

Navigating the Integration of Content and Language in Higher Education: Key Considerations for Educators and Policy Makers

Susilawati^{1*}, Rina Riniawati², Nurhasanah Halim³, Retno Dwigustini⁴, Ali Satri Efendi⁵

^{1,2,3,4} Universitas Bina Sarana Informatika

⁵Politeknik LP3I Jakarta

* E-mail: susilawati.sxw@bsi.ac.id

Abstract

The integration of content and language in higher education (ICLHE) has developed rapidly in response to growing industry demand for graduates with both disciplinary knowledge and professional communicative competence. However, the effective practices of ICLHE necessitate careful consideration regarding pedagogical and implementation-related factors. This study explores English-based ICLHE practices and derives key considerations for designing the courses. A systematic literature review (SLR) was applied along with Search, Appraisal, Synthesis, and Analysis (SALSA) design, involving 12 articles from the Scopus database. The findings demonstrate the current practices in English-based ICLHE courses, including the integration of cultural and intercultural dimensions, collaborative lesson planning and team teaching, instructional scaffolding, modelling, and task-based learning, supportive and flexible learning environments, lecturer professional development and well-being, and integrated language support within content instruction. From these practices, considerations emerge for educators and policymakers, focusing on culture, collaboration, pedagogy, and professional growth as essential components of effective implementation.

Key words: integrating content and language in higher education (ICLHE), content and language integrated learning (CLIL), higher education (HE), systematic literature review (SLR) .

INTRODUCTION

The field of higher education continues to change in response to globalization and technological advancement. Students are increasingly expected to possess subject-specific comprehension and the ability to communicate in the globalized industry (Sampaio et al., 2021). Universities are no longer only spaces for acquiring disciplinary knowledge; they are also expected to cultivate graduates who can operate effectively in an international and multicultural environment. In this context, linguistic competence, particularly in English, has become a critical skill that complements academic expertise.

As English has emerged as the dominant medium of communication in global business, science, technology, and academia, graduates who can convey complex ideas clearly and persuasively in English are highly sought after by industry (Chan, 2021). Accordingly, higher education institutions are under growing pressure to develop and apply curricula that prepare students not only for professional mastery in their chosen fields, but also for effective communication in a global context. However, achieving this dual objective remains challenging when language development is treated as an isolated skill rather than an integral component of disciplinary learning.

Traditional teaching methods, or what is called the fragmented approach, which often separates language instruction from subject-specific content (Kreijkes & Greateorex, 2024), frequently fall short in equipping students with these dual competencies. This limitation has driven the search for pedagogical approaches that integrate language learning directly into disciplinary instruction. This is to maintain that learners can achieve language proficiency and content mastery simultaneously.

The content and language integration approach, known as Content and Language Integrated Learning (CLIL), is suggested by Coyle et al. (2010) to bridge the gap between language learning and content instruction. In the setting of higher education, this approach is recognized as Integrating Content and Language in Higher Education (ICLHE). It has been recognized as a vital means to nurture students

with the language skills and content knowledge (Helm, 2020) required to thrive in their targeted disciplines. ICLHE has expanded exponentially in recent years as universities seek to prepare graduates for a competitive and international workforce (Gilanyi et al., 2023). Four main elements of ICLHE, encompassing 4S: content, communication, cognition, and culture, are created to promote students' potential for language skills, confidence, and language awareness (Macaraeg et al., 2024). This approach is also expected to enhance deeper learning and student engagement (de Zarobe, 2025). Through this dual focus, ICLHE aims to produce graduates who are not only knowledgeable in their disciplines but also capable of communicating complex ideas effectively in English.

Notwithstanding its potential benefits, ICLHE adoption is frequently hampered by a variety of barriers. These include a lack of understanding regarding ICLHE practices. Therefore, lecturers sometimes find difficulties in balancing the objectives to reach the mastery of language and content knowledge (Villabona & Cenoz, 2022). Training for ICLHE educators is another point of concern. A study exposed that ICLHE educators are frequently deemed untrained, or sometimes, insufficiently prepared for their roles in expanding dual-objectives learning (Dang et al., 2023). Another problematic thing is the mode of teaching delivery. The study of Yang and Yang (2022) found that distance learning did not match students' expectations of learning language and content simultaneously. Students' different background also plays a crucial role in adopting ICLHE. Coyle et al. (2023) highlight that distinctive linguistic and cultural backgrounds can render it tricky for educators to address the needs of students with various language ability levels. Precisely, the phenomenon of non-English instructors not paying attention to other aspects of language (Olsson, 2021) when teaching remains a crucial issue in ICLHE implementation. In light of these challenges, investigating ICLHE best practices is essential. Such an investigation will enable educators and policymakers to acquire useful insights into implementation, identify areas for improvement, and design focused solutions. Understanding current best practices in ICLHE can inform teacher training programs, curriculum design, and institutional policies that advocate content-language integration. Additionally, ongoing investigation of ICLHE best practices can help identify emerging issues and opportunities for innovation in content-language integration.

Existing literature reveals several major trends shaping the discussion of ICLHE. These include the rising popularity of ICLHE, others name it as EMI (English as a Medium of Instruction), as emphasized by Lee et al. (2025) and Akıncioğlu (2024). Another is the growing relevance of multimodal learning, in which such a model can enhance students' communicative competence (Costa & Mair, 2022, 2023) and scaffold the process of learning with dual objectives of instruction (de Zarobe & Querol-Julián, 2025). Therefore, the integration of technology in language learning has also been widely explored to support students' communicative competence. For instance, the development of digital learning media, such as animation-based instructional videos, can enhance students' engagement and facilitate more effective language learning processes (Amaliah et al., 2022). This indicates that innovative instructional media can support the dual objectives of language and content mastery in higher education contexts. Furthermore, the necessity for enhanced teacher training and support is also a matter of attention (Custodio-Espinar et al., 2025). In addition, preparing students for professional jobs has also become a significant concern (Omer et al., 2024), in which students can be trained to reach professional objectives and encounter real-world content, and solve real-world problems in the field.

