Teachers' Classroom Roles under CLIL: A Ten-Year Systematic Review

Jiajie Zhang[1], Hanita Hanim Ismail[1], Nur Ainil Sulaiman[1]

[1] Faculty of Education, Universiti Kebangsaan Malaysia, Bangi 43600, Malaysia

Corresponding author: Hanita Hanim Ismail, Faculty of Education, Universiti Kebangsaan Malaysia, Bangi 43600, Malaysia. E-mail: hanitahanim@ukm.edu.my

Abstract

Content and Language Integrated Learning (CLIL) has garnered global popularity in foreign language education, particularly in teaching English. While there is a plethora of research on the general perceptions of CLIL teachers, the examination of their classroom roles remains largely unexplored. This article reviewed 31 studies from 2014 to 2023 using the PRISMA framework to explore: (1) CLIL teachers' perceptions on their classroom roles in existing studies; (2) factors influencing CLIL teachers' classroom roles; (3) ideal roles for CLIL teachers according to the literature; (4) strategies to help improve CLIL teachers' roles in the classroom. Findings reveal that the majority of CLIL teachers perceived the integration of language and content teaching as central to their classroom role, although some placed greater emphasis on language instruction than content teaching, and vice versa. Internal factors like teachers' understanding of CLIL and external factors such as students' level of proficiency in the target language influence teachers' roles. CLIL teachers should be also tasked with cultivating students' cognitive skills and contemplating the utilization of the first language when deemed necessary for the success of CLIL. Several strategies were identified through the review to enhance the roles of CLIL teachers, including training, professional development, and support from educational authorities. Future empirical research is needed to validate the discussed strategies for the development of CLIL teachers and to focus on optimizing the balance between the use of target languages, such as English, and L1 in CLIL-based classrooms to enhance outcomes in foreign language education.

Keywords: Content and Language Integrated Learning, English language teaching, teachers' perceptions, teachers' roles, systematic review

1. Introduction

Content and Language Integrated Learning (CLIL) is developed from Content-based Instruction (CBI) in European countries (Cenoz, 2015). CBI advocates for teachers to utilize content knowledge as a tool for imparting linguistic skills to students (Sariani et al., 2022), therefore emphasizing language instruction as the principal objective in the CBI-based classroom (Brown & Bradford, 2017). In contrast to CBI, CLIL proves advantageous in enabling learners to concurrently acquire proficiency in both content knowledge and language skills (Barra et al., 2018; Coyle et al., 2010; Lyster & de Zarobe, 2018). Numerous studies (e.g., Banegas, 2020; Coyle et al., 2010; Fajardo-Dack et al., 2020; Genesee & Hamayan, 2016) have explored the definition of CLIL. While variations exist in the conceptualization of CLIL across these studies, the commonality can be identified: CLIL is an educational approach focusing on two tasks involving the use of an additional language for the instruction of language acquisition and content learning. Beyond the instruction of language and content, students are expected to develop additional skills (e.g., problem-solving skills, critical thinking ability, etc.) in CLIL-based classrooms (Coyle et al., 2010). As CLIL gains popularity worldwide, it is recognized for its potential to enhance English language learning outcomes, contributing to the development of bilingual individuals with strong academic and cognitive abilities (Banegas, 2020; Genesee & Hamayan, 2016). This study focuses on CLIL teachers' classroom roles, shedding light on how they can effectively support the teaching and learning of a foreign language in CLIL-based classrooms, offering a promising pathway for improved linguistic and academic achievement in diverse learning contexts.

According to Coyle (2002) and Fajardo-Dack et al. (2020), teachers are deemed to play a pivotal role in the successful implementation of CLIL, which is strongly tied to teachers' perceptions of classroom roles (Barrios & Milla Lara, 2020; Hussain, 2022; Lyster & Tedick, 2014; Zhu et al., 2021). In the CLIL-based classroom, teachers' roles can be categorized into three groups as identified in the existing literature (e.g., Banegas, 2020; Cammarata, 2016; Villabona & Cenoz, 2022): content-oriented teachers, language-oriented teachers, and compound teachers. On one hand, content-oriented teachers prioritize content teaching, while language-focused teachers place greater emphasis on language instruction. CLIL characterized by a one-sided emphasis on either language or content instruction is referred to as the "weak" or "soft" version (Ohmori, 2014), resulting in an unbalanced distribution in the teaching of language and content. On the other hand, teachers who perfectly integrate language teaching and content teaching in the classroom are recognized as compound teachers, a role identified by Zhu et al. (2021) as the optimum model within the CLIL context. This assertion aligns with the fundamental principle of CLIL, so as to facilitate students' competence in both linguistic and subject matter domains (Coyle, 2002). In the discourse on the classroom roles of CLIL teachers, the significance of their perceptions is deemed essential. (Campillo et al., 2019; Zhu et al., 2021).

Teachers' perceptions are described as their self-assured views on teaching (Borg, 2003), comprising a group of complex variables such as

attitudes, ideas, experiences, and expectations in educational and teaching activities (Li, 2021; Skinnari & Bovellan, 2016), which are dynamic and situational on the specific context (Dafouz et al., 2016). Clear perceptions of CLIL are essential for addressing students' learning requirements, aligning teachers' endeavors, developing effective practices (Campillo et al., 2019; Kung, 2018), and conceptualizing teachers' role within this approach (Villabona & Cenoz, 2022). Based on previous research (e.g., Karabassova, 2018; Kung, 2018; Lo, 2020; Zhu et al., 2021), the distinct perceptions of CLIL teachers regarding their roles are critical to facilitate successful teaching and learning processes that enhance classroom quality. Consequently, when examining CLIL teachers, prioritizing an exploration of their perceptions on classroom roles represents an initial step.

Given that teachers' roles in the classroom are essential for the successful implementation of CLIL, this article undertook an analysis of relevant literature from the past decade. Below are the research questions:

1. What are CLIL teachers' perceptions on their classroom roles in existing studies?
2. What factors influence CLIL teachers' classroom roles?
3. What are the ideal roles for CLIL teachers according to the literature?
4. What strategies can help improve CLIL teachers' roles in the classroom?

