

Implementing CLIL: Introducing Safety and Health Education in English in Primary Schools in Chongqing

A report by UCL and the Chongqing High-tech Zone Research Group supported by the British Council China

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CONTENTS

PART 1 SUMMARY	6
PART 2 INTRODUCTION	8
Defining CLIL	8
Rationale for the study	9
PART 3 LITERATURE REVIEW	10
The recent development of Safety and Health Education in China	10
Research on language teacher agency in the CLIL context	11
PART 4 METHODS	13
Research questions	13
Participants and context	13
Data collection methods	14
Instruments and data analysis	14
Ethical considerations	16
PART 5 FINDINGS	17
Quantitative findings	17
Language teacher agency	17
CLIL implementation variability	19
English language proficiency	20
Teachers' overseas experiences	22
Teaching experience and expertise	23
Motivation and commitment	25
Learner engagement and learning outcomes	26
Pedagogical challenges and professional development needs in CLIL implementation	27
Institutional support for CLIL integration	29
Qualitative findings	30
Teacher autonomy in CLIL lessons	31
Effectiveness of CLIL lessons and language proficiency	32
Interdisciplinary collaboration in CLIL lessons	34
Teacher autonomy and professional development	34
PART 6 Summary of the findings and discussion	35
PART 7 Conclusion and recommendations	38
REFERENCES	40
APPENDIX	42

PART 1 SUMMARY

- **What is the study about?**

This one-year longitudinal study investigates the implementation of content and language integrated learning (CLIL) in Safety and Health Education across 68 primary schools in the Chongqing High-tech Zone, China. The aim is to take account of stakeholders' experiences with CLIL six months post-implementation. The emphasis is on engaging both students and teachers in CLIL for Safety and Health Education. By closely examining classroom-level practices, this study provides actionable insights for school, provincial, and national planning and policies. Recommendations emphasize participants' feedback and advocate for grassroots enhancements in educational materials and platforms.

- **Why was this report commissioned?**

The Chongqing Municipality Education Commission, in response to the National English Curriculum 2022, is to introduce a range of content-based English curricula in schools. This report was commissioned to investigate this introduction by collecting responses from Chinese school teachers of English and other stakeholders about their understanding of such CLIL curricula. Safety and Health Education, when delivered in English, may play an instrumental role in shaping students' holistic growth. This method not only equips students with vital knowledge and skills for their well-being but also offers an array of other benefits. By leveraging English as the instructional medium, schools in Chongqing can bolster students' and teachers' intercultural communication skills, tap into international resources, prepare students for global opportunities, enhance academic and language competencies, and foster international collaborations. This integrated approach ensures students are well-prepared to navigate the complexities of a globalised environment.

- **How was data for the report collected?**

An eclectic methodology was employed, incorporating three questionnaires, semi-structured interviews, and in-class observations (via video recordings). This multi-method approach sought insights from various stakeholders: CLIL teachers, school administrators, policymakers, and parents. The focus areas of the questionnaires and interviews included attitudes towards CLIL, recognized benefits and challenges, teaching methodologies, institutional backing, and overall insights. Classroom observations granted a close look at how CLIL was put into practice.

- **What did the project find?**

Analysing both quantitative and qualitative data over the initial six months revealed comprehensive insights into stakeholder experiences with this educational innovation. Understanding their perceptions is pivotal for appraising the successful enactment of CLIL.

- **What are the main recommendations of the report?**

The study concludes with proposals aimed at optimising CLIL Safety and Health Education to further benefit teachers and students alike.

PART 2 INTRODUCTION

In today's rapidly globalising educational landscape, the merging of language learning with content education is becoming an imperative. As schools and educators grapple with finding effective methods to provide holistic education, certain pedagogical approaches rise to prominence. One such method, which this report will delve into, is CLIL. Within the specific context of Chongqing's primary schools and the broader Chinese educational reform, understanding and utilising CLIL can offer transformative insights.

Defining CLIL

Content and language integrated learning (CLIL) is an educational approach that blends subject matter teaching with language instruction. Essentially, it enables students to learn a subject (like history, science, or in this case, health and safety) while simultaneously developing proficiency in a foreign language.

