

Bridging the Gap: Reviewing Assessment Literacy of Teachers and Learners in Asian Content and Language Integrated Learning Classrooms

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Abstract

Aim/Purpose: This article examined alignment and persistent mismatches between Teacher Assessment Literacy Frameworks (TALF) and Student Assessment Literacy Frameworks (SALF) within Asian Content and Language Integrated Learning (CLIL) classrooms. By synthesizing the 10 core empirical studies alongside broader educational literature, it highlights key principles and structural gaps between these frameworks. By evaluating the similarities, differences, and systemic boundaries within these models through a socio-cognitive lens, this study outlines clear directions for further research and pedagogical practices aimed at bridging the gap between TALF and SALF in bilingual educational classrooms.

Introduction/Background: CLIL has gained significant attention across Asian educational contexts. This approach features a dual focus, simultaneously developing students' subject knowledge and second language proficiency. However, the success of CLIL is heavily influenced by the role of assessment literacy in the instructional and evaluative processes of both educators and students. While the alignment between Teacher Assessment Literacy (TAL) and Student Assessment Literacy (SAL) is necessary to develop an effective pedagogical framework, this relationship remains under-researched. Most current studies have focused on investigating and developing the principles and characteristics of TALF, whereas few explore CLIL students' perspectives to construct a comprehensive SALF.

Methodology: This scoping review followed the methodological framework established by Arksey and O'Malley (2005). Specifically, a systematic literature search was conducted across three major international databases: Scopus, Web of Science, and ERIC. To achieve this, the search targeted articles published between 2020 and 2025 by combining keywords using Boolean operators, including CLIL, bilingual education, Teacher Assessment Literacy (TAL), Student Assessment Literacy (SAL), assessment alignment, and assessment literacy framework. By applying strict selection criteria, the researchers collected a core dataset of 10 primary empirical studies (qualitative, quantitative, and mixed methods) that strictly focused on Asian educational settings. Additionally, foundational books and studies from outside Asia were intentionally excluded from this core dataset during screening but were utilized during synthesis to provide theoretical support and global comparisons. Finally, the 10 core studies were analyzed using thematic coding to map key concepts and patterns across teacher and student assessment literacy frameworks, organizing the final findings into main themes.

Findings: This review of existing studies revealed five major themes based on the characteristics and gaps of both TALF and SALF in Asian CLIL classrooms. The existing literature identified several key principles of both TAL and SAL. TAL mainly focused on teachers' knowledge of assessment purposes and strategies, as well as the influence of contextual factors. In contrast, SAL emphasized students' understanding of assessment purposes, their behavioral actions to engage in assessment processes, and their attitudes toward assessment. Furthermore, TAL and SAL shared several aligned principles, including a mutual understanding of assessment objectives, collaborative implementation of feedback, and an awareness of

how contextual factors influence assessment literacy. Despite these three areas of alignment, the review also revealed important mismatches between TAL and SAL in CLIL, particularly regarding assessment strategies and emotional workloads. Additionally, existing SAL frameworks do not fully explain how students experience or respond to CLIL assessment practices. Finally, many studies were conducted in relatively homogeneous educational contexts; as a result, the influence of multilingual backgrounds and cultural values on assessment literacy remains underexplored.

Contribution/Impact on Society: This study enriches the literature by offering a comprehensive, side-by-side comparative matrix of teacher and student assessment literacy frameworks in Asian CLIL classrooms. By identifying key alignments and socio-emotional mismatches, this review provides a clear foundation for developing more balanced, collaborative evaluation models. Ultimately, these insights help curriculum developers and educational policymakers design more equitable, transparent, and context-sensitive assessment practices that support sustainable bilingual education.

Recommendations: This review suggests targeted recommendations for both educators and researchers in CLIL settings. CLIL teachers should explicitly communicate their assessment purposes, rubrics, and underlying criteria to students, thereby scaffolding the evaluative process and allowing students to formulate clear expectations. This collaborative communication transforms assessment into a shared cultural tool, reflecting students' actual academic performance rather than forcing them to merely comply with unfamiliar assessment formats. Researchers are also encouraged to investigate both students' and teachers' perspectives related to assessment literacy in multilingual CLIL classrooms, particularly regarding how diverse first languages and local cultural expectations shape classroom evaluations.