2. Method

This systematic review followed the flow diagram of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), which was conducted by searching for articles and other literature published between 2014 and 2023 that focus on CLIL teachers' perceptions of classroom roles. The search was carried out across four reputable databases: Web of Science (WoS), the Education Resources Information Center (ERIC), Scopus, and Google Scholar. For this review, four criteria for inclusion and exclusion were established, as it is explained in Section 2.1. Initially, to uphold the scholarly integrity of the literature, publications lacking peer review were excluded. Subsequently, only empirical studies, known for their reliability due to evidence derived from data, were considered. The third criterion encompasses publications related to CLIL, taking into account that some methodologies such as CBI and English-Medium Instruction (EMI) share similarities with CLIL and are often conflated with it. Additionally, publications that do not focus on classroom roles in relation to teachers' perceptions, a critical aspect of this study, are deemed ineligible for inclusion. Based on the Inclusion and Exclusion criteria, articles in the four databases underwent a meticulous evaluation from four steps: Identification, Screening, Eligibility, and Inclusion (see Figure 1).
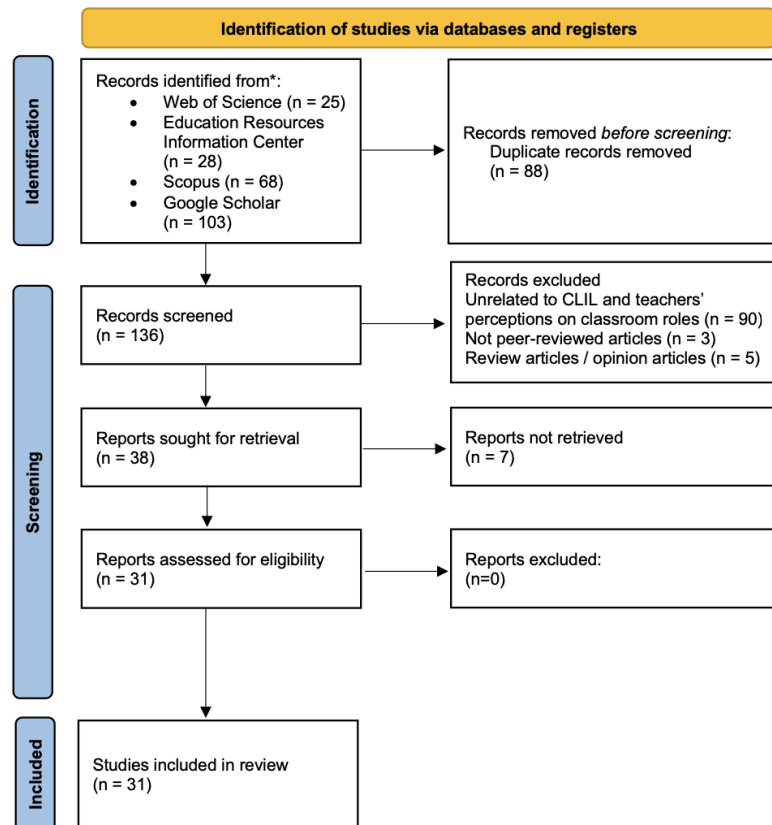

Figure 1. Flow diagram of the research

2.1 Identification

As delineated in the PRISMA 2020 flow diagram, the initial stage is Identification. This phase encompasses conducting a literature search across four databases (WoS, ERIC, Scopus, and Google Scholar) to identify synonyms and related concepts of the keywords: Content and Language Integrated Learning, teachers' perceptions, and classroom roles. These keywords collectively formed the search string used in each database.

For one thing, the search strategy employed keywords (("CLIL" OR "Content and Language Integrated Learning") AND ("teacher's perceptions" OR "teacher's views" OR "practitioner's perceptions" OR "practitioner's views") AND ("classroom roles" OR "roles")) across WoS, ERIC, and Scopus databases. Subsequently, this search yielded 25 publications in WoS, 28 publications in ERIC, and 68 publications in Scopus. For another, Google Scholar is recognized as a search engine that encompasses both academic articles and grey literature, which is widely recognized as a valuable complement to traditional search methods (Haddaway et al., 2015). Consequently, authors employed these specific keywords in title searches to refine and focus the search outcomes, and 103 articles were identified in Google Scholar. The search strings utilized for each database are shown in Table 1. Overall, the record of identified articles was 224, based on which authors proceeded the step of screening.

Table 1. Search string used in each database

Database	Search string
WoS	(("CLIL" OR "Content and Language Integrated Learning") AND ("teacher's perceptions" OR "teacher's views" OR "practitioner's perceptions" OR "practitioner's views") AND ("classroom roles" OR "roles"))
ERIC	(("CLIL" OR "Content and Language Integrated Learning") AND ("teacher's perceptions" OR "teacher's views" OR "practitioner's perceptions" OR "practitioner's views") AND ("classroom roles" OR "roles"))
Scopus	(("CLIL" OR "Content and Language Integrated Learning") AND ("teacher's perceptions" OR "teacher's views" OR "practitioner's perceptions" OR "practitioner's views") AND ("classroom roles" OR "roles"))
Google Scholar	Allintitle-"CLIL" and "teachers' perceptions" and "classroom roles"

2.2 Screening

The authors identified a total of 224 articles across WoS, ERIC, Scopus, and Google Scholar, which underwent rigorous examination to assess their alignment with the study criteria. Table 2 presents the Inclusion and Exclusion criteria that guided the publication screening process. Out of the initial 224 publications, after excluding 88 duplicates, 136 articles progressed to the subsequent stage of screening. The authors screened the 136 records by title, abstract and keywords. Following the criteria previously specified (Section 2 Method), 90 documents were excluded due to their lack of emphasis on CLIL and teachers' perceptions of classroom roles. Besides, 3 articles were excluded because they did not undergo peer review, while an additional five records were eliminated as they were literature reviews or opinion articles rather than empirical research studies. Thus, 38 articles remained for retrieval.