Regardless of the rising corpus of research on ICLHE, a significant gap remains in understanding systematic practices across different subjects and learning settings where English is used as the instructional language. To mitigate this divide, the present study undertakes a systematic literature review approach of evolving practices in ICLHE. This study aims to answer the research questions: 1) What are the current practices in ICLHE classrooms? 2) What considerations can be drawn from the findings for ICLHE educators and policymakers? By investigating the answers to these questions, this current study intends to contribute to establishing optimal ICLHE practices in different subjects and instructional settings. Specifically, it seeks to identify and synthesize current practices and

Susilawati^{1*}, Rina Riniawati², Nurhasanah Halim³, Retno Dwigustini⁴, Ali Satri Efendi⁵ provide evidence-based considerations to inform educators and policymakers in enhancing ICLHE implementation and policy development.

METHODOLOGY

The researchers applied a systematic literature review (SLR) by adopting the concept of (Mengist et al., 2020). This approach follows a structured and transparent process to identify, evaluate, and synthesize existing research relevant to a specific topic. This SLR was selected as it enables the identification of ICLHE trends across multiple studies with varying subject settings of English learning in higher education. By collecting and analyzing such studies, this research provides a comprehensive picture of the current practices on ICLHE and identifies the recurring patterns and research gaps in the field.

In the procedure of collecting and analyzing the articles, the SALSA (Search, Appraisal, Synthesis, and Analysis) procedure (Grant & Booth, 2009) was employed. This SALSA framework was chosen as it offers a systematic and replicable structure for reviewing and organizing scholarly literature.

In the process of “search”, the researchers determine the search strings and identify the database to be used. Boolean operators and quotation marks were applied to refine the search results and ensure relevance. The Scopus database was then opted for as it provides the largest database for scientific literature (Schotten et al., 2017) from all over the world. This indeed will assist the researchers in scrutinizing ICLHE's current practices from various disciplines and settings. The researchers set keywords, including “integrating content and language in higher education”, “ICLHE”, “content and language integrated learning in higher education”, “CLIL in universities”, “practices”, and “implementation.”

When applying the “appraisal” steps, the criteria of inclusion and exclusion were determined. Those criteria were constructed to ensure the quality, relevance, and consistency of the selected studies. The complete criteria are presented in Table 1.

Table 1. The inclusion and exclusion criteria

| Inclusion | Exclusion |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Paper published between 2020 and 2025 | |
| Open access | Close access |
| Journal articles | Proceedings, books, book chapters, theses, and dissertations |
| The integration of language and content using English as the instructional language | Content and language integration taught in other languages |

During the “synthesis” process, the researchers categorized the relevant publications. This categorization was based on similarities in research focus and reported practices. From the criteria, 15 of 34 were selected. A preliminary compilation of 34 articles published was discovered. Then they were meticulously screened using established inclusion criteria. Following a thorough investigation, 12 publications met the inclusion criteria for the study. A summary of the selected articles is shown in Table 2.

Table 2. The included articles

| No | Publication | Year of publication |
|----|---------------------------------|---------------------|
| 1 | Mearns and Platteel | 2021 |
| 2 | Yang and Yang | 2022 |
| 3 | Mestre-Segarra and Ruiz-Garrido | 2022 |
| 4 | Reitbauer et.al | 2022 |
| 5 | Smit and Finker | 2022 |
| 6 | Satayev et.al | 2022 |
| 7 | Kanoksilapatham and Khamkhien | 2022 |
| 8 | Bacovsky-Novak | 2023 |
| 9 | Lee | 2024 |

| | | |
|----|----------------|------|
| 10 | Itoi | 2024 |
| 11 | Macaraeg et.al | 2024 |
| 12 | Kenzhe et.al | 2025 |

In the next step, namely “analysis”, the selected publications were initially coded. An inductive coding approach was employed to allow patterns and themes to emerge from the collected data. The coding practice included extracting and reducing significant sentences into clauses, as well as nominalizing words to simplify them. Finally, the researchers interpreted the results. Justifications for the current relevant research were also applied. This process confirmed that the findings were grounded in existing literature and aligned with the study’s research objectives. The very final step conducted was drawing conclusions based on the analysis

RESULT AND DISCUSSION

RESULT

From the 12 articles that discuss current practices of ICLHE, the researchers found 4 main findings as considerations for ICLHE’s successful implementation. The findings encompass 1) integrating cultural and intercultural dimensions, 2) collaborating in lesson planning and team teaching, 2) implementing instructional scaffolding, modelling, and task-based learning, 4) designing supportive and flexible learning environments, 5) enhancing teacher professional development and well-being, and 6) embedding language support within content instruction. The results from the 12 articles are displayed in Table 3.

Table 3. The findings on English-based ICLHE practices

| No | Publication | ICLHE practices | Findings |
|----|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1 | (Mearns & Platteel, 2021) | The practice of content and language integration should incorporate cultural aspects as another aspect of learning the target language. | Integrating cultural and intercultural dimensions |
| 2 | (Yang & Yang, 2022) | ICLHE is best practiced in an asynchronous learning environment to improve motivation, lessen distraction and pressure, enhance interaction, promote teachers’ control, and decrease instructors’ stress | Designing supportive and flexible learning environments |
| 3 | (Mestre-Segarra & Ruiz-Garrido, 2022) | ICLHE is applied in a collaborative learning environment by involving international students from many different countries. Not only has this collaboration improved communication and content mastery, but it has promoted interculturality in the field. | Integrating cultural and intercultural dimensions |
| 4 | (Reitbauer et al., 2022) | ICLHE instructor professional development with the model of the Interactive Balance Model for Managing Wellbeing to tackle or reduce the challenges of teaching using ICLHE. | Enhancing teacher professional development and wellbeing |
| 5 | (Smit & Finker, 2022) | CLIL, combined with language-related episode (LRE), effectively emphasizes and supports language learning within content instruction | Embedding language support within content instruction |
| 6 | (Satayev et al., 2022) | The subject and language instructors teach together in a biology class, in which they plan the lesson together to balance the content and language focus | 1. Collaborating in lesson planning and team teaching 2. Embedding language support within content instruction |
| 7 | (Kanoksilapatham & Khamkhien, 2022) | Teaching collaboration between language and content lecturers in the engineering course. Both lecturers work together to design balanced course materials for the reading section. The students are presented with relevant research articles in which the articles are firstly reviewed by both lecturers to ensure their relevance. First, the students are introduced to the content, and then proceed to the language aspects found in the articles. | 1. Collaborating in lesson planning and team teaching 2. Implementing instructional scaffolding, modelling, and task-based learning |
| 8 | (Bacovsky- | Collaborative ICLHE lesson planning to balance | Collaborating in lesson |