Research Limitations: Despite the significant insights that this review provides, it also has some limitations. First, it reviewed a limited number of studies published between 2020 and 2025, which may not represent the full historical range of research related to assessment literacy frameworks in Asian CLIL contexts. Second, most of the studies used to analyze these principles were focused on Asian educational settings, which may limit the direct generalizability of findings to Western or alternative regional educational systems. Finally, this review based its conceptual framework and critical review on the existing literature rather than primary empirical field data.

Future Research: Future studies in Asian CLIL classrooms should investigate learners' phenomenological perspectives on alternative assessment strategies and tools and compare them systematically with teachers' views. Such work would help refine SALF so that it better reflects CLIL-specific linguistic demands. In addition, more longitudinal research is needed to investigate TAL and SAL in highly diverse, multilingual CLIL classrooms, especially looking at how linguistic diversity and local cultural traditions influence formative assessment processes and long-term learning outcomes.

Keywords: *Assessment literacy, assessment framework, CLIL, assessment alignment*

Introduction

In recent years, Content and Language Integrated Learning (CLIL), which aims to foster students' academic content knowledge and second language acquisition simultaneously, has spread rapidly across Asian countries. Depending on different educational settings and purposes, CLIL is often implemented as a standalone program or integrated into local school curricula. In these educational settings, while teachers are expected to teach both subject matter and second language knowledge (typically English), students learn academic content through a second language (Liu et al., 2023; Lo & Leung, 2022). By the end of the program, students in CLIL courses are expected to develop both subject knowledge and second language proficiency. Although CLIL programs offer several potential benefits for learners, they often face different challenges and barriers in terms of instructional priorities and effective student evaluation.

While many scholars and studies have focused on suggesting effective teaching strategies for balancing both content and language instruction, comparatively less attention has been paid to how assessment is understood and experienced by both teachers and students. In particular, the alignment between teachers' and students' assessment literacy in CLIL classrooms remains underexplored.

Teachers' Assessment Literacy (TAL) is often defined as teachers' understanding of assessment principles and their abilities to apply that understanding to evaluate learners' academic performance in many different aspects (Xu & Brown, 2016). In CLIL contexts, assessment becomes extremely complex because both learners' academic knowledge and target language skills need to be evaluated simultaneously. Moreover, limited second-language proficiency can hinder learners' actual understanding of content, and teachers face challenges in teaching and preparing students for increasing linguistic and academic demands at higher educational levels (Kruawong & Imsa-ard, 2024; Lo & Fung, 2020). Additionally, CLIL teachers report several misalignments and barriers regarding the focus of assessment. These include challenges in clearly separating a student's content understanding from their language skills. Furthermore, assessment practices are often inconsistent because they depend heavily on whether an individual teacher focuses more on content or on language (Lo & Leung, 2022; Mahan, 2022; Villabona & Cenoz, 2022). To address these challenges and provide suggestions, many scholars have developed Teacher Assessment Literacy Frameworks (TALFs) tailored to CLIL settings, including explanations of major principles and the relationship among them. These TALFs and explanations were reviewed, discussed, and compared to Student Assessment Literacy Frameworks (SALFs) as the primary objective of this review.

Although Student Assessment Literacy (SAL) has received less systematic attention in Asian CLIL research, some scholars have studied and defined it in different educational settings to understand the impacts of assessment on students' well-being. Despite some differences in domains, key framework factors, and dimensions, SAL generally refers to a student's understanding, abilities, and attitudes. These qualities help students recognize assessment types and purposes, participate actively in the assessment process, and apply assessment results as feedback to support their own learning (Chan & Luo, 2021; Hannigan et al., 2022; Yang et al., 2025). However, existing SAL frameworks are typically developed for general educational settings rather than for CLIL contexts specifically, where educational settings affect students' perceptions, attitudes, and actions in assessment. As a result, these frameworks may not fully reflect the unique challenges that CLIL students face when simultaneously demonstrating both content knowledge and language proficiency. Previous research has also shown that students tend to comply with and receive the assessment passively, such as viewing assessment as punishment, or not sufficiently engaging in self- or peer-assessment practices, rather than actively participating and using assessment as a learning tool (De la Barra et al., 2018).