Table 2. Inclusion/exclusion criteria

Inclusion criteria	Exclusion criteria
Peer-reviewed	Not peer-reviewed
Empirical studies	Literature review or opinion articles
The research focuses on CLIL	The research does not focus on CLIL
Teachers' perceptions are on classroom roles	Teachers' perceptions are not on classroom roles

2.3 Eligibility

A total of 38 articles were included for the eligibility assessment stage. However, the full text of 7 publications could not be found in the databases, resulting in 31 reports being ultimately evaluated for eligibility. Given that the quality of included studies is widely recognized as paramount due to its direct influence on the reliability and validity of the review's findings and conclusions (Pollock & Berge, 2018), the remaining records (n = 31) underwent assessment using a quality evaluation tool as described by Bond et al. (2021). This evaluation focused on determining if the studies addressed the research questions and if the evidence presented was deemed reliable based on the research methods, findings, and conclusions outlined in the respective articles. Subsequently, all 31 records met the eligibility criteria for the review and progressed to the stage of Included.

2.4 Included

Through the previous steps, 31 publications were left for the study, which provided information and evidence on the role perceptions of teachers in CLIL-based classrooms, thus meeting the criteria (see Table 2) for subsequent review. These records contain different types of publications, including 25 journal articles, 3 dissertations, and 3 book chapters.

2.5 Data Analysis

In this stage, 31 articles were systematically identified and recorded through NVivo which allows for the creation of detailed coding frameworks to help categorize and analyze key information from the included articles (Alyahmadi & Abri, 2013). According to Newman and Gough (2020), after selecting eligible articles, it is necessary to code them using technology that facilitates information storage and analysis. Specifically, there are three aspects considered when coding the articles: (1) the details of the research participants and contexts, (2) how the study was conducted, and (3) the results of the study (Newman & Gough, 2020) to answer review questions effectively. Appendix A offers an overview of the 31 selected articles, specifying the year and country of publication, the aims, the participants and findings.

3. Results and Discussion

The aim of this systematic literature review is to examine the perceptions of CLIL teachers regarding their classroom roles as depicted in studies conducted over the past decade. This review also seeks to collate the factors that have influenced these perceptions, delve into the conceptualization of ideal roles for CLIL teachers, and identify strategies aimed at enhancing the effectiveness of teachers' roles in the CLIL-based classroom.

3.1 CLIL Teachers' Perceptions on Classroom Roles

RQ1: What are CLIL teachers' perceptions on their classroom roles in existing studies?

The review results of CLIL teachers' perceptions on their roles in the past decade showed that teachers had different understandings of their classroom roles: (1) equal roles of teaching language and teaching content, (2) integration of language teaching and content teaching with different priority, and (3) cultivating students' comprehensive abilities as well as teaching language and content.

3.1.1 Perceptions on the Equal Roles of Teaching Language and Teaching Content

Some teachers had a brief understanding of CLIL, consequently this enabled them to concurrently focus on content and language instruction within the CLIL-based classroom. Specifically, teachers surveyed in studies highlighted that in CLIL-based classrooms, practitioners were expected to teach content in the fluent target language (e.g., Budiarta et al., 2020; Kim & Lee, 2020; Kung, 2018; McDougald, 2015; McDougald & Pissarillo, 2020; Pham & Unaldi, 2022; Targamadze & Kriauciuniene, 2016), typically centering on specific subjects, units, or topics. Additionally, the importance of establishing teaching objectives encompassing both content and language facets was emphasized (Segura, 2023). In other words, in the CLIL context, the acquisition of language skills and subject matter knowledge held equal significance, thereby placing upon educators a same responsibility to impart both aspects of learning (Thuy, 2016). Overall, regarding the roles within CLIL classrooms, teachers in 9 of the reviewed articles mentioned the equal importance of content and language teaching.

3.1.2 Perceptions on the Different Priorities in the CLIL-Based Classroom

In the study of Zhu et al. (2021), teachers presented slightly different perspectives. They first declared that language teaching and content teaching do need to be integrated in CLIL classrooms, but with different focuses. Different focuses in CLIL-based classrooms, explained as language-teaching priority or content-teaching priority (Zhu et al., 2021), have been mentioned in other 13 publications among the 31 reviewed articles. In some studies, teachers under CLIL demonstrated a greater emphasis on language instruction over content delivery (van Kampen et al., 2017), dedicated attention to the teaching of sentence structure and expressions in the target language (Torres-Rincón & Cuesta-Medina, 2019), and emphasized the learning of language skills (Kim & Lee, 2020). Correspondingly, some studies (e.g., Bellido & Herrero, 2021; Bovellan, 2014; Maximova, 2020) suggested that in the view of some teachers, content teaching was the primary goal in CLIL. Besides, teachers involved in the research of Ocaña Peinado (2020) claimed that content took precedence over language. When it came to the teaching focus in the classroom, some teachers emphasized the content of the subject, while neglecting the learning of language skills (Pham & Unaldi, 2022). They believed that language learning in CLIL was an accidental acquisition in the process of learning content (Gierlinger et al., 2017; Kim & Lee, 2020), which was a by-product of content teaching (Bovellan, 2014). What is worse, some surveys showed that the understanding of language roles and the concern on its teaching have been severely overlooked by teachers. In some CLIL classrooms, the use of the target language was seen by teachers as a barrier, especially for their poor pronunciation (Kewara, 2017; Nguyen, 2019) and speaking skills (Kung, 2018). Due to their limited proficiency in the target language, only content was delivered according to the basic curriculum requirements without designing complex and creative lessons in the target language (Kung, 2018). Overall, as our results show, most teachers under CLIL had different priorities on content teaching and language teaching.

3.1.3 Perceptions on Cultivating Students' Comprehensive Abilities

It is noteworthy that cultivating students' cognitive skills was also perceived as a task for CLIL teachers (Coyle et al., 2010). In the study of Pham and Unaldi (2022), half of the teacher participants mentioned that their focus was also on developing students' broader abilities as well as teaching content and language. In addition, a teacher participant from the research of Kim and Lee (2020) specifically stressed her emphasis and training on students' comprehension skills. Cognitive skills are essential for cultivating students in the CLIL classroom to become well-rounded talents (Coyle et al., 2010). However, these skills were scarcely addressed by practitioners, with only two out of 31 reviewed articles making mention of them.