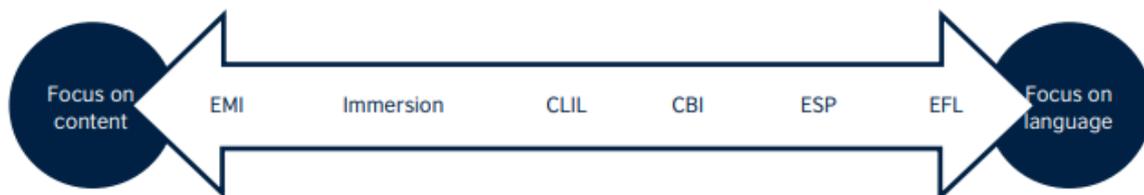


Figure 1: Continuum of CLIL in practice (adapted from: Thompson & McKinley, 2018)

EMI: English medium instruction, CBI: content-based instruction, ESP: English for specific purposes, EFL: English as a foreign language.

As shown in Figure 1, the goal of CLIL lies in its twofold mission:

Content-oriented objectives: Through CLIL, students grasp and engage with subject-specific content, concepts, and skills. It fosters critical thinking and problem-solving abilities as students navigate both the subject matter and language barriers.

Language-oriented objectives: While learning about a particular subject, students also enrich their language skills — vocabulary, grammar, syntax, and discourse — tailored to that subject. The

contextual learning environment enhances not just their linguistic prowess but also their ability to communicate ideas specific to the content being studied.

The essence of CLIL is not merely bilingual education but rather a synergistic approach that amplifies cognitive development and intercultural understanding. With the globalising trends in education, CLIL stands as a testament to the interwoven nature of language and content, underscoring the idea that language isn't just a medium of instruction but an integral component of content comprehension.

Rationale for the study

Set against the backdrop of China's growing emphasis on student Safety and Health Education, this report pioneers the development of innovative teaching materials to bolster Safety and Health Education in Chongqing schools. The focal point is the integration of English learning into this education via the CLIL curriculum. While China's educational renaissance over recent decades has witnessed an uptick in curricula spotlighting safety, well-being, and promoting mental health resilience, there remains an evident gap. Few initiatives synergise English language pedagogy with teacher training aimed at enhancing mental well-being and diminishing mental health adversities among school-going children. Our project delineates the nuances of executing school Safety and Health Education within the CLIL framework, meticulously set within the unique confluence of globalisation and the indigenous tenets of Chinese education.

PART 3 LITERATURE REVIEW

The recent development of Safety and Health Education in China

In the past three decades, China has significantly advanced its efforts to champion Safety and Health Education in schools. Prioritising student well-being and preparing them for potential dangers, several initiatives and policies have been introduced to fortify Safety and Health Education across educational establishments in China.

A landmark event in this context was the inauguration of the National Day for Primary and Secondary School Students' Safety Education in 1996. This annual event in March propels awareness about various safety dimensions and fortifies students' capabilities, enabling them to protect themselves in a myriad of circumstances. In 2002, the Ministry of Education (MOE) introduced the Guidelines for Psychological Health Education in Primary and Secondary Schools, highlighting the significance of mental health in augmenting safety education (MOE, 2002). A pivotal move came in 2021 when the MOE released the "Guideline to Life Safety and Health Education Materials for Primary and Secondary Schools", covering a plethora of topics from healthy living and mental health to disease prevention and public health emergency response (MOE, 2021). Both documents have been paramount in ensuring consistency and standardisation in Safety and Health Education across the spectrum.

A noteworthy enhancement is the incorporation of specific programmes within broader curricula across disciplines, including physical education, science, and social studies. This synthesis guarantees a well-rounded instruction, covering emergency handling, fire safety, personal hygiene, nutrition, and mental well-being. Taking a cue from this, Shanghai's Education Commission, in 2013, declared the inclusion of a course named the 'Public Safety Behaviour Guide', making it an integral part of the academic fabric from the first semester itself (State Council of PRC, 2013).

The emphasis on experiential learning and the amalgamation of contemporary technology is another milestone. Schools now host a variety of activities such as emergency drills, disaster readiness simulations, and personal safety workshops, enhancing students' hands-on experiences. Collaboration with local bodies, including public health agencies and non-profits, further supplements this practical approach. In this vein, the Ministry of Education has initiated diverse safety education and training activities, and numerous schools have employed interactive multimedia platforms and online tools to make learning more captivating.

The investment in teacher training, emphasising safety protocols and health education best practices, underscores the commitment to quality instruction. Concurrently, measures such as stricter safety regulations, regular inspections, and the establishment of emergency response plans demonstrate a drive towards safer school environments. The Measures on Safety Management of Primary and Secondary Schools and Kindergartens (Decree No. 23) specifically mentions enhancing assessment and guidance in school safety. Moreover, engaging teachers, parents, and the community through seminars and discussions highlights a collective effort in this endeavour.