While the TALF proposed by Lo and Leung (2022) was developed and visualized to give teachers an overview, knowledge, and guidance on producing assessment materials and conducting assessment processes in CLIL, the SALF was not clearly composed for the specific setting of CLIL. Most studies give the general elements to identify and develop the SAL frameworks without emphasizing educational settings (or CLIL), such as "dimensions" by Chan and Luo (2021), "domains" by Hannigan et al. (2022), or "components" by Yang et al. (2025). Therefore, this raises critical questions about whether current SALFs are suitable, relevant, or applicable for understanding students' perspectives, practices, and attitudes toward assessment in CLIL classrooms. Because teachers and students hold differing views about assessment literacy (Zhu & Evans, 2024), this disconnection and misalignment directly undermine assessment effectiveness, creating unfair challenges and unnecessary burdens for both groups. In this study, the "gap" between TAL and SAL refers to the limited integration between teachers' assessment design and students' understanding, engagement, and use of assessment processes in CLIL contexts.

Against this backdrop, rather than examining TAL and SAL in isolation, this article systematically integrated findings from diverse empirical methodologies in Asian CLIL contexts. By doing so, it maps out the theoretical landscape, uncovers operational gaps, and offers a unified perspective to guide future

classroom practices and policy designs. To identify related studies in major academic databases, such as Google Scholar, Scopus, and Google Books, the researchers used keywords related to CLIL, including teacher assessment literacy, student assessment literacy, assessment literacy framework, and CLIL assessment literacy. While most of the literature this study reviewed was related to the TAL and SAL of Asian CLIL classrooms, it also cited references from broader educational contexts to support the theoretical literature. By examining existing TAL and SAL frameworks together, this review sought to: (a) highlight the similarities, differences, and gaps between TAL and SAL, and (b) suggest directions for further research and practice aimed at bridging the gap between TAL and SAL in CLIL classrooms. Through this comprehensive synthesis, the paper is expected to enrich the existing literature on how assessment principles are demonstrated, challenged, and potentially developed in CLIL classrooms across Asia.

Methodology

To ensure a transparent, systematic, and replicable synthesis of the literature, a scoping review design was adopted in this study. This approach follows the five-stage methodological framework established by Arksey and O'Malley (2005) and advanced by Levac et al. (2010). This protocol is ideal for mapping key concepts and research approaches within an emerging field. Specifically, it examined the intersection of TAL and SAL in Asian CLIL and bilingual environments. A systematic literature search was conducted across three international databases: Scopus, Web of Science, and the Education Resources Information Center (ERIC). The search window was limited to articles published between 2020 and 2025 to capture contemporary developments in dual-focused classroom evaluation. Peer-reviewed primary empirical articles published in English were retrieved using Boolean operators to combine targeted terms: ("CLIL" OR "content and language integrated learning" OR "bilingual education") AND ("teacher assessment literacy" OR "TAL" OR "student assessment literacy" OR "SAL" OR "assessment alignment" OR "assessment literacy framework").

To maintain an unbiased selection, explicit boundaries were applied during the screening stages:

- Inclusion Criteria: (a) Peer-reviewed primary empirical research articles published in English; (b) Published within the strict 2020–2025 chronological window; (c) Geographically and educationally situated within Asian instructional settings; (d) Explicitly collected data on components of TAL, SAL, or their operational alignment within a dual-focused environment.
- Exclusion Criteria: (a) Dissertations, book reviews, secondary scoping reviews, meta-analyses, or non-peer-reviewed gray literature; (b) Studies focusing exclusively on monolingual primary language (L1) traditional classrooms or general EFL contexts lacking content integration; (c) Conceptual frameworks or theoretical overviews lacking primary, localized classroom field data; (d) Studies situated outside of the Asian educational landscape.

Applying these parameters ensured that a highly refined dataset of 10 primary empirical studies was retained for systematic analysis (Table 1). This core dataset included only qualitative, quantitative, or mixed methods studies with first-hand classroom data from Asian CLIL contexts. To keep a strict regional and methodological focus, the researchers excluded general global overviews, studies from outside Asia, and secondary literature reviews during the screening phase. Crucially, foundational theoretical books and empirical studies from non-Asian settings were integrated later within the Introduction, Main Findings, and Discussion sections. While these external sources were excluded from the core data matrix, they were necessary to provide theoretical support and cross-regional comparisons. They also highlighted how localized Asian findings related to global trends in bilingual assessment. This approach kept the review strictly focused on Asia while anchoring the analysis within a broader global framework.