In conclusion, teachers in 18 publications in this review owned relatively proper perceptions on their roles in CLIL-based classrooms: in addition to teaching language and content, it is imperative to emphasize the training of students' cognitive skills. On the other hand, three studies (e.g., McDougald, 2015; Ocaña Peinado, 2020; Thuy, 2016) revealed instances where teachers struggled to adhere closely to the CLIL framework in their instructional practices. Additionally, Torres-Rincón and Cuesta-Medina's (2019) study found that teachers lacked the knowledge required for effective implementation of CLIL methodologies. Plus, although teachers expressed to focus on the dual goals of CLIL in studies, in an actual CLIL classroom, some might inadvertently neglect one of them and lose the required balance (Pham & Unaldi, 2022) or acknowledged the difficulty of managing this dual-focus task (Oattes et al., 2018). The factors contributing to these occurrences will be elaborated upon in the subsequent section.

3.2 Factors Influencing CLIL Teachers' Classroom Roles

RQ2: What factors influence teachers' perceptions on classroom roles?

As previously mentioned, teachers had different views on classroom roles when implementing CLIL, with the variance in this pedagogical approach attributable to a range of internal and external factors. Internal factors mainly encompass the teacher's level of CLIL-understanding, the type of teachers, and the teacher's abilities. For external factors, it involved multiple aspects, with students' language proficiency and the school's management emerging as the most frequently cited influences.

3.2.1 The Teacher's Level of CLIL-Understanding

When teachers lacked a comprehensive understanding of CLIL, they encountered challenges in accurately defining their roles in the classroom (Hashmi, 2019; McDougald, 2015), and were confused about the utilization of the target language and the first language (L1) in the classroom (Budiarta et al., 2020). According to other studies (e.g., McDougald, 2015; Oca ña Peinado, 2020; Thuy, 2016), while some teachers knew the basic definition of CLIL, they struggled to proficiently execute CLIL in the classroom without a thorough grasp of other requirements of CLIL, such as cultivating students' cognitive skills. In other words, the extent of teachers' understanding of CLIL is directly proportional to its implementation effectiveness.

3.2.2 The Type of Teachers

The subsequent factor is the type of teachers. The teacher participants in the research on exploring CLIL teachers' perceptions fit into one of the following two types: (1) content teachers and (2) language teachers. Content teachers were defined as practitioners teaching non-linguistic subjects within a specialized disciplinary domain, such as maths, history and so on (e.g., Campillo et al., 2019; Gierlinger et al., 2017; Kewara, 2017; V ázquez et al., 2020). The academic background of language teachers, on the other hand, typically involved the study of a specific language and the basic skills required for its effective use (e.g., Kim & Lee, 2020; Oca ña Peinado, 2020; Torres-Rinc ón & Cuesta-Medina, 2019; Zhu et al., 2021). The type of teachers was shaped by their disciplinary backgrounds and educational experience, leading them to unconsciously prioritize either content or language teaching when implementing CLIL (e.g., Campillo et al., 2019; Gierlinger et al., 2017; Gülşen & Dikilitaş, 2023; Kewara, 2017; Nhac, 2023; van Kampen et al., 2017; V ázquez et al., 2020). As a result, some teachers experienced confusion regarding their professional identities in the CLIL-based classroom (e.g., Oattes et al., 2018; Szczesniak & Luna, 2022), leading to a disruption in maintaining a balanced dual focus.

3.2.3 The Teacher's Abilities

The discussion on the influence of teacher's insufficient abilities on CLIL implementation mainly revealed in (1) their deficiencies in foreign language teaching and challenges in teaching content fluently in the target language (e.g., Fielden Burns & Mart ñez Agudo, 2023; Segura, 2023; Szczesniak & Luna, 2022; Thuy, 2016; V ázquez et al., 2020); (2) their lack of disciplinary knowledge in content, especially in subjects such as mathematics and science (e.g., Gülşen & Dikilitaş, 2023; Kim & Lee, 2019; Nhac, 2023); (3) their inadequacies in efficiently designing materials for use in the CLIL-based classroom within constrained timeframes (e.g., McDougald, 2015; McDougald & Pissarello, 2020; Nguyen, 2019; Nhac, 2023; Segura, 2023; Szczesniak & Luna, 2022; Yavuz et al., 2020), directly impacting student learning outcomes and classroom efficacy (Zhu et al., 2021). In general, the role of teachers to effectively carry out dual tasks required by CLIL in the classroom cannot be guaranteed when they exhibit some deficiencies.

3.2.4 The Language Proficiency of Students

The language proficiency of students in the target language was essential in the CLIL-based classrooms, determining their ability to acquire content knowledge when teachers used the target language for instruction (Budiarta et al., 2020; Yavuz et al., 2020). Numerous reviewed studies in this paper (e.g., Maximova, 2020; McClintic, 2022; Oattes et al., 2018; Pham & Unaldi, 2022; Thuy, 2016; Yavuz et al., 2020; Zhu et al., 2021) indicated that students faced challenges in adapting to the learning in CLIL-based classroom when their language skills were uneven or insufficient. To be specific, inadequate proficiency in the target language was likely to result in further learning challenges for students (Campillo et al., 2019). Consequently, this can lead to increased time devoted to content study (Kung, 2018) and the emergence of communication barriers with teachers (Maximova, 2020; Segura, 2023). Considering this situation, in order to ensure students' acquisition of knowledge, teachers tended to allocate a significant portion of class time to teaching language (e.g., Oattes et al., 2018), use students' native language for teaching (e.g., Nguyen, 2019; Oattes et al., 2018; Thuy, 2016), or deliberately ignore language teaching to focus more on content delivery (e.g., Zhu et al., 2021). Overall, all of these facts contributed to the ineffectiveness of the teacher's dual role required by CLIL.

3.2.5 The School Management

On a school-wide level, some studies have indicated that educational institutions failed to provide adequate support for the successful implementation of CLIL in the classroom. Specifically, challenges included the absence of comprehensive and practical CLIL resources (e.g., Maximova, 2020; Thuy, 2016), insufficient emphasis on teacher training and professional development (e.g., Kung, 2018; Maximova, 2020; Pham & Unaldi, 2022; Szczesniak & Luna, 2022; Thuy, 2016), a lack of active promotion of collaboration between content teacher and language teacher on campus (e.g., Oca ña Peinado, 2020; Pham & Unaldi, 2022; Szczesniak & Luna, 2022), and a deficiency in implementing timely and effective measures to promote teachers' working motivation and engagement (e.g., Szczesniak & Luna, 2022; Yavuz et al., 2020). In the study of Bellido and Herrero (2021), the viewpoint of schools encouraging teachers to organize CLIL-based classrooms was mentioned. However, in classrooms teaching subjects such as mathematics, surveyed teachers indicated that language

instruction should not occur (e.g., Bellido & Herrero, 2021; Maximova, 2020). They cited that students faced challenges in these subjects which are more cognitively demanding (Bellido & Herrero, 2021), which contributed to a lack of confidence among teachers in teaching language despite school requirements for CLIL-based classrooms (Maximova, 2020).