Susilawati^{1*}, Rina Riniawati², Nurhasanah Halim³, Retno Dwigustini⁴, Ali Satri Efendi⁵

| | | |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Novak, 2023) | content and language integration in vocational college, as well as to bridge the gap between theory and practice | planning and team teaching |
| 9 (Lee, 2024) | ICLHE was implemented based on content- and task-based instruction, cooperative interaction among peers, and scaffolding. | Implementing instructional scaffolding, modelling, and task-based learning |
| 10 (Itoi, 2024) | CLIL was implemented by translanguaging within content-based instruction to enhance both language learning and intercultural awareness. By using MEC (Meaning-Expression-Content) cycle, students first engage in multilingual discussions to build understanding in multilingual discussions to build understanding, then produce final outputs in the target language. | Integrating cultural and intercultural dimensions |
| 11 (Macaraeg et al., 2024) | ICLHE was practiced well and influenced students' skills in communicating using English, self-confidence, and social and cultural experience. However, ICLHE practitioners should provide targeted language assistance, such as vocabulary-enhancement activities and scaffolding of technical terminology, alongside teacher training, to help students manage the dual demands of content and language learning while fostering confidence and cultural awareness. | 1. Integrating cultural and intercultural dimensions 2. Enhancing teacher professional development and wellbeing |
| 12 (Kenzhe et al., 2025) | Modelling was incorporated into the practice of ICLHE for Chemistry Teacher Training to improve professional communication when using a foreign language in the chemistry course. | Implementing instructional scaffolding, modelling, and task-based learning |

DISCUSSION

1. Current practices in ICLHE-based English language classrooms

a. *Integrating cultural and intercultural dimensions*

The integration of cultural and intercultural elements in ICLHE is essential for achieving meaningful communication and global competence among students. Studies by Mearns and Platteel (Mearns & Platteel, 2021), Mestre-Segarra and Ruiz-Garrido (Mestre-Segarra & Ruiz-Garrido, 2022), Itoi (Itoi, 2024), and Macaraeg et.al (Macaraeg et al., 2024) collectively demonstrate that culture should not be treated as a peripheral component but as a critical aspect of content and language instruction. Incorporating cultural awareness helps students contextualize the language within real-world and disciplinary frameworks. When learners engage with culturally diverse materials or peers from different backgrounds, they gain insights into global perspectives that enhance their communicative and cognitive skills.

Incorporating cultural aspects also strengthens the implementation of culture as the core element of ICLHE (Garcés-Manzanera & Roca-Marín, 2025b). Although cultural integration is seen as a challenging task (Gómez-parra, 2020), this intercultural exposure will foster tolerance, empathy, and adaptability, as the skills that are increasingly necessary in an internationalized academic and professional environment. What is more, integrating cultural aspects into classroom instruction encourages a deeper understanding of language use across contexts or disciplines. Accordingly, integrating intercultural dimensions reinforces ICLHE's core goals in preparing students to be proficient and competent global communicators and professionals. Not only that, but infusing cultural dimension will also function to preserve native cultural understanding as students' own heritage (Bajec et al., 2025).

b. *Collaborating in lesson planning and team teaching*

Collaboration among instructors is identified as a cornerstone of successful ICLE practice. The discovery of Satayev et al. (Satayev et al., 2022), Kanoksilapatham and Khamkhien (Kanoksilapatham

& Khamkhien, 2022), and Bacovsky-Novak (Bacovsky-Novak, 2023) underscore that team teaching and joint planning between language and subject lecturers result in more balanced and coherent lessons. One important point to remember is that students with better proficiency have more potential and opportunities to convey content knowledge of a particular discipline (Wilkinson & Gabriëls, 2021). When lecturers work together, they can align language goals with subject-specific outcomes and formulate learning interventions (Malmström & Zhou, 2025) based on the dual focus objectives, which will prevent an overemphasis on either dimension.

Collaboration also supports innovation as lecturers can share techniques for integrating academic language into disciplinary instruction. Additionally, co-teaching offers opportunities for professional reflection and mutual learning, i.e., as part of professional development (Zhu et al., 2023) to enhance the quality of instruction. In technical subjects, teaching this collaboration can also lead to ICLHE curriculum development (Malmström & Zhou, 2025). Thus, it is evident that team teaching and collaboration among CLIL lecturers foster pedagogical synergy for both lecturers and students.

c. Implementing instructional scaffolding, modelling, and task-based learning

The reviewed studies emphasized instructional learning, such as scaffolding (Lee, 2024) (Macaraeg et al., 2024), modelling (Kenzhe et al., 2025) and task-based teaching (Macaraeg et al., 2024). These strategies are seen as supportive for students as they navigate the simultaneous demands of mastering disciplinary knowledge and language skills. Scaffolding provides structured guidance that gradually transfers responsibility from lecturers to students. It will help students elevate their content knowledge and language proficiency (Kim et al., 2021). Whilst modelling, which is also claimed as a part of scaffolding (Dominguez & Svihla, 2023), demonstrates the expected language use or problem-solving process. Task-based learning, on the other hand, promotes active engagement and application of both content and language in authentic contexts (Chen, 2023). Through these approaches, students develop autonomy and confidence, building competence in subject-specific communication. Another thing centers around the belief that scaffolding is connected to students' motivation (Acosta-Gonzaga & Ramirez-Arellano, 2022), as it involves students in engaging in classroom activities (Alfares, 2025). Together, those strategies can establish a strong framework to support students in dual-objectives courses.