Table 1 *Methodological Summary Matrix of the 10 Core Reviewed Studies*

Article No.	Author/s and Year of Publication	Settings	Methodology & Participants	Focus (SAL/TAL/ Both)
1	Chan, C. K. Y., & Luo, J. (2021)	Hong Kong	- Mixed-methods survey and focus groups - 2,150 Undergraduate University students	SAL
2	Izzah, N., & Wulandari, S. (2023)	Indonesia	- Qualitative case study - Junior High School Science teachers	TAL
3	Kao, Y. T. (2024)	Taiwan	- Mixed-methods classroom inquiry - Secondary School CLIL teachers and students	Both
4	Kruawong, T., & Imsa-ard, P. (2024)	Thailand	- Qualitative study - Secondary School STEM teachers	TAL
5	Liu, J. E., & Lo, Y. Y. (2025)	Hong Kong	- Mixed-methods exploration - Primary & Secondary bilingual teachers	TAL
6	Lo, A. W. T. (2025a)	Hong Kong	- Qualitative study - Secondary School CLIL students	SAL
7	Lo, A. W. T. (2025b)	Hong Kong	- Quantitative study - Secondary Education student cohorts	SAL
8	Lo, Y. Y., & Fung, D. (2020)	Hong Kong	- Mixed-methods study - Secondary subject teachers & students	Both
9	Lo, Y. Y., & Leung, C. (2022)	Hong Kong	- Qualitative study - In-service secondary CLIL instructors	TAL
10	Nanni, A., & Hale, C. C. (2020)	Japan	- Mixed-methods case study - University students & instructors	Both

Main Findings and Thematic Synthesis***Teachers' Assessment Literacy Frameworks***

According to Xu and Brown (2016), TAL refers to teachers' insights and knowledge about assessment in general, and their capacities to apply this knowledge to evaluate students' learning processes and achievements. In CLIL settings, it requires a complex process that integrates multiple elements to design, implement, and interpret assessments effectively. Therefore, several studies on TAL in Asian CLIL programs have identified and reported key characteristics that contribute to understanding its principles. In the literature, three major principles consistently emerge: knowledge of assessment objectives and purposes, knowledge of assessment tools and materials, and knowledge of contextual and cultural mediation factors (Izzah & Wulandari, 2023; Kao, 2024; Kruawong & Imsa-ard, 2024; Liu et al., 2023; Lo & Fung, 2020; Lo & Leung, 2022).

Assessment Purposes and Objectives

One core principle of TAL is teachers' understanding of assessment purposes and objectives in designing and implementing particular assessments. In CLIL classrooms, teachers face a distinct practical

problem: they must decide whether an assessment measures content mastery, second-language development, or both at the same time. Rather than treating these targets as isolated goals, current research has suggested that identifying these specific purposes must happen before selecting evaluation methods. For instance, the findings of Liu et al. (2023), Lo and Fung (2020), and Lo and Leung (2022) collectively converge on a single requirement: clarifying the exact target (content understanding or language proficiency). This allows teachers to select materials that accurately reflect actual learning outcomes.

Reflecting genuine learning outcomes is highly complex in CLIL contexts because student performance is simultaneously influenced by content understanding and second-language proficiency. This creates an interpretive dilemma for teachers. As noted by Lo and Leung (2022), it is difficult to identify whether students are struggling with content knowledge itself, or with the limited second-language ability that they are using to demonstrate understanding. Therefore, a clear grasp of assessment purposes helps CLIL teachers to move past basic grading, allowing them to select appropriate tools and interpret student performance more accurately.

Assessment Strategies and Tools

Another key principle of TAL involves teachers' knowledge of appropriate assessment strategies and tools in evaluating students' academic performance. Research suggests that assessment in CLIL contexts cannot rely on traditional methods; instead, it must be multimodal, dynamic, formative, and learning-oriented to provide a rich understanding of student capabilities. Recent studies investigating teacher perspectives have highlighted a shift toward combining multiple modes of representation. For example, while Kruawong and Imsa-ard (2024) and Liu and Lo (2025) focused on utilizing visual, oral, and written forms through interactive problem-solving to capture linguistic and cognitive growth, Kao (2024) expanded this by emphasizing formative approaches like self-assessment, targeted questioning, and constructive feedback. Synthesizing these perspectives shows that effective TAL requires balancing these various strategies, enabling teachers to evaluate student learning more comprehensively.