This proactive approach in Chinese schools underscores a dedication to student welfare, exemplifying the significance of a secure and informed educational environment.

Research on language teacher agency in the CLIL context

Teacher agency in language instruction relates to educators' autonomy in shaping their teaching strategies based on their beliefs, values, and experiences (with both study and teaching). It's a dynamic concept, suggesting an interplay between the individual and their surroundings (Miller and Gkonou, 2018). In the realm of Second Language Acquisition, discussions on teacher agency are burgeoning, often interlinked with constructs like teacher identity, emotion, belief, and knowledge (Tao and Gao, 2021).

Several research works, such as Varghese et al. (2005) and Johnson (2009), have explored language teacher identity, touching upon critical issues like the role of non-native speaker teachers and the professional stature of language instruction. These studies offer insights into the conception of language teacher agency. Nias (1996), for instance, probed the nexus between emotions and teacher agency, emphasizing the external validation's impact on teachers' professional passion and commitment.

Contextual influences on teacher agency have been a focal point of numerous studies. For instance, Flores and Day (2006) delved into factors affecting teacher identity and agency, revealing the potent role of school culture and leadership. Echoing these findings, Tsui (2007) investigated the interrelation between teacher agency and societal structures, underscoring participation's centrality in shaping teachers' identity and agency. Teachers' study and teaching experiences have also been shown to influence their identity and agency in CLIL contexts, including China (see Liu & Sammons, 2021). A factor in need of exploration is the influence of CLIL teachers' study experiences *overseas* (see Rahmi, 2021, for an exploration of this influence on EFL teachers' identity construction in Indonesia).

Furthermore, motivation has also been explored as a factor influencing teachers' agency and approaches to CLIL, with implications for teacher education (Pappa et al., 2017). Kubanyiova (2020) elaborated on language teacher agency within second language teacher education, assessing the relevance of teacher training programmes. Works by scholars like Priestley, Biesta, and Robinson (2015) explore varied perspectives on teacher agency, focusing on its interplay with external elements such as research practices and institutional contexts. Barnard and Burns (2012), through diverse case studies, highlighted the autonomy language teachers exercise in moulding their instructional strategies according to students' needs and teaching environments. Such aspects are part of the broad concept of motivation, which also requires further investigation regarding its impact on teachers' approaches to CLIL.

PART 4 METHODS

- Questionnaire conducted with 297 educators and 1096 parents nationwide.
- Semi-structured interviews with 14 local teachers and policymakers
- Classroom observations involving 68 teachers and their students during CLIL lessons on safety and health.

This longitudinal study, spanning one year, examined the implementation of CLIL for Safety and Health Education in English across 68 primary schools located in the High-tech Zone of Chongqing, China. A multi-method approach was adopted, comprising survey questionnaires, semi-structured interviews, and classroom observations to collate insights from various CLIL stakeholders, such as teachers, school leaders, policymakers, and parents.

Research questions

This study aims to respond to the following research questions:

1. How does language teacher agency influence the implementation of CLIL teaching practices among primary school teachers in Chongqing, China?
2. How does a teacher's English proficiency influence their implementation of CLIL?
3. How does a teacher's study and teaching experiences affect their approach to CLIL?
4. How does a teacher's motivation impact their approach to CLIL?

Participants and context

Adopting an 'opportunity sampling' strategy (Rose et al., 2020), participants were voluntarily recruited. All 68 local EFL teachers, who were part of this study, also contributed to the course materials during a training session. These teachers subsequently underwent three intensive CLIL training courses, imparted by the project staff.

The chosen schools, although inexperienced in CLIL, aimed to enhance their students' English exposure. All these institutions are state-funded public schools situated in Chongqing's High-tech Zone and share analogous socio-demographic attributes. Notably, local international schools were exempted from this project due to their distinct educational practices. For the study's objectives, Year 1, Year 2, and Year 3 students were not incorporated due to their preliminary English proficiency and comprehension of safety and health content.

The participant schools demonstrated commitment by permitting their teachers to attend the project's training courses. They also allowed access to their classrooms for observations, tests, questionnaires, and interviews with various stakeholders.