In summary, in this review, various factors from different aspects have been found, which impacted CLIL teachers' perceptions of their roles in the CLIL-based classroom. Internal factors such as teachers' understanding level of CLIL, their professional backgrounds, and pedagogical competencies were identified as key determinants. Additionally, external factors encompassed students' language proficiency levels, and the support and management provided by the school. Subsequently, the forthcoming section will present the roles that CLIL teachers should possess, derived from the findings of the 31 empirical research publications.

3.3 The Ideal Roles for Teachers in the CLIL-Based Classroom

RQ3: What are the ideal roles for teachers in the CLIL-based classroom according to the literature?

Teachers' ideal roles to achieve the effective implementation of CLIL are obtained in the literature. Two aspects need to be paid attention to.

3.3.1 Focus on Content and Language Teaching as well as Cultivating Students' Cognitive Skills

For the successful implementation of CLIL, educators must devote focus to both content delivery and language instruction, while concurrently cultivating students' cognitive abilities. Scholars have posited the necessity for CLIL teachers to adhere to the principles and framework of this approach, embodying dual roles as both language and content instructors in the classroom (e.g., Budiarta et al., 2020; Oattes et al., 2018; Pham & Unaldi, 2022; Szczesniak & Luna, 2022; Thuy, 2016; Yavuz et al., 2020; Zhu et al., 2021). Teachers under CLIL are expected to facilitate the integration of content and language teaching in a natural and dynamic manner (Skinnari & Bovellan, 2016), while also achieving a balance between the two domains (Ocaña Peinado, 2020). Additionally, some researchers (e.g., Budiarta et al., 2020; Torres-Rincón & Cuesta-Medina, 2019) have highlighted that the role of CLIL teachers in nurturing students' comprehensive abilities as a mentor and facilitator (Torres-Rincón & Cuesta-Medina, 2019), encompassing the development of collaborative ability, critical thinking skills, problem-solving ability, and other cognitive capacities (Coyle et al., 2010).

3.3.2 The Discussion on the Use of First Language

It is imperative to emphasize that perceptions of teachers regarding the reasonable use of L1 in CLIL-based classrooms has gained support from various studies (e.g., Gülşen & Dikilitaş, 2023; Kim & Lee, 2020; Oattes et al., 2018). The use of L1 has been deemed acceptable in situations where either the teacher or students lacked sufficient proficiency in the target language (Gülşen & Dikilitaş, 2023; Oattes et al., 2018; Thuy, 2016). Thus, fostering the coexistence of L1 and the target language through translanguaging practice (Liu & Lin, 2021) has been recognized as an effective strategy for enhancing the efficacy of CLIL (Kim & Lee, 2020; Oattes et al., 2018). In addition, the study of Kung (2018) proposed that in the context of CLIL, where students' mother tongue proficiency was not fully established, the appropriate use of the native language is acceptable to address the oversight of students' first language in the classroom.

To sum up, the ideal roles of CLIL teachers in the classroom need to focus on delivering content and language instruction while cultivating students' cognitive skills for developing their well-rounded abilities. Plus, teachers can judiciously use L1 to impart content in instances where effective communication in the target language is unattainable. As claimed by Hu (2022), it is essential for CLIL teachers to be aware of how to encourage and standardize cross-language practices for various instructional objectives in alignment with evolving classroom requirements. In order to achieve the ideal roles of CLIL teachers, some strategies are mentioned in studies, as described in the following section.

3.4 Strategies Helping Improve CLIL Teachers' Roles in the Classroom

RQ4: What strategies can help improve CLIL teachers' roles in the classroom?

Due to a wide variety of internal and external factors, the majority of practitioners struggled to fulfill the ideal roles required by CLIL. In light of this challenge, researchers advocated for the enhancement of teachers' classroom roles through various strategies.

3.4.1 Teacher Training

Numerous studies (e.g., Bellido & Herrero, 2021; Gierlinger et al., 2017; Gülşen & Dikilitaş, 2023; Hashmi, 2019; Kung, 2018; Maximova, 2020; McClintic, 2022; Nguyen, 2019) emphasized the importance of teacher training, typically administered by schools or local governments. Researchers claimed that teacher training was beneficial for teachers at both the pre- and in-service stages (San Isidro & Lasagabaster, 2019; van Kampen et al., 2017), enabling them to deepen their understanding of CLIL (Thuy, 2016; Yavuz et al., 2020) and foster accurate formulation or reshaping of their perceptions on classroom roles (Szczesniak & Luna, 2022; Zhu et al., 2021). Specifically, it can empower teachers to comprehend the integration of content teaching and language teaching in the classroom (Skinnari & Bovellan, 2016; Yavuz et al., 2020).

Besides, it can serve as a platform for teachers with limited language proficiency to acquire language usage skills (Skinnari & Bovellan, 2016; Szczesniak & Luna, 2022; Targamadze & Kriauciuniene, 2016) and develop expertise in conducting classes in the target language (Nhac, 2023; Szczesniak & Luna, 2022; Vázquez et al., 2020). Correspondingly, some courses or models pertaining to content and subject-specific pedagogical themes (McDougald, 2015; Ocaña Peinado, 2020; van Kampen et al., 2017; Vázquez et al., 2020), along with frameworks and methods for connecting them with CLIL, must also be included in teacher training (Skinnari & Bovellan, 2016; Thuy, 2016; van Kampen et al., 2017).