Contextual and Cultural Mediation Factors

A third important principle of TAL concerns a knowledge of contextual and cultural mediation factors, which influence how assessments are designed, implemented, and interpreted in different educational settings. Research has indicated that students' situational, social, and cultural backgrounds, as well as curriculum demands, shape how assessments are used, adjusted, and interpreted (Liu et al., 2023; Lo & Leung, 2022). In other words, CLIL teachers often adapt or modify assessment tasks, procedures, and interpretations to suit the specific needs of students. Contextual factors such as students' cultural backgrounds, classroom norms, language abilities, and curriculum requirements may all influence how assessment results are understood and used to modify pedagogical practices. Consequently, teachers need to recognize the limitations of certain assessment methods and adjust their approaches accordingly to support students' learning more effectively.

An example that clearly reflects contextual factors and adaptation in assessments can be seen in the case study conducted by Izzah and Wulandari (2023) in Indonesian CLIL classrooms. Their study highlights a practical strategy for managing the dual focus of CLIL: teachers utilized formative assessment platforms to evaluate and guide content understanding during most lessons, while English language skills were assessed indirectly through observation during discussions and presentations. Furthermore, a clear tension between content and language was managed by presenting some assessment questions in the native language (L1) to safeguard content understanding, while using English (L2) to assess content and language skills simultaneously. Teachers also provided explicit support, such as explaining English questions before and during tests, to help students showcase their content knowledge and L2 abilities.

Overall, this case study illustrates how CLIL teachers actively adjust assessment procedures to maintain a balance between evaluating content knowledge and language development in real classrooms.

TAL Framework for CLIL Contexts

Because general assessment frameworks lack a discipline-specific focus for specialized environments like CLIL, Lo and Leung (2022) proposed a new framework to illustrate key principles and provide guidance tailored to bilingual classrooms. This framework shows the relationship between teachers' conceptions, teachers' practices, and environmental factors that influence classroom application. Different from other frameworks, Lo and Leung (2022) placed teacher conceptions at the core of the new TALF. They built up key principles to illustrate a holistic view of assessment literacy, connect knowledge components with practices, and explicitly include contextual mediation.

The TALF proposed by Lo and Leung (2022) outlines key components (teacher conceptions, teacher practices, and potential contextual factors) and relationships among them. While teacher conceptions are defined by knowledge of assessment purposes, objectives, assessment materials, assessment interpretation, and action-taking, potential contextual factors then influence how these conceptions are translated into practical assessment practices in CLIL classrooms. Structurally, this framework operates as an interactive system where the teacher's internal understanding sits at the center, surrounded by external classroom actions, while local environmental constraints continuously shape how these two components influence each other.

Students' Assessment Literacy Frameworks

SAL is broadly referred to as students' understanding, abilities, and attitudes that enable them to interpret, participate in, and make effective use of assessment processes to enhance their learning (Yang et al., 2025). Like TAL, SAL stresses the importance of students' understanding and skills that enable them to recognize different assessment forms and purposes, as well as their attitudes toward assessment results and self-learning processes (Chan & Luo, 2021; Hannigan et al., 2022; Holmes, 2024; Leontjev & deBoer, 2020).

Throughout the literature, three interconnected dimensions of SAL are commonly identified as understanding, actions (or abilities), and attitudes toward assessment. By clearly understanding the assessment's purposes and objectives, students can take an active role in assessment through engagement strategies, while a positive attitude guides students' monitoring and directing their own learning. In CLIL settings, SAL is more complicated to identify and understand because of the dynamic link between cognitive tasks and language requirements, the importance of fairness and equity, and difficulties in interpreting content and language development (Lo & Fung, 2020; Mearns et al., 2025; Nikula et al., 2023).

Understanding Assessment Purposes and Procedures

One of the first principles of SAL involves students' knowledge of assessment purposes, objectives, and procedures. Especially in the CLIL context, where assessment does not simply focus on academic understanding but also targets language skills, students' performance is highly affected by their awareness of assessment criteria and how the assessment is conducted (Ladjel & Hanifi, 2025; Lo & Fung, 2020). When students clearly understand the dual focus of an assessment, they can change their learning strategies to get the best results.