Data collection methods

Data in this project were collected in three stages, encompassing both quantitative and qualitative instruments:

Questionnaires: as a primary quantitative technique, questionnaires were distributed at the outset to garner numerical data and to identify volunteers for the subsequent phase.

Classroom observations and interviews: these methods were instrumental in the second phase to present a comprehensive view, enhance the research's credibility, and amplify its reliability.

Instruments and data analysis

- **First Stage - Questionnaires**

Survey questionnaires were administered at three time points. First, a needs analysis questionnaire with 10 open- and closed-ended questions was given to all participating CLIL teachers at the beginning of the school year to gauge their attitudes and prior CLIL experiences.

Following the needs analysis questionnaire survey, two large-scale questionnaires were designed targeting multiple key stakeholders in CLIL practice, including teachers, school leaders, policymakers, and parents. A total of 297 stakeholders engaged with the educators' questionnaire, while another one tailored for parents received 1096 responses via their children's CLIL teachers. The educator questionnaire comprised 49 questions, a mix of both open and closed-ended queries around pivotal themes, exploring areas like their educational background, understanding of CLIL, and English proficiency. It also probed their perceived strengths and weaknesses in CLIL teaching, the strategies they deployed in the classroom, the support they received from the institution and their colleagues, and their feelings upon the culmination of the CLIL experience.

In contrast, the questionnaire for parents sought to gain insights into their attitudes towards their children's participation in CLIL classes, their perceptions of the potential benefits offered by CLIL, and their understanding of what knowledge and skills are acquired through CLIL classes. Given the absence of student samples in the project, parents were further probed regarding their assessments of

their children's improvement in English, their children's attitudes towards CLIL classes, and their own perspectives on the increased utilisation of technology within these courses.

- **Second Stage – Classroom observation and semi-structured interviews**

Following the quantitative data collection, qualitative data was collected from observing 68 videos of CLIL classroom teaching and 10 semi-structured interviews with the volunteer CLIL teachers. The interview questions mainly dealt with the perceptions of CLIL teachers' class activities observed in the video and their teaching strategies in class.

- **Classroom observation**

Classroom observations were conducted to detect and define issues (Rose et al., 2020), providing a more comprehensive picture of what happens in class to better understand the context and to achieve a higher standard of teaching and more effective teaching methods. One of the main advantages of conducting observations from recordings is that researchers can watch and record the teachers' language use and approaches to teaching a safety and health course in English along with their behaviour during classroom activities.

In this project, the observations were conducted online via video recordings. In total, 68 CLIL lessons on safety and health were recorded and observed for teaching activities that focus on teacher's English language use and perceptions of Safety and Health Education in English; teachers were asked to use the materials provided by the UCL team (which they were encouraged to adapt for their own learners) and explain their reasons for these activities and their understanding in the following interviews. In this project, adopting observation as a method triangulated and complemented other methods (i.e., the interviews) and accordingly improve the quality of research findings (Rose et al., 2020).

- **Interviews**

Additionally, in-depth semi-structured interviews were conducted with a subset of 14 CLIL teachers to obtain more detailed perspectives. The interviews covered similar topics as the questionnaire, with a focus on perceptions of specific class activities and teaching strategies. Teachers were asked to explain their understanding of their current CLIL approaches, which were also identified in questionnaires and classroom observations. Each interview was conducted by one researcher in Mandarin or English and lasted approximately 40 to 60 minutes. Post session, transcripts were shared with the participants for potential amendments. After participants had checked the transcripts (and relevant translation, if applicable), A rigorous qualitative content analysis was employed to discern

emerging themes for coding (Selvi, 2020). The researchers performed independent coding before comparing the preliminary key themes identified to develop a coding framework.

The combination of questionnaires, interviews, and observations allowed for gathering both a breadth and depth of perspectives on the CLIL experience from key stakeholders involved in the implementation. The data was analysed using descriptive statistics for closed-ended questionnaire responses and qualitative content analysis for open-ended questionnaire responses, interviews, and observation videos.

Ethical considerations

Maintaining the study's ethical integrity was paramount. Ethics approval was granted by the UCL Institute of Education Research Ethics Committee before data collection. Participants were given detailed information about the study and gave their consent. They were involved on a purely voluntary basis, with no incentives provided. All data, whether audio or text, was securely housed within the UCL network. Assurances regarding confidentiality were given, ensuring that the participants' identities remained protected. In alignment with the GDPR under the Data Protection Act 2018, no breach of this confidentiality was anticipated. Participants retained the right to retract their data without any obligations. To ensure transparency and accuracy, interview transcripts were shared with the participants, allowing them an opportunity for clarifications or corrections.