Furthermore, the training required for CLIL teachers should be tailored towards enhancing specialized competencies, such as communication skills, materials design skills (McDougald & Pissarello, 2020), lesson planning, and the implementation of pedagogical methodologies (Thuy, 2016) rather than solely concentrating on the foundational CLIL knowledge (Fielden Burns & Mart ñez Agudo, 2023; Skinnari & Bovellan, 2016) or language proficiency for teaching content (Fielden Burns & Mart ñez Agudo, 2023; V ázquez et al., 2020). It is imperative to stress that training in teaching practices should focus on practicality, as evidenced by Ibrahim et al. (2023), where teachers highlighted the importance of practical training methods such as group work, guidance, and exemplars.

3.4.2 Professional Development

The significance of regular and continuous professional development for teachers cannot be ignored (Bellido & Herrero, 2021; Kim & Lee, 2020; Maximova, 2020; Pham & Unaldi, 2022), as it plays a vital role in solidifying and advancing the roles of CLIL teachers in the classroom. For instance, researchers have advocated for governmental and institutional intervention to provide teachers with enhanced resources and tools aimed at improving the educational standards in CLIL-based classrooms (Campillo et al., 2019; Skinnari & Bovellan, 2016). These provisions encompass effective and appropriate teaching materials (Kewara, 2017; Oca ña Peinado, 2020; Segura, 2023), comprehensive CLIL implementation guidelines or supportive measures (Nguyen, 2019; Segura, 2023; Torres-Rinc ón & Cuesta-Medina, 2019; V ázquez et al., 2020), routine assessment of teachers' language proficiency and instructional competencies (Skinnari & Bovellan, 2016), evaluation of teaching methods (Maximova, 2020; McDougald & Pissarello, 2020), and practical assistance in curriculum design and pedagogical adjustments (Kewara, 2017; Kim & Lee, 2020). Continuous professional development should consider factors such as teacher satisfaction, qualifications, and professional background, as indicated by (Omar et al., 2022). Through employing the aforementioned methods, CLIL teachers can consistently maintain and develop their effective classroom roles, thereby securing the efficacy of CLIL practices.

3.4.3 Collaboration between Subject Teachers and Language Teachers

In instances where teachers encountered challenges in concurrently teaching language and content, research (e.g., Budiarta et al., 2020; Kim & Lee, 2020; McDougald & Pissarello, 2020; Nhac, 2023) suggested that promoting collaboration between subject-area instructors and language specialists proves to be a viable solution. As proposed by San Isidro and Lasagabaster (2019), collaborative curriculum planning and co-teaching in a shared classroom setting serve as the foundation for the successful implementation of CLIL. When subject-area instructors face difficulties in delivering lessons fluently in the target language, the involvement of language assistants emerged as a crucial and effective measure (Campillo et al., 2019) in ensuring the success of CLIL (Thuy, 2016). Moreover, in McDougald's (2015) study, a substantial number of language teachers endorsed the idea of collaborating with subject-area teachers. In essence, despite the presence of multiple teachers in CLIL-based classrooms, practitioners can collaborate harmoniously to complete the dual instructional requirements of CLIL, provided that classroom efficiency and collaborative quality are maintained.

3.4.4 Other Strategies

In addition to the aforementioned aspects, some other strategies were mentioned to improve the roles of CLIL practitioners. First, it was suggested that teachers engage in rigorous self-study to actively enhance their abilities (Maximova, 2020). Also, schools were advised to implement initiatives to motivate CLIL teachers. These initiatives could include involving teachers in the design of CLIL courses and related teaching materials (Kim & Lee, 2020) and fostering professional communities to promote collaboration among teachers (McDougald & Pissarello, 2020). Such efforts were essential for establishing a CLIL culture in schools and across the country, providing channels (e.g., teacher networks, workshops, etc.) for the exchange of teaching experiences in CLIL implementation (Oca ña Peinado, 2020). Meanwhile, support and collaboration of students and colleagues (McClintic, 2022; Segura, 2023), as well as positive parental attitudes towards CLIL-based classrooms (Targamadze & Kriauciuniene, 2016), play a critical role in the successful implementation of CLIL. Additionally, expectations from policy-makers, educational institutions, and school management (McDougald & Pissarello, 2020; Nguyen, 2019; Pham & Unaldi, 2022; van Kampen et al., 2017), along with the development opportunities and policies they provide (McDougald, 2015), all of which have been recognized as valuable components in fostering a supportive CLIL environment. The support of these key stakeholders can empower teachers with the confidence and motivation needed to effectively fulfill their roles in CLIL-based classrooms.

Through this review, various strategies have been identified in studies to improve CLIL teachers' roles in the classroom. These strategies encompass teacher training, continuous professional development, collaboration between subject instructors and language specialists, and others.

4. Conclusion

CLIL has emerged as a prominent teaching approach in the global education landscape, attracting significant scholarly attention. Acknowledging the pivotal role of CLIL practitioners and their roles in the efficacy of CLIL implementation (Azparren Legarre, 2022), this paper provides a systematic review of the research concerning the roles of CLIL teachers published from 2014 to 2023. Following the PRISMA flow diagram, 31 eligible records were included in this systematic review to provide valuable insights. Drawing from the selected publications, this study addressed four questions: (1) What are CLIL teachers' perceptions on their classroom roles in existing studies?; (2) What factors influence CLIL teachers' classroom roles?; (3) What are the ideal roles for CLIL teachers according to the literature?; (4) What strategies can help improve CLIL teachers' roles in the classroom?

The findings and their corresponding practical implications for enhancing English language teaching practices in CLIL classrooms have

