indicate that while teachers recognize the effectiveness of CLIL in enhancing students' language and content learning, its implementation requires a balanced approach that combines bilingual strategies, collaborative efforts, and interactive teaching methods to address the challenges identified.

Discussion

These findings reinforce the importance of adaptable teaching strategies and localized content (Banegas, 2020). The use of translanguaging practices (Cenoz & de Zarobe, 2021) and interactive methods (Ament & Pérez-Serrano, 2021) contributed positively to engagement and comprehension. The study confirms that success in CLIL depends not only on curriculum but also on teacher preparedness and collaboration.

This study aimed to explore the implementation of Content and Language Integrated Learning (CLIL) in education, particularly at the primary and secondary school levels (Mehrani, 2020). The main findings of this study indicate that while there is recognition of CLIL's benefits in enhancing students' motivation and language skills, the primary challenges faced by teachers were limited training and inadequate resources (Morton & Llinares, 2021). These findings align with the research of Aflahatun et al. (2022), who found that while teachers had positive views on CLIL implementation, they encountered difficulties due to limited resources and inadequate training. Their study also emphasized the importance of improved teacher training to support the successful implementation of CLIL.

The study found that teacher preparation plays a significant role in ensuring the success of CLIL programs. Teachers who received targeted professional development showed greater confidence and effectiveness in implementing CLIL strategies. This resonates with findings by Ament & Pérez-Serrano (2021), who also highlighted the importance of teaching methods in fostering motivation. However, the study adds a new layer by emphasizing that teacher preparedness directly correlates with the effective application of these methods.

Furthermore, student engagement was a key theme that emerged from the findings. We observed that when students were actively involved in interactive tasks, their motivation and language learning outcomes improved significantly. This finding supports Ament & Pérez-Serrano (2021), but also provides additional evidence that student participation is crucial for the success of CLIL programs, particularly when using technology and project-based learning methods.

Language proficiency emerged as another significant factor. The findings reinforce the findings of Anderson & James (2019), who argued that higher language proficiency led to better outcomes in CLIL classrooms. In this study, we found that students with advanced language skills were more likely to succeed in both content understanding and language acquisition. This suggests that language support should be an integral part of CLIL programs, particularly for students with lower language proficiency.

Additionally, the study highlighted the critical need for curriculum adaptation in CLIL programs. Institutions that tailored their curriculum to the specific needs of students and teachers saw better implementation success (Tashmatova, 2021). This is consistent with Banegas (2020), who emphasized that curriculum adaptation was key to CLIL success. The study adds to this by showing that localized adaptations, including cultural relevance and context-specific content, can enhance both content and language learning in CLIL.

In terms of multilingualism, this findings align with Breidbach & Viebrock (2019), who found that multilingual approaches in CLIL classrooms enriched the learning experience but required effective management. This study further confirms that the use of diverse languages in the classroom fosters a more inclusive learning environment, benefiting both language acquisition and cognitive development (Pittas & Tompkins, 2024).

In conclusion, Coyle & Meyer (2021) introduced the concept of pluriliteracies, which promotes deeper understanding across various literacies through CLIL. Their approach showed that deeper conceptual understanding could be achieved through CLIL, a finding that was also evident in this research, where students not only improved their foreign language skills but also gained a better understanding of the content being taught (Pavón Vázquez & Ellison, 2020).

Comparison with Previous Research

Building on the discussion above, this study also compares its findings with those of previous research in the field of CLIL. The comparison reveals several similarities and differences in the implementation of CLIL across different educational contexts:

1. Teacher Training and Resources

As noted in the studies of Aflahatun et al. (2022) and Anggraini et al. (2023), a recurring challenge for CLIL implementation is the limited availability of resources and teacher training. Both studies emphasize the importance of adequate professional development for teachers, which aligns with this own findings. Teachers in this study also expressed the need for more targeted training to integrate content and language effectively.

2. Motivation and Engagement

Research by Ament & Pérez-Serrano (2021) and Dalton-Puffer & Smit (2020) suggests that motivation is a critical factor in the success of CLIL, which was confirmed in this findings. However, the degree of student engagement also appears to vary across different contexts. The study shows that interactive teaching methods, as emphasized by Ament & Pérez-Serrano (2021), are particularly effective in enhancing student participation in CLIL lessons, echoing the importance of dynamic teaching practices for increasing motivation.

3. Linguistic Proficiency and CLIL Outcomes

The relationship between language proficiency and CLIL success, discussed by Anderson & James (2019), also parallels the findings. We observed that higher proficiency in both the target language and the content being taught contributed to more successful learning outcomes. The results were consistent with those of Banegas (2020), who highlighted the importance of teacher proficiency and the integration of language skills in content learning.

4. Curriculum Adaptation

Banegas (2020) and Eurico & Serra (2020) emphasize the need for curriculum adaptation to suit local contexts, a point that is reflect in this study. The findings suggest that CLIL implementation is more effective when the curriculum is tailored to meet the specific needs of the students and teachers involved. This is an essential consideration for successful CLIL programs, as indicated by these studies.

5. Multilingual Approaches

Breidbach & Viebrock (2019) and Cenoz & de Zarobe (2021) discuss how multilingualism in CLIL classrooms enhances students' learning experiences, but also require careful management. The study aligns with this, noting that while linguistic diversity can present challenges, it also offers valuable opportunities for enriched learning. When properly managed, multilingual strategies support both content acquisition and language development.

In summary, the findings of this study reinforce the importance of teacher training, resource availability, and curriculum adaptation in the successful implementation of CLIL. These insights are consistent with the conclusions drawn in previous research, further supporting the idea that CLIL has the potential to enhance both language proficiency and content knowledge, but only when these challenges are addressed effectively.

CONCLUSION

This study explored primary teachers' perspectives on the implementation of Content and Language Integrated Learning (CLIL) in an Indonesian non-international school. The findings revealed that while CLIL is perceived as an effective approach to integrate language and subject learning, teachers still face notable challenges such as linguistic complexity, limited access to suitable materials, and varying levels of student motivation. To address these issues, teachers employed bilingual instruction, collaborative lesson planning, and interactive strategies that promote engagement and comprehension.

These findings highlight the need for ongoing professional development programs tailored to CLIL implementation, the development of locally adapted and context-sensitive teaching resources, and structured collaboration between content subject teachers and English teachers. By understanding the practical experiences and adaptive strategies of teachers, this study contributes valuable insights into how CLIL can be more effectively implemented in similar educational contexts. Future research is encouraged to examine the long-term impact of CLIL on student outcomes and to explore how its implementation can be scaled across diverse Indonesian school settings.

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