This critical awareness becomes even more necessary as students move to higher academic levels. At these advanced stages, learners face the double burden of tracking sophisticated content concepts while simultaneously building the advanced target language skills required to express that knowledge (Lo & Fung, 2020).

Students' Actions and Self-Regulatory Processes

The second principle of SAL relates to student abilities and actions within the assessment process, which include evaluating performance results, acting on feedback, and monitoring independent learning. An active conceptual debate exists regarding how these actions should be categorized. On the one hand, Lo (2025a) synthesized these actions as an integrated, single system of “self-regulatory processes,” through which CLIL students plan, monitor, assess, and use feedback to enhance academic performance. On the other hand, Yang et al. (2025) separated this action component into two distinct dimensions: physical actions (evaluating and using feedback) and cognitive actions (student awareness of personal responsibility). Despite these differing structural perspectives, both models ultimately agree on the same conclusion: active student engagement is the foundation of the student assessment literacy framework (SALF).

However, these self-regulatory processes, including both physical and cognitive actions, are strongly influenced by metacognitive skills, mindsets, and learners' beliefs in their own capabilities. As a result, many students encounter difficulties maintaining their self-regulation processes. Likewise, Lo (2025a) highlighted a major problem here, observing that students who manage their own learning effectively still face language issues more than content challenges in the CLIL classroom. This reveals a clear gap: there is an urgent need for language-supportive assessment (Lo, 2025b) and for raising student awareness about it. Furthermore, this links directly to the findings of Nanni and Hale (2020), who argued that self-assessment helps students reach curriculum goals because it keeps them actively and independently involved in both content and language learning. Therefore, these combined findings show a clear need to integrate self-assessment into the CLIL SALF, ensuring learners monitor their own progress and take ownership of their learning.

Attitudes Toward Assessment

The third principle of SAL concerns students' attitudes toward assessment, including their confidence, responsibility, and awareness of the emotional impacts of assessment results. Research emphasizes that these affective elements directly steer a student's self-regulatory progress (Lo, 2025a; Yang et al., 2025). When grades or feedback trigger negative emotional impacts, the student's self-learning process often breaks down. In contrast, building self-confidence directly increases a learner's willingness to monitor their own progress and fix mistakes. Therefore, developing a strong SALF requires explicit awareness of these emotional effects alongside traditional cognitive skills.

SAL Framework

Overall, the three key principles of understanding, abilities, and attitudes represent different layers and a holistic understanding of SAL. In this concept, the SALF proposed by Yang et al. (2025) has clearly captured and illustrated these elements by mapping specific behavioral expectations for each layer: “knowledge about the nature” defines Understanding, “skills for evaluating work” handles Actions, and “self-confidence” forms the baseline for Attitudes. Under this model, students must first understand the purpose, expectations, and procedures of assessment. They then demonstrate skills to comply with assessments, use the assessment feedback, and develop a sense of personal accountability in their learning. Lastly, they need to develop self-confidence to engage actively, take ownership, and manage the emotional and social impacts of assessment.

While Yang et al. (2025) offer a strong baseline framework, their model remains highly generalized and fails to account for the linguistic and cultural realities of multilingual education. Because it treats assessment as a universal process independent of classroom context, the framework ignores the specific content-and-language friction found in bilingual settings. This model sets up a hierarchical, three-tiered layer where cognitive understanding forms the base, practical behavioral actions occupy the middle, and internal affective attitudes act as the top layer directing the overall system. Consequently, integrating

CLIL-specific contextual factors into SAL frameworks is necessary to create a stronger, more effective alignment with the TAL framework proposed by Lo and Leung (2022).

Discussion and Implications

When viewed through both cognitive and sociocultural perspectives, the alignment and mismatches between TAL and SAL show that assessment is not just a set of technical tools. Instead, it is a social and linguistic process shaped by classroom interaction, language output, and environmental pressures.