d. Designing supportive and flexible learning environments

Research by Yang and Yang (Yang & Yang, 2022) and Mestre-Segarra and Ruiz-Garrido (Mestre-Segarra & Ruiz-Garrido, 2022) reveals that the learning environment is central to achieving success in ICLHE implementation. Environments that promote collaboration, intercultural interaction, and flexibility enhance students' engagement and reduce learning-related anxiety (Huang, 2025; Wang, 2024). Asynchronous learning platforms, for example, allow learners to review materials at their own pace, to facilitate better comprehension and time management. In other words, it creates personalized learning based on students' individual needs (Whalley et al., 2021). A model of collaborative online international learning (COIL) environments mentioned by Mestre-Segarra and Ruiz-Garrido (Mestre-Segarra & Ruiz-Garrido, 2022), create opportunities for authentic communication and peer learning among culturally diverse students. Such settings not only improve content mastery but also strengthen global competence and intercultural communication skills (Hackett et al., 2023). Additionally, flexible learning environments can help reduce lecturer stress by offering more control over instructional pacing and delivery. By considering this condition, creating supportive and adaptable learning spaces is an important pedagogical consideration in effective ICLHE practices.

e. Enhancing lecturer professional development and well-being

The research conducted by Reitbauer et al. (Reitbauer et al., 2022), and Macaraeg et al. (Macaraeg et al., 2024) highlight that lecturers' preparedness and well-being are integral to the success of ICLHE implementation. Instructors face unique challenges when balancing language and content

Susilawati^{1*}, Rina Riniawati², Nurhasanah Halim³, Retno Dwigustini⁴, Ali Satri Efendi⁵ objectives, which can lead to increased workload and stress. Professional development programs, such as the Interactive Balance Model mentioned in the study of Reitbauer et al. (Reitbauer et al., 2022), provide tools for managing well-being and sustaining motivation. Continuous training in language pedagogy, intercultural communication, and curriculum design equips educators with the necessary skills to implement ICLHE confidently. Furthermore, lecturers' emotional and psychological well-being directly influences classroom climate (Savina et al., 2025) and student academic engagement (Shen et al., 2024). Without adequate support, lecturers may struggle to maintain enthusiasm and effectiveness in their teaching. Therefore, institutional investment in both professional growth and well-being is a prerequisite for sustainable ICLHE practice.

f. Embedding language support within content instruction

Embedding language support within content instruction is a defining feature of effective ICHLE pedagogy. Studies by Smit and Finker (Smit & Finker, 2022) and Satayev et.al (Satayev et al., 2022) indicate that explicit focus on language (through methods like Language-Related Episodes or LRE) and co-teaching help to enhance students' comprehension. These strategies offer students language functions to construct disciplinary or content knowledge. Integrating language support ensures that content learning is not hindered by linguistic barriers, particularly in areas where students' first language shapes target-language production, such as pronunciation difficulties influenced by their mother tongue (Rohmah et al., 2023). A study even discovered that language mastery is the only determinant for student success in integrated subject classes (Kamaşak & Sahan, 2023). On top of that, by blending language instruction with subject content, teachers make academic communication skills more relevant and contextualized. This practice will also promote deeper understandings since students learn to articulate subject-content complex ideas clearly and accurately. Essentially, incorporating language into topic instruction transforms ICLHE classrooms into environments in which linguistic and cognitive progress occur concurrently.

2. Considerations for educators and policymakers

From reported practices, there are six considerations to be highlighted by ICLHE educators and universities as policymakers. The first is the integration of cultural and intercultural dimensions. Lecturers who plan ICLHE courses are strongly recommended to embed cultural perspectives and intercultural communication tasks into their curricula. This can be achieved through project-based learning (PBL), as reported by Yufrizal (Yufrizal, 2021), case studies from different cultural settings (Hackett et al., 2023), or student collaborations across international contexts (Mestre-Segarra & Ruiz-Garrido, 2022). Lesson materials should be selected to represent a variety of viewpoints, which can promote critical reflection on culture as one of the core dimensions in ICLHE. As pointed out by Koro and Hagger-Vaughan (Koro & Hagger-Vaughan, 2025), infusing cultural aspects into language learning will enable lecturers to explore and adjust relevant language curricula in their classrooms. During learning, lecturers can guide students in comparing cultural practices related to their academic field, for the sake of strengthening both linguistic and global awareness. Assessment tasks can be designed in the form of a formative, holistic assessment (Koro & Hagger-Vaughan, 2025) to evaluate not only content mastery but also intercultural understanding and adaptability. Ultimately, embedding intercultural competence in ICLHE enables students to communicate using language in real-life contexts whilst developing cultural awareness.

The second one is collaborating with subject lecturers as a systematic and sustained process embedded in ICLHE lesson design. Joint planning sessions permit lecturers to create pedagogical agency (Montgomery & De Costa, 2024), for instance, designing joint curricula to adjust objectives, discuss lesson stages, and design materials that equally support content comprehension and language development. Establishing clear communication channels between language and subject lecturers ensures coherence and continuity across subjects. Institutions can facilitate this collaboration by

allocating dedicated time, providing co-teaching opportunities, and offering professional workshops on integrated instruction (Costa et al., 2025). Lecturers can also engage in peer observation while their co-workers teach to exchange constructive feedback and refine their collaborative methods. Such a partnership model either enhances teaching and learning effectiveness or offers students interdisciplinary cooperation. In a nutshell, collaboration among lecturers empowers them to create more active, balanced, and relevant ICLHE lessons.

Another point to consider is the implementation of ICLHE lessons involving scaffolding, modelling, or task-based learning. Lecturers can start by identifying students' needs (Li & Zhang, 2020) for language or conceptual support, and plan an appropriate scaffold. Examples include pre-teaching vocabulary or presenting academic genres, which are regarded as critical to the point of students' learning departure. Following this, lecturers are recommended to plan for the gradual removal of scaffolds to foster independence and deeper learning. After that, students can be presented with much more challenging activities like subject-related projects. Additionally, lecturers can also scaffold the class by implementing collaborative tasks that allow students to practice using content knowledge through structured language interaction, as each member can encourage each other to provide help (Calor et al., 2022). Such procedures will equip students to progress confidently from guided practices to independent learning in the context of facing real-world challenges.