been summarized. First, some surveyed teachers perceived themselves as responsible for integrating language instruction and content delivery in the classroom, albeit with other teachers, displaying a tendency to prioritize either content or language teaching. Besides, training students' cognitive skills is deemed vital in the CLIL-based classroom, but this received limited attention from teachers. This highlights the need for professional development programs that emphasize the importance of cognitive skill training alongside content and language instruction. Second, teachers' perceptions were found to be influenced by a range of factors, categorized as internal factors (e.g., teacher's types, teachers' abilities) or external factors (e.g., students' language proficiency, school management). Recognizing these factors can help administrators and policymakers tailor support and resources to meet the specific needs of teachers and students, to improve the overall effectiveness of CLIL implementation. Third, the ideal roles for CLIL teachers involve using the target language for both language and content instruction while cultivating students' cognitive skills, such as problem-solving and collaboration abilities. Participant experiences, on the other hand, underscore the necessity of resorting to L1 in instances of communicative barrier between students and teachers. Besides, translanguaging practices are said to foster the coexistence of L1 and the target language, thereby enhancing CLIL implementation. This points to the practical value of translanguaging practices, which allow a flexible integration of L1 and the target language, thereby supporting language comprehension and learning in CLIL contexts. Lastly, various strategies have been proposed to improve CLIL teachers' roles, encompassing initiatives such as teacher training, continuous professional development, and support from the school and educational authorities. Teacher training could involve workshops on lesson design that balances language and content, along with methods like project-based learning to develop critical thinking. Professional development might include peer observations and mentorship, providing CLIL teachers with feedback and best practices, particularly for managing mixed language proficiencies through translanguaging. Schools and educational authorities can support these efforts by dedicating resources for training and recognizing certified CLIL educators. Implementing these strategies can help equip CLIL teachers with the necessary skills to balance content and language instruction effectively. For policymakers and administrators, these findings highlight the importance of fostering a supportive environment that encourages the development of bilingual competencies and higher-order thinking skills, ultimately enhancing language learning outcomes in CLIL-based programs.

In conclusion, from the 31 publications in this systematic review, perceptions of CLIL teachers on their classroom roles can be gained. The factors influencing their classroom roles can be identified. This review also reveals the ideal roles of CLIL teachers and summarizes potential strategies to improve teachers' roles. However, limited empirical research exists to validate the effectiveness of strategies. This lacuna offers an avenue for future research endeavors to further delve into and advance. Moreover, based on the discussion in this review regarding the use of the L1 in CLIL classrooms, future CLIL research should focus on optimizing the balance between L1 and target language use, especially for improving comprehension and overcoming communication barriers. Additionally, the implementation and impact of translanguaging practices need further exploration to enhance bilingual education. Addressing these areas could significantly improve CLIL practices and outcomes in foreign language teaching and learning.

Authors' contributions

Jiajie Zhang was responsible for determining the direction of the study and writing the manuscript.

Dr. Hanita Hanim Ismail was responsible for determining the direction of the study and refining the manuscript.

Dr. Nur Ainil Sulaiman was responsible for proofreading.

All authors read and approved the final manuscript.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available

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Appendix A

Study	Country/ region	Year	Aims of the study	Participants/ study materials	Major findings
Kung	Taiwan	2018	To explore CLIL teachers' experience of teaching to bridge the gap of teachers' reflection	9 practitioners from 9 different universities	The study revealed recurring themes including English elitism, limited creativity, inadequate teacher preparation, and biased recruitment in the context of CLIL implementation, highlighting concerns regarding government-promoted CLIL practices leading to inequalities and stress among practitioners
Gülşen & Dikilitaş	Turkey	2023	To explore whether CLIL teachers' professional identities are reconstructed by their experiences of implementing CLIL	4 secondary school teachers	Role conflicts caused by a lack of pedagogical knowledge about how to integrate content and language hinder the construction of CLIL teacher identity.
Budiarta et al.	Indonesia	2020	To figure out teachers' perceptions and the challenges of CLIL implementation in primary schools in Bali	3 teachers and documents from 3 different sites or schools	Teachers' perceptions were directed towards CLIL characteristics, CLIL implementation and students' understanding of the content and language.
Nhac	Vietnam	2023	To examine teachers' and students' perspectives on the application of CLIL in teaching and learning legal English.	Qualitative: 11 university students attending legal English courses and 7 instructors who had more 5 years' experience in teaching legal English Quantitative: 243 students attending legal English courses	Overall agreement existed between learners and teachers on the benefits of implementing CLIL in legal English classrooms. Also, both teachers and students reported encountering barriers to content knowledge in a particular area of law.
McClintic	Spain	2022	To explore teachers' perceptions on diversity in CLIL classrooms	Qualitative: 6 teachers and 2 classroom observation of CLIL lessons Quantitative: 77 participants including 6 teachers	Most of the teachers were engaging students in the L2 classroom. There was a significant difference in the implementation of language under CLIL between native English teachers and non-native English teachers.
Segura	Spain	2023	To analyse pre-primary teachers' CLIL knowledge and to identify the expected benefits, challenges, and perceived needs of CLIL in pre-primary	129 pre-primary teachers including 76 in-service teacher and 53 pre-service teachers	Most in-service teachers knew CLIL, while pre-service teachers were unfamiliar with it. Teachers had positive expectations for the potential benefits of CLIL for both students and teachers. But most of them believed that they are not ready to implement CLIL.
Fielden Burns & Mart ńez Agudo	Spain	2023	To examine teachers' perceptions of CLIL to determine if there are differences between content and English teachers; to assess the effectiveness of current CLIL programs and identify their potential challenges	36 teachers at four secondary schools	Although teachers had a positive attitude towards the CLIL programs, there were some differences including the time spent using a second language in the content course and the language skills under in the CLIL.
Skinnari & Bovellan	Austria, Finland, and Spain	2016	To gain a deeper understanding of what integration means for teachers who apply CLIL	12 secondary school teachers from Austria, Finland, and Spain	CLIL teachers understood their roles in various ways which are related to their context, personal and professional experiences, goals, and interests. Also,