PART 5 FINDINGS

Quantitative findings

Major findings (highlights)

- English language proficiency positively influences teachers' implementation of CLIL.
- Teachers with overseas study experience are more confident in implementing CLIL strategies than those who studied locally.
- Experience in handling CLIL classes has a statistically significant positive impact on teachers' demonstration of CLIL approaches.
- A teacher's motivation level is positively correlated with their understanding and practice of CLIL concepts.

This report predominantly focuses on the findings from the teachers' questionnaire, offering an in-depth exploration of the adoption of CLIL practices among primary educators in Chongqing, China. Key themes addressed include language teacher agency, CLIL implementation variability, English proficiency, overseas study impacts, and pedagogical challenges, among others. The primary metric used to gauge CLIL integration was teachers' confidence in providing linguistic support to students. Additionally, the influence of school and administrative backing on teachers' inclination towards CLIL methodologies is assessed. Through detailed statistical analysis, this study seeks to enrich our understanding of CLIL's role in primary education and guide future educational strategies.

Language teacher agency

Teacher agency is instrumental in the effective implementation of CLIL methodologies. By empowering teachers with greater autonomy, we enhance their instructional authority (Pappa et al., 2019). The survey data underscores the central role teachers play in CLIL adoption, influenced by their beliefs, competencies, and control.

Understanding of CLIL

Findings indicate that 70% of respondents possess a moderate to thorough knowledge of CLIL practices. Those with deeper insights into CLIL show a higher inclination towards its implementation, making informed pedagogical choices possible.

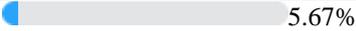
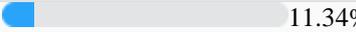
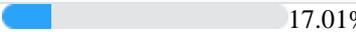
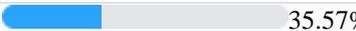
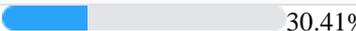
Teacher experience and expertise

Collected data suggests that teaching experience directly correlates with heightened agency. About 50.34% of surveyed teachers boast over a decade of experience, showcasing a notable cluster of seasoned professionals. These educators tend to be more receptive to instructional innovations, including CLIL.

Confidence in resource adaptation

As detailed in Table 2, approximately 65.98% of participants express confidence in adjusting educational materials for CLIL-focused language learning. Their assurance fosters greater adaptability, highlighting the relationship between confidence, agency, and the aptitude to tweak teaching techniques as needed.

Table 2 *Confidence in Adapting Content Materials to Support Language Learning*

Response	Respondents	Percentage
Strongly Disagree	11	 5.67%
Disagree	22	 11.34%
Neutral	33	 17.01%
Agree	69	 35.57%
Strongly Agree	59	 30.41%
	194	

Reflection and collaboration

Almost one-third of teachers (30.41%) frequently review and refine their CLIL instructional strategies according to student feedback and evaluation results. This introspective exercise evinces a deliberate effort to optimize teaching techniques, demonstrating an empowered mindset toward professional growth. In addition, nearly six in ten participants (58.76%) consistently work together with their colleagues to exchange innovative techniques for successful CLIL teaching. The cooperation represents a combined desire among teachers to mutually advance their pedagogical methods.

Challenges and support

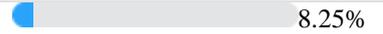
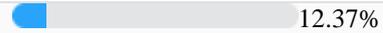
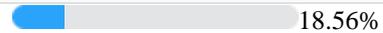
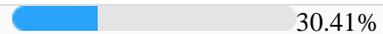
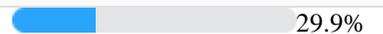
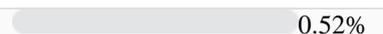
The investigation brings to light the obstacles that instructors encounter when integrating CLIL, specifically related to language aptitude, resource availability, and educational assistance. Educators who experience sufficient backing are more inclined to harbour a greater sense of autonomy.

CLIL implementation variability

The exploration into CLIL practices among educators reveals varying levels of integration. Many teachers feel confident in adapting content for language learning, with 65.96% showcasing this, 61.34% excel in blending language and content, and 61.35% provide adept language support. Notwithstanding, while 59.8% are engaged in creating activities that balance language and content and similarly use authentic materials, there's evident room for improvement.