The next point is the design of supportive and flexible learning; lecturers have opportunities to design an ICLHE environment that balances structure with flexibility that caters to diverse learner needs and teaching contexts. Given the effectiveness of online learning (Purwanto & Despita, 2023), in both synchronous and asynchronous formats, lecturers can design asynchronous sessions, such as providing recorded lectures and discussion forums, and synchronous components, including virtual meetings that focus on interaction and feedback. Lecturers can also create opportunities for intercultural collaboration through online group work or exchange programs such as COIL, with the involvement of international peers (Mestre-Segarra & Ruiz-Garrido, 2022). Universities can also enact policies and provide sufficient technological facilities to support this learning environment, due to the positive effects of technology in supporting ICLHE, with the note that lecturers are trained and facilities are representative (Martínez-Soto & Prendes-Espinosa, 2023). To sum up, for the successful implementation of ICLHE, an attentively designed environment should be established by considering policies and principles of flexibility.

A further aspect to emphasize is the intention to enhance professional development and well-being. Universities are strongly advised to provide professional development opportunities that build competence in ICLHE practice. Training programs can focus on integrated lesson planning, ICLHE materials, assessment design, and techniques for managing dual content-language objectives (Cañado, 2020). To secure lecturers' well-being, universities are expected to implement strategies to reduce lecturer cognitive load and enrich their teaching resources (Hsieh et al., 2025), so that lecturers will not be seen as unprepared (Custodio-Espinar et al., 2025). Practically, institutions are projected to establish mentorship systems, collaborative learning communities, and reflective practice sessions for continuous advancement. In addition to that, policies supporting balanced workload and mental health should be stipulated, which in the end can greatly promote lecturer resilience and satisfaction. In this case, lecturers are encouraged to maintain a balance between innovation in teaching and their own self-care, since they are close to their well-being risk (Hessel et al., 2020). By prioritizing professional growth and well-being, lecturers not only enhance their own performance but also model positive, balanced academic engagement for their students.

The final point is designing ICLHE lessons with a balance of both linguistic loads and specific content knowledge. Lecturers are encouraged to identify linguistic demands inherent in disciplinary content and design activities to address them explicitly. This includes focusing on specific-subject vocabulary (SSV) (Rieder-Bünemann et al., 2022), discipline-specific grammar (Nikmah & Anwar, 2021), and communication standards applicable and substantial to the subject (Olsson, 2021). Lecturers can incorporate LREs, guided discussions, or writing workshops that align language goals

Susilawati^{1*}, Rina Riniawati², Nurhasanah Halim³, Retno Dwigustini⁴, Ali Satri Efendi⁵ with content outcomes. Teamwork between language lecturers and subject-matter experts is the ultimate concern in ICLHE courses (Malmström & Zhou, 2025), which will ensure that these supports are contextually appropriate and pedagogically sound. Educators should also provide ongoing, proper assessments to help students refine their language use in authentic academic tasks. Additionally, assessment criteria should evaluate not only conceptual understanding of content or cognition, but also clarity and accuracy of communication. One practical solution for this is equipping lecturers with assessment literacy, which enables lecturers to understand and execute holistic assessment, as well as communicate the results to stakeholders (Lo & Leung, 2022). Formative feedback is also highly recommended, compared to summative feedback (Garcés-Manzanera & Roca-Marín, 2025a). In brief, by focusing and merging language support throughout content instruction, lecturers make learning more accessible, meaningful, and effective for all students engaged in ICLHE programs.

CONCLUSION

The synthesis of findings from the 12 studies on ICLHE practices reveals that successful implementation depends on the following components: the integration of cultural and intercultural dimensions, collaboration in lesson planning and team teaching, implementation of instructional scaffolding, modelling, and task-based learning, design of supportive and flexible learning environments, enhancement of lecturer professional development and well-being, and integration of language support within content instruction. Collectively, these findings underscore that ICLHE is not merely a pedagogical technique but a holistic educational approach that requires alignment among linguistic, cultural, and content goals to attain professional communicative skills. This present study confirms that institutions are expected to view ICLHE as a dynamic, context-dependent framework that evolves in response to the students' academic priorities, educators, the learning environment, and professionals.

The reviewed practices of ICLHE emphasize that effective implementation entails a holistic strategy that integrates culture, collaboration, instructional practices, and educator professional development. Embedding cultural and intercultural dimensions helps students build global competence and use language meaningfully across contexts. Strong collaboration between language and content lecturers ensures balanced lesson planning and coherent instruction. The use of scaffolding, modelling, and task-based learning supports students' mastery of both linguistic and disciplinary knowledge. Furthermore, flexible and personalized learning environments foster motivation, intercultural engagement, and sustainable teaching practices. Equally important, continuous professional development and concern for lecturers' well-being promote instructional quality. Ultimately, embedding explicit language support within content instruction makes learning more accessible, which ensures that students develop both academic proficiency and subject expertise simultaneously.

Apart from its contributions, this study is limited by a relatively small number of published articles, most of which represent specific disciplinary contexts, which makes it difficult to generalize across diverse educational systems. Future research is strongly recommended to explore ICLHE implementation in underrepresented contexts, such as vocational education or lower-resourced institutions, and examine longitudinal effects on both lecturers' and students' development. Empirical studies employing mixed-methods approaches could provide deeper insights into how collaboration, scaffolding, technology infusion, and cultural integration impact language and content learning outcomes. These directions will enrich the theoretical foundation and practical applicability of ICLHE in a rapidly globalizing and digitalized education landscape.

ACKNOWLEDGEMENT

The researchers acknowledge the use of Grammarly and Quillbot to refine the language accuracy and style of this work.