As many studies discussed above have described the key principles and characteristics of both TAL and SAL in Asian CLIL classrooms, the first converging principle between the two groups is a shared understanding of assessment objectives and purposes. The knowledge of assessment objectives refers to what is assessed (content knowledge, language skills, or both), while the assessment purposes refer to why the assessment is conducted (grading, feedback, diagnostics, etc.) in CLIL settings (Ladjel & Hanifi, 2025; Lo & Leung, 2022; Yang et al., 2025). As CLIL curricula emphasize, students are encouraged to produce and expose themselves to the second language as much as possible by using it to learn different subjects (Swain, 2005, for the Output Hypothesis). Therefore, alignment in assessment objectives and purposes between the two groups (teachers and students) reduces misunderstandings and misalignment of assessment focus (Lo & Fung, 2020; Lo & Leung, 2022). From a sociocultural lens, this alignment creates a shared psychological tool in the classroom, meaning that when external evaluative standards are internalized by both actors, they serve as a shared cognitive roadmap. As a result, teachers can select the right and effective assessment tools and materials, as well as interpret results correctly. Meanwhile, students can better prepare for both content and language demands when they understand the specific criteria and methods of evaluation. When teachers and students share a clear, common understanding of what is being assessed and why, CLIL assessments become more transparent, more equitable, and ultimately more effective.

Furthermore, the second shared principle focuses on how CLIL teachers and students interpret assessment results and act on them. For teachers, it involves a comprehensive process that includes reviewing, interpreting, and adjusting the assessment to ensure that it is fair, valid, and reliable in evaluating students' actual performances (Kruawong & Imsa-ard, 2024; Liu & Lo, 2025; Lo & Leung, 2022). By reviewing and interpreting the assessment results, teachers can identify patterns of students' performance, evaluate how well the teaching objectives have been achieved, and then modify teaching and assessment strategies.

From a sociocultural perspective, this feedback loop serves as a form of collaborative scaffolding within the classroom, operating directly within students' Zone of Proximal Development where a teacher's graded feedback transforms their potential ability into actual autonomous performance. For students, reviewing and interpreting the assessment results are also beneficial, especially in strengthening their self-regulation practices and self-responsibility to drive their own learning processes. Additionally, the constructive feedback provided by teachers, or gained through self-review of assessment results, provides students with opportunities to identify their weaknesses, not only in content understanding, but in their second-language production as well (Swain, 2005, regarding the constructive feedback of the Output Hypothesis). This process deepens synthesis because it shows that within CLIL settings, this feedback guides students in refining their understanding of content mastery while simultaneously developing the accuracy and complexity of their second-language production.

Additionally, the third area of convergence is the influence of contextual and socio-cultural factors on both TAL and SAL. Several studies have identified these potential factors as social or cultural elements, curricular objectives, and institutional identity (Liu et al., 2023; Lo & Leung, 2022; Yang et al., 2025). By recognizing the impact of social and contextual factors on TAL, CLIL teachers can provide a fair and balanced assessment for students from diverse social and cultural backgrounds. Moreover, teachers can also provide positive interaction environments for students when they are aware of these factors. For

students, awareness of the effects of assessment and the ability to manage the emotional and social effects of assessment shape their positive emotional responses and create a supportive environment for classroom interaction. In addition, in the supportive assessment environments that promote interaction, students can improve their second language acquisition (Long, 2022, for the “Interaction Hypothesis”) through exchanging content knowledge and practicing second-language skills. Interpreting this through a sociocultural lens, a supportive, low-anxiety environment allows social mediation to happen naturally, meaning language acquisition is accelerated when learners actively negotiate meaning to solve communication breakdowns. To sum up, recognizing these contextual influences positively supports CLIL teachers in designing assessments that protect students’ well-being while still encouraging rich linguistic and content interaction.

Despite these areas of alignment, this review also revealed important mismatches between TAL and SAL in CLIL, particularly regarding assessment strategies. Most TAL studies have emphasized the potential benefits of dynamic and multimodal assessments, particularly formative assessments, which were expected to increase the involvement, interaction, and performance of students in the evaluation process (Izzah & Wulandari, 2023; Kao, 2024; Kruawong & Imsa-ard, 2024; Liu & Lo, 2025). However, this suggestion was built mainly on teachers’ perspectives (through interviews or classroom observation); very few studies examined students’ perspectives on how assessment strategies affect their learning process and outcomes. While the SALF proposed by Yang et al. (2025) gives a general view to understand the characteristics of SAL, it does not provide any specific illustration of contextual factors. By ignoring these local environmental factors, the current framework fails to capture the unique cognitive and emotional stress CLIL students face when being evaluated on content and language simultaneously. This mismatch exists because current frameworks treat assessment as a universal process rather than a localized, socially mediated activity. Future studies in Asian CLIL classrooms should therefore investigate learners’ perspectives on assessment strategies and tools and compare them systematically with teachers’ views. Such work would help refine SALF so that it better reflects CLIL-specific demands.