					it is claimed that the integration of content and language to happen in the classrooms in a natural and dynamic way.
Nguyen	Vietnam	2019	To explore the perceptions of students and teachers about the CLIL project in Vietnam and compare them	Qualitative: 7 teachers Quantitative: 196 students	A basic language level was necessary for both students and teachers in CLIL-based classrooms. In most cases, students were motivated by the tasks rather than by the mediation of a foreign language.
McDougald & Pissarello	Colombia	2020	To investigate in-service teachers' perceptions and knowledge about CLIL and bilingual education	26 in-service teachers in Valledupar, Colombia	Teamwork and administrative support were crucial for successful CLIL implementation. Teachers knew very little about the CLIL approach.
Targamadze & Kriauciuniene	Lithuania	2016	to explore the viewpoints of teachers to CLIL in Lithuania	36 different subject teachers from various schools	A more systemic approach is needed to better implement CLIL. The perceptions of all the stakeholders' to CLIL should be strengthened. CLIL teacher training programs should be offered.
Pham & Unaldi	Vietnam	2022	To investigate multiple aspects of cross-curricular collaboration in a Vietnamese CLIL program	8 teachers from the school's bilingual program	Teachers viewed their teaching responsibilities and priorities as their subject, rather than the dual focus of language and content teaching. The professional support provided by the school was not appropriate. The teacher collaboration lacked consistency and systematicity due to issues such as workload, scheduling, and motivation.
van Kampen et al.	Netherlands	2017	To investigate practitioner and specialist perceptions about the goals and practices of CLIL in the Netherlands	7 CLIL practitioners and 9 CLIL specialists	It presented a rich description of the ideal CLIL by the main stakeholders in the Netherlands, and also indicated that despite the high degree of institutionalization of CLIL in the Netherlands, experts and practitioners had different views on the ideal CLIL
Hashmi	Saudi	2019	To explore the perceptions of English as Foreign Language (EFL) teachers about the notion of CLIL in the Saudi EFL contexts	10 EFL teachers	CLIL was not frequently used, but its usefulness and effectiveness were recognized by the participants.
Bellido & Herrero	Spain	2021	To analyze the plurilingual education system of the Valencian region currently in force from the perspective of trainee teachers	25 pre-service teachers	Lack of teacher training on multilingual issues led to low language proficiency, flawed methodologies, and a lack of tailored teaching materials
Gierlinger et al.	Austria	2017	To investigate the beliefs on integration of subject and second language teaching and its influence on CLIL practices	2 novice CLIL teachers	It investigated the field of teachers' beliefs on the roles of languages and learning in CLIL from five major categories, which were achieved through dynamic, ever-changing, and even contradictory belief networks.
Vázquez et al.	Spain	2020	To explore teachers' perceptions on training and development needs, participation in courses and mobility and the coordination and organization of CLIL	130 teachers involved in delivering CLIL in primary and secondary schools	Teachers had a positive attitude towards CLIL, but content teachers had less confidence in the implementation of CLIL than language teachers. A stronger professional teacher education was necessary to support the implementation of CLIL.
San Isidro & Lasagabaster	Spain	2019	To make sure whether the main interests and concerns for practitioners coincide with the ones for researchers	6 teachers	Teachers believed that CLIL provided a good framework for the development of multiculturalism. Teachers emphasized the need for method-oriented training.

Kim & Lee	South Korea	2020	To explore English language teachers' beliefs and practices while developing and executing CLIL	a native and a non-native instructor; related teaching materials	Teachers initially owned resistance towards language and content integration teaching, and then their teaching focus gradually aligned with CLIL goals. The study also emphasized the awareness of teachers' initiative in curriculum development, teaching adjustment, teacher collaboration, and professional development.
Kewara	Thailand	2017	To investigate the possibility of providing pre-made classroom language sentences to Thai content teachers who require language support, and to explore the views of Thai mathematics teachers on CLIL	25 Thai mathematics teachers	A pre-designed phrase handbook may be helpful. Prefabricated phrases should respond to the mathematical concept norms at each level to make the CLIL course effective and possible.
Campillo et al.	Spain	2019	To report primary teachers' perceptions of the most relevant aspects of CLIL teaching of Science and Social Science in Primary Education	129 participants from 114 primary schools in the Region of Murcia	Emphasis was placed on the widespread application of the CLIL method guidelines and the need for a wide range of tools in evaluating learner abilities. Also, the role of language assistants and more resources from public administration were emphasized.
Thuy	Vietnam	2016	To discuss critiques by the policy actors regarding the significance of CLIL	Qualitative: 4 teachers Quantitative: 9 teachers	It showed the discussion of the CLIL implementation in the Vietnamese context, teachers' readiness, students' readiness, and CLIL materials
Torres-Rincón & Cuesta-Medina	Colombia	2019	To determine the factors and conditions that intervene in the implementation of CLIL	6 English teachers	Teachers had a complex understanding of CLIL, and this study advocated incorporating basic lifelong skills (i.e. creativity, critical thinking, collaboration, and communication) into the implementation of CLIL in the classroom
Ocaña Peinado	Guatemala	2020	To determine students' and teachers' perceptions about different issues vis-à-vis CLIL programs	Qualitative: 71 students and 10 teachers (3 English language teachers and 7 non-linguistic area practitioners) Quantitative: 71 students and 10 teachers	The overall results showed that both stakeholders viewed the different aspects of the survey they received in a positive and optimistic manner, although significant differences were found statistically
Maximova	Kazakhstan	2020	To explore the perceptions that graduates from pedagogical institutions with a multilingual track have about pre-service training and the challenges they face in CLIL classrooms	6 participants	Participants generally held a positive attitude towards pre-service training. The challenges faced by them included assessment, student language proficiency, lack of method support, and the need for regular language practice.
Yavuz et al.	Turkey	2020	To investigate Turkish EFL teachers' attitudes, perceptions and needs of CLIL	5 in-service high school EFL teachers	Although teachers were aware and convinced of the advantages of CLIL and were enthusiastic about integrating it, participating teachers in science high schools faced challenges.
Szczesniak & Luna	Spain	2022	To examine the teachers' perceptions of CLIL implementation	203 in-service teachers	The research results reflected a lack of teacher training programs, and inadequate textbook design. In addition, content-oriented teachers, teachers with lower language abilities and less teaching experience urgently needed

					more training and support.
McDougald	Colombia	2015	To explore teachers' attitudes, perceptions and experiences in CLIL	140 teachers	Teachers currently knew very little about CLIL, but they were still actively seeking informal and formal teaching of CLIL. Almost all participants agreed that the benefits of CLIL.
Bovellan	Finland	2014	To investigate CLIL teachers' beliefs about the role of learning and language in CLIL and explore the strategies to adapt teaching materials for CLIL	13 teachers who teach content subjects for grades 3 – 6 in English	The results indicated that learning in CLIL classrooms was still teacher centered. The influence of teacher personality on the design and use of teacher textbooks was significant.
Oattes et al.	Netherlands	2018	To gain insight into the perceptions of Dutch bilingual education history teachers	8 teachers	History teachers in bilingual education believed that their dual task as language and subject teachers was challenging, but English teaching enriched their teaching skill.
Zhu et al.	China	2021	To explore college English teachers' beliefs about content-language integration	4 college English teachers	Teachers held different beliefs, and all four teachers attached importance to the integration of content and language, but had different emphases on content and language.