REFERENCES

- Amaliah, K., Hastuti Retno Kuspiyah, & Somia Ela Safrika. (2022). Development of 2D Animation Videos as English Learning Media. *Channing: Journal of English Language Education and Literature*, 8(1), 27–37. <https://doi.org/10.30599/channing.v8i1.2177>
- Acosta-Gonzaga, E., & Ramirez-Arellano, A. (2022). Scaffolding matters? Investigating its role in motivation, engagement and learning achievements in higher education. In *Sustainability* (Vol. 14, Issue 20). <https://doi.org/10.3390/su142013419>
- Akincioğlu, M. (2024). Rethinking of EMI in higher education: A critical view on its scope, definition and quality. *Language, Culture and Curriculum*, 37(2), 139–154. <https://doi.org/10.1080/07908318.2023.2251519>
- Alfares, N. (2025). Effectiveness of a scaffolded autonomous learning scheme in enhancing learners' motivation in EFL classes. *Learning and Motivation*, 89(February), 102084. <https://doi.org/https://doi.org/10.1016/j.lmot.2024.102084>
- Bacovsky-Novak, T. (2023). Operationalising pluriliteracies in a lesson planning tool for vocational CLIL teachers. *English Teaching & Learning*, 47(3), 385–402. <https://doi.org/10.1007/s42321-023-00153-w>
- Bajec, M. L., Štemberger, T., & Bratož, S. (2025). Enhancing intercultural competences with the CulCLIL model. *Innovation in Language Learning and Teaching*, 1–21. <https://doi.org/10.1080/17501229.2025.2512828>
- Calor, S. M., Dekker, R., van Drie, J. P., & Volman, M. L. L. (2022). Scaffolding small groups at the group level: Improving the scaffolding behavior of mathematics teachers during mathematical discussions. *Journal of the Learning Sciences*, 31(3), 369–407. <https://doi.org/10.1080/10508406.2021.2024834>
- Cañado, M. L. P. (2020). Addressing the research gap in teacher training for EMI: An evidence-based teacher education proposal in monolingual contexts. *Journal of English for Academic Purposes*, 48(November), 100927. <https://doi.org/10.1016/j.jeap.2020.100927>
- Chan, C. S. C. (2021). University graduates' transition into the workplace: How they learn to use English for work and cope with language-related challenges. *System*, 100(August), 102530. <https://doi.org/10.1016/j.system.2021.102530>
- Chen, C. (2023). Application of TBLT (Task-based language teaching approach) in English teaching in junior high schools and universities. *Journal of Education, Humanities and Social Sciences*, 23, 132–135.
- Costa, P. I. De, Hartman, D., Green-eneix, C., & Montgomery, D. P. (2025). Advancing CLIL approaches in EMI settings through international collaboration : An introduction. *Chinese Journal of Applied Linguistics*, 48(1), 3–11. <https://doi.org/10.1515/CJAL-2025-0101>
- Costa, F., & Mair, O. (2022). Multimodality and pronunciation in ICLHE (Integration of Content and Language in Higher Education) training. *Innovation in Language Learning and Teaching*, 16(4–5), 281–296. <https://doi.org/10.1080/17501229.2022.2053130>
- Costa, F., & Mair, O. (2023). Multimodality and pronunciation in ICLHE (Integration of Content and Language in Higher Education) training. In *Teacher Professional Development for the Integration of Content and Language in Higher Education* (1st ed.). Routledge.
- Coyle, D., Hood, P., & Marsh, D. (2010). *CLIL: Content and Language Integrated Learning*. Cambridge University Press.
- Coyle, D., Kim, B., Yvonne, F., & and Hancock, J. (2023). Teachers as designers of learning in diverse, bilingual classrooms in England: An ADiBE case study. *International Journal of Bilingual Education and Bilingualism*, 26(9), 1031–1049. <https://doi.org/10.1080/13670050.2021.1989373>
- Custodio-Espinar, M., Corral-Robles, S., & Ortega-Martín, J. L. (2025). Tailored CLIL training for education degrees based on student teachers' perceptions of their competence to plan CLIL lessons. *International Journal of Multilingualism*, 1–26. <https://doi.org/10.1080/14790718.2025.2555408>
- Dang, T. K. A., Bonar, G., & Yao, J. (2023). Professional learning for educators teaching in English-medium-instruction in higher education: A systematic review. *Teaching in Higher Education*, 28(4), 840–858. <https://doi.org/10.1080/13562517.2020.1863350>
- de Zarobe, Y. R., & Querol-Julián, M. (2025). Multilingualism and multimodality in the CLIL/EMI classroom. *Journal of Multilingual and Multicultural Development*, 46(5), 1397–1415. <https://doi.org/10.1080/01434632.2025.2482734>
- Dominguez, S., & Svihla, V. (2023). A review of teacher implemented scaffolding in K-12. *Social Sciences & Humanities Open*, 8(1), 100613. <https://doi.org/10.1016/j.ssaho.2023.100613>
- Garcés-Manzanera, A., & Roca-Marín, J. L. (2025a). Evaluation and assessment in CLIL-PE. In A.