Moreover, the second major gap concerns the limited attention to multilingual and multicultural CLIL contexts in current TAL and SAL research. In many CLIL studies reviewed above, participants were drawn from relatively homogeneous contexts (same L1, shared local culture). As a result, these studies do not represent all CLIL contexts in Asia, where students are more linguistically and culturally diverse. This is a significant theoretical oversight when viewed through Vygotsky’s (1991) foundational sociocultural theory (SCT). The native language (L1) is not a barrier to learning; it functions as a critical cognitive, emotional, and communicative tool to support students in handling complex or collaborative activities with their classmates (Li, 2023; Swain & Lapkin, 2013; Wu, 2018, for L1 roles in SCT). Likewise, cultural principles support learners with the “symbolic tools” such as language, symbols, and social conventions that shape cognitive and learning processes (Lantolf & Beckett, 2009; Rahmatirad, 2020; Vygotsky, 1991, for “cultural values and roles” in SCT). Collectively, these findings suggest that different L1s and cultural expectations may affect how students interpret assessment criteria, fairness, and feedback, while teachers may need different assessment strategies when students do not share the same L1. Future research should therefore examine TAL and SAL in multilingual CLIL classrooms, focusing on how L1 use and cultural norms shape students’ understanding of assessment and their ability to demonstrate both content knowledge and language proficiency.

To translate these findings into everyday classroom realities, CLIL teachers should implement direct, actionable strategies that move beyond general recommendations. First, teachers should create dual-focus rubrics together with their students before tasks begin, clearly separating content grading (such as drawing a science cycle) from language grading (such as using correct vocabulary). Displaying these expectations visually reduces students’ anxiety and lowers their mental workloads. Second, because a student’s native language (L1) is an important learning tool, teachers should intentionally allow students to use their L1 during peer reviews or self-reflections to ensure they deeply understand the subject

content before producing the final work in the target language (L2). Lastly, teachers should move away from traditional, text-heavy tests which often confuse poor language skills with poor subject knowledge. Instead, classrooms should use varied, multimodal methods, such as recorded oral explanations, labeled diagrams, or hands-on projects, so that diverse students can show what they know without getting blocked by language barriers.

Conclusion and Recommendations

This study offers valuable insights into TAL and SAL within the unique context of CLIL programs in Asia. It synthesizes research on TAL and SAL in Asian CLIL contexts, highlighting both their areas of convergence and their points of divergence. Moreover, it also addresses the similarities, alignment, and persistent mismatch in the principles, characteristics, and applications between TAL and SAL. Most recent studies emphasize three key assessment-literacy principles for both teachers and students: knowledge of objectives and purposes, ability to interpret and use feedback, and awareness of contextual or socio-cultural factors before, during, and after assessment.

On the other hand, studies of TAL and SAL also show a distinct disconnect between assessment strategies and the significant CLIL contextual factors that form the student assessment framework. While most TAL studies suggest the need for and effectiveness of dynamic and multimodal assessment (more formative assessment) based on CLIL teachers' perspectives, fewer have investigated students' perspectives about this aspect of assessment strategies and tools. In addition, CLIL programs' contextual factors (focusing on both content knowledge and second language acquisition) and students' linguistic and cultural backgrounds have received little attention in current studies. Therefore, it is necessary and important for further studies to investigate CLIL students' experiences and perspectives to form a specific assessment framework that contains the elements of CLIL classrooms and assessment strategies or tools that maximize learning outcomes.

Most current studies have not heavily explored CLIL settings where students are multilingual and multicultural. Therefore, further research should focus on the impacts of these contextual factors, such as different first languages (L1s) and cultural values, which potentially interact with and influence SAL and self-regulatory engagement.

Author Contributions

Vo Truong Giang: Conceptualization, methodology, investigation, formal analysis, writing—original draft, writing—review and editing; **Atima Kaewsard:** Conceptualization, methodology, supervision, writing—review and editing

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