- Susilawati^{1*}, Rina Riniawati², Nurhasanah Halim³, Retno Dwigustini⁴, Ali Satri Efendi⁵**
 Garcés-Manzanera & J. L. Roca-Marín (Eds.), *Content and language integrated learning in physical education: Motivation, engagement and inclusion* (pp. 91–106). Springer Nature Switzerland. https://doi.org/10.1007/978-3-032-06317-5_7
- Garcés-Manzanera, A., & Roca-Marín, J. L. (2025b). The CLIL framework in education. In A. Garcés-Manzanera & J. L. Roca-Marín (Eds.), *Content and language integrated learning in physical education: Motivation, engagement and inclusion* (pp. 3–24). Springer Nature Switzerland. https://doi.org/10.1007/978-3-032-06317-5_2
- Gilanyi, L., Gao, X. (Andy), & Wang, S. (2023). EMI and CLIL in Asian schools: A scoping review of empirical research between 2015 and 2022. *Heliyon*, 9(6), e16365. <https://doi.org/10.1016/j.heliyon.2023.e16365>
- Gómez-parra, M. E. (2020). Measuring intercultural learning through CLIL. *Journal of New Approaches in Educational Research*, 9(1), 43–56. <https://doi.org/10.7821/naer.2020.1.457>
- Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26(2), 91–108. <https://doi.org/10.1111/j.1471-1842.2009.00848.x>
- Hackett, S., Janssen, J., Beach, P., Perreault, M., Beelen, J., & van Tartwijk, J. (2023). The effectiveness of Collaborative Online International Learning (COIL) on intercultural competence development in higher education. *International Journal of Educational Technology in Higher Education*, 20(1), 5. <https://doi.org/10.1186/s41239-022-00373-3>
- Helm, F. (2020). EMI, internationalisation, and the digital. *International Journal of Bilingual Education and Bilingualism*, 23(3), 314–325. <https://doi.org/10.1080/13670050.2019.1643823>
- Hessel, G., Talbot, K. R., Gruber, M., & Mercer, S. (2020). The well-being and job satisfaction of secondary CLIL and tertiary EMI teachers in Austria. *Journal for The Psychology of Language Learning*, 2(2), 73–91. <https://doi.org/10.52598/jpll/2/2/6>
- Hsieh, C., Khau, A. H., & Li, H.-C. (2025). Impacts of bilingual teaching job demands and resources on teacher self-efficacy- A Taiwanese example. *Sage Open*, 15(3), 21582440251358984. <https://doi.org/10.1177/21582440251358982>
- Huang, Qionghui. (2025). Integrating IT to foster engagement and reduce anxiety in foreign language learning. *Information Development*, 02666669251325520. <https://doi.org/10.1177/02666669251325520>
- Itoi, K. (2024). Fostering inclusive learning and 21st-century skills: Creating translanguaging spaces in university content and language integrated learning courses. *International Journal of Applied Linguistics*, n/a(n/a). <https://doi.org/10.1111/ijal.12643>
- Kamaşak, R., & Sahan, K. (2023). Academic success in English medium courses: Exploring student challenges, opinions, language proficiency and L2 use. *RELC Journal*, 55(3), 705–720. <https://doi.org/10.1177/00336882231167611>
- Kanoksilapatham, B., & Khamkhen, A. (2022). CLIL implemented and scaffolded in an EFL higher education context: Engineering research methodology course. *Indonesian Journal of Applied Linguistics*, 11(3), 502–514. <https://doi.org/10.17509/ijal.v11i3.36913>
- Kenzhe, A., Bitemirova, A., Bayan, U., Bitursyn, S., & Zhorabekova, A. (2025). Integrated teaching methodology in the development of foreign language professional communicative competence on the discipline “organic chemistry” at Kazakhstan University. *Frontiers in Education*, 10(February), 1–10. <https://doi.org/10.3389/educ.2025.1374165>
- Kim, E. G., Park, S., & Baldwin, M. (2021). Toward successful implementation of introductory integrated content and language classes for EFL science and engineering students. *TESOL Quarterly*, 55(1), 219–247. <https://www.jstor.org/stable/48642929>
- Koro, R., & Hagger-Vaughan, L. (2025). Collaborative curriculum making at a local level: The Culture and Language integrated Classrooms (CLiC) project – integrating linguistic and cultural learning in the day-to-day practices of language teachers. *The Language Learning Journal*, 1–19. <https://doi.org/10.1080/09571736.2025.2475107>
- Kreijkes, P., & Greatorex, J. (2024). Differential effects of subject-based and integrated curriculum approaches on students’ learning outcomes: A review of reviews. *Review of Education*, 12(e3465), 1–40. <https://doi.org/10.1002/rev3.3465>
- Lee, H., Rose, H., Macaro, E., & Lee, J. H. (2025). Effectiveness of EMI in higher education: A multi-level meta-analysis. *System*, 133(October), 103755. <https://doi.org/10.1016/j.system.2025.103755>
- Lee, J.-Y. (2024). Pedagogical effects of CLIL in Asia’s higher education: An empirical reassessment. *SAGE Open*, 14(3), 21582440241271140. <https://doi.org/10.1177/21582440241271140>
- Li, D., & Zhang, L. (2020). Exploring teacher scaffolding in a CLIL-framed EFL intensive reading class: A classroom discourse analysis approach. *Language Teaching Research*, 26(3), 333–360.

- <https://doi.org/10.1177/1362168820903340>
- Lo, Y. Y., & Leung, C. (2022). Conceptualising assessment literacy of teachers in Content and Language Integrated Learning programmes. *International Journal of Bilingual Education and Bilingualism*, 25(10), 3816–3834. <https://doi.org/10.1080/13670050.2022.2085028>
- Macaraeg, J. M., Gallego, M. C., Ferrera, R. E., & Ulla, M. B. (2024). Content and language integrated learning (CLIL): Experiences and challenges of English preparatory school graduates in a Cambodian international university. *Social Sciences and Humanities Open*, 10(September), 101165. <https://doi.org/10.1016/j.ssaho.2024.101165>
- Malmström, H., & Zhou, S. (2025). Language–subject teacher collaboration in English-medium higher education: Current practices and future possibilities. *RELC Journal*, 00336882241313234. <https://doi.org/10.1177/00336882241313234>
- Martínez-Soto, T., & Prendes-Espinosa, P. (2023). A systematic review on the role of ICT and CLIL in compulsory education. In *Education Sciences* (Vol. 13, Issue 1, pp. 1–13). <https://doi.org/10.3390/educsci13010073>
- Mearns, T., & Platteel, T. (2021). Exploring teacher support for a content and language integrated modern languages curriculum. *Language, Culture and Curriculum*, 34(3), 207–223. <https://doi.org/10.1080/07908318.2020.1809665>
- Mengist, W., Soromessa, T., & Legese, G. (2020). Method for conducting systematic literature review and meta-analysis for environmental science research. *MethodsX*, 7(2020), 100777. <https://doi.org/10.1016/j.mex.2019.100777>
- Mestre-Segarra, M. Á., & Ruiz-Garrido, M. F. (2022). Examining students' reflections on a collaborative online international learning project in an ICLHE context. *System*, 105(April), 102714. <https://doi.org/10.1016/j.system.2021.102714>
- Montgomery, D. P., & De Costa, P. I. (2024). Leveraging relational agency: CLIL teacher collaboration in one Kazakhstani University. *RELC Journal*, 56(2), 412–429. <https://doi.org/10.1177/00336882241234756>
- Nikmah, N. S., & Anwar, C. (2021). EFL young learners' problems encountered in the learning of English speaking: Teachers' perspectives. *Register Journal*, 14(2), 301–316. <https://doi.org/10.18326/rgt.v14i2.301-316>
- Olsson, E. (2021). A comparative study of CLIL implementation in upper secondary school in Sweden and students' development of L2 English academic vocabulary. *Language Teaching Research*, 29(1), 7–32. <https://doi.org/10.1177/13621688211045000>
- Omer, W. K. H., Mohamed, A. M., & Al-Khresheh, M. H. (2024). The integration of English language skills in business education: Insights from Accounting in the Saudi context. *Journal of Teaching in International Business*, 35(3–4), 130–158. <https://doi.org/10.1080/08975930.2025.2452529>
- Purwanto, M. B., & Despita. (2023). The implementation of English online learning in rural-area. *Channing: Journal of English Language Education and Literature*, 8(1), 11–18. <https://doi.org/10.30599/channing.v8i1.1804>
- Reitbauer, M., Fürstenberg, U., Kletzenbauer, P., & Marko, K. (2022). Teaching is therapy for me. The subjective wellbeing of Austrian ICLHE teachers: Learning to balance challenges and resources through teacher development. *Innovation in Language Learning and Teaching*, 16(4–5), 366–380. <https://doi.org/10.1080/17501229.2022.2064468>
- Rieder-Bünemann, A., Julia, H., & Smit, U. (2022). 'Who would have thought that I'd ever know that!': subject-specific vocabulary in CLIL student interactions. *International Journal of Bilingual Education and Bilingualism*, 25(9), 3184–3198. <https://doi.org/10.1080/13670050.2021.2020211>
- Rohmah, A., Weano, M., Rahmah, M., & Kuspiyah, H. R. (2023). An analysis of student's Javanese language interference in pronunciation of English. *Channing: Journal of English Language Education and Literature*, 8(1), 19–26. <https://doi.org/10.30599/channing.v8i1.2172>
- Ruiz de Zarobe, Y. (2025). *Content and language integrated learning (CLIL)*. Cambridge University Press. <https://doi.org/10.1017/9781009439251>
- Sampaio, C., Régio, M., & Morgado, M. (2021). Implementing Integrated Content and Language in higher education in accounting classes: Implication for international business teaching. *Journal of Teaching in International Business*, 32(3–4), 236–261. <https://doi.org/10.1080/08975930.2022.2033668>
- Satayev, M., Balta, N., Shaymerdenovna, I. R., Fernández-César, R., & Alcaraz-Mármol, G. (2022). Content and language integrated learning implementation through team teaching in biology lessons: A quasi-experimental design with university students. *Frontiers in Education*, 7(March), 1–11. <https://doi.org/10.3389/educ.2022.867447>
- Savina, E., Fulton, C., & Beaton, C. (2025). Teacher emotional competence: A conceptual model. *Educational Psychology Review*, 37(2), 40. <https://doi.org/10.1007/s10648-025-10018-2>

Susilawati^{1*}, Rina Riniawati², Nurhasanah Halim³, Retno Dwigustini⁴, Ali Satri Efendi⁵

- Schotten, M., Aisati, M. el, Meester, W. J. N., Steinginga, S., & Ross, C. A. (2017). A brief history of Scopus: The world's largest abstract and citation database of scientific literature. In F. J. Cantu-Ortiz (Ed.), *Reserach analytics* (1st ed.). Auerbach Publications. <https://doi.org/10.1201/9781315155890>
- Shen, S., Tang, T., Pu, L., Mao, Y., Wang, Z., & Wang, S. (2024). Teacher emotional support facilitates academic engagement through positive academic emotions and mastery-approach goals among college students. *Sage Open*, 14(2), 21582440241245370. <https://doi.org/10.1177/21582440241245369>
- Smit, U., & Finker, T. (2022). Topicalizing language in CLIL teaching at technical colleges: A micro-level analysis of language-related episodes (LREs). *English for Specific Purposes*, 68, 102–115. <https://doi.org/10.1016/j.esp.2022.07.004>
- Villabona, N., & Cenoz, J. (2022). The integration of content and language in CLIL: A challenge for content-driven and language-driven teachers. *Language, Culture and Curriculum*, 35(1), 36–50. <https://doi.org/10.1080/07908318.2021.1910703>
- Wang, Y. (2024). An interactive online educational environment to reduce anxiety, improve emotional well-being, and critical thinking for college students. *Acta Psychologica*, 248(August), 104347. <https://doi.org/https://doi.org/10.1016/j.actpsy.2024.104347>
- Whalley, B., France, D., Park, J., Mauchline, A., & Welsh, K. (2021). Towards flexible personalized learning and the future educational system in the fourth industrial revolution in the wake of Covid-19. *Higher Education Pedagogies*, 6(1), 79–99. <https://doi.org/10.1080/23752696.2021.1883458>
- Wilkinson, R., & Gabriëls, R. (2021). The untapped potentials of EMI programmes. The Dutch case. *System*, 103(December), 102639. <https://doi.org/10.1016/j.system.2021.102639>
- Yang, W., & Yang, L. (2022). Evaluating learners' satisfaction with a distance online CLIL lesson during the pandemic. *English Teaching & Learning*, 46(2), 179–201. <https://doi.org/10.1007/s42321-021-00091-5>
- Yufrizal, H. (2021). The impact of project based-CLIL on students' English proficiency. *Journal of Education and Learning (EduLearn)*, 15(1), 11–18. <https://doi.org/10.11591/edulearn.v15i1.15692>
- Zhu, Yan, Liu, Yue, Yang, Nana, & Newton, Jonathan. (2023). Changing teacher educator cognition within a collaborative teacher education programme for CLIL: A case study in China. *Language Teaching Research*, 13621688231179512. <https://doi.org/10.1177/13621688231179513>