Notably, the depth of CLIL integration in teaching routines is revealed by 57.91% of educators attending CLIL training and 58.59% having direct CLIL teaching experience. Such disparities might be linked to teachers' prior English teaching experiences and their English proficiency levels. Furthermore, most teachers, 58.25% to be precise, often join forces with fellow CLIL educators to exchange tactics, while 26.8% consistently do so. However, a shift is observed in reflection habits, with 30.41% reflecting often and 26.8% consistently revisiting their methodologies.

Table 3 Implementation Variability

Response	Respondents	Percentage
Strongly Disagree	16	 8.25%
Disagree	24	 12.37%
Neutral	36	 18.56%
Agree	59	 30.41%
Strongly Agree	58	 29.9%
Unanswered	1	 0.52%
Total	194	

The findings shown in Table 3 highlight potential determinants behind these differences. For instance, English proficiency, previous English teaching stints, and the extent of training are influential. Equally

significant is the emphasis on greater school managerial support (with 74% desiring more) and a keenness for enhanced professional development opportunities, as 80.13% express interest in more comprehensive CLIL training.

In sum, the study underscores diverse degrees of CLIL execution among educators, driven by factors like confidence, past experiences, training avenues, and the frequency of collaboration and self-review. Gaining insights into these elements can pave the way for interventions that fortify CLIL's potency in classrooms.

English language proficiency

Exploration into educators' English language skills and their interplay with CLIL methodologies underscores the profound influence of linguistic competencies on the adept implementation of CLIL techniques. The survey data highlight a clear association between teachers' linguistic capabilities and their confidence in deploying CLIL methodologies.

Teachers proficient in English displayed enhanced confidence and competence in enacting CLIL techniques. Notably, of those with intermediate (37.37%) and advanced (28.96%) English proficiency, a significant proportion expressed confidence in modifying instructional content (64.37% and 71.67% respectively) and successfully merging language with thematic elements (61.64% and 68.38% respectively). These figures indicate that educators with refined language skills are better positioned to integrate language and content, a fundamental aspect of CLIL instruction.

A Kruskal-Wallis test, assessing teachers' confidence in offering language support for student comprehension and content conveyance in the target language, revealed distinct confidence levels based on English language proficiency: $H(4) = 10.372, p = 0.035$. The mean rank confidence scores were distributed as follows: beginners at 144.45, elementary proficiency at 137.37, intermediate at 141.54, advanced at 147.32, and fluent English speakers at 184.31 (Refer to Tables 4, and 5 below).

Table 4 Confidence Level Mean Ranks by English Proficiency Level

Ranks			
	What is your current English proficiency level	N	Mean Rank
I can provide language support to help students comprehend and export content	Beginner	10	144.45
	Elementary	46	137.37
	Intermediate	111	141.54
	Advanced	86	147.32
	Fluent/Native	44	184.31
	Total	297	

Table 5 *Kruskal Wallis Test Output for Differences by English Proficiency*

Test Statistics^{a,b}

	I can provide language support to help students comprehend and export content
Chi-Square	10.372
df	4
Asymp. Sig.	.035

a. Kruskal Wallis Test

b. Grouping Variable:
What is your current English proficiency level

The tables referenced above indicate that teachers with higher English proficiency are more inclined to use authentic resources (64.87% at advanced proficiency) and develop activities that foster simultaneous language and content acquisition (67.74% at advanced proficiency). A robust English foundation equips educators with a wider range of resources, enabling them to design engaging lessons tailored for their students.

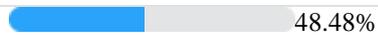
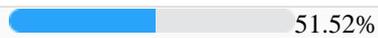
Moreover, the survey emphasises the connection between English proficiency and educators' readiness to provide linguistic support for deeper comprehension and content generation. A notable 76.79% of teachers with advanced skills expressed confidence in their ability to guide students towards effective expression and comprehension in the target language. This correlation is also mirrored in their reflective practices: those with advanced English skills (68.97%) were more proactive in assessing their CLIL methodologies, indicating a commitment to refining their teaching strategies.

The survey's findings accentuate the instrumental role of English proficiency in equipping educators to adeptly deploy CLIL techniques. Those proficient in English exhibited heightened assurance in key CLIL components, from content adaptation and integration to the use of resources and language assistance. These results spotlight the critical interplay between linguistic proficiency and effective CLIL instruction, underscoring the importance of furnishing educators with the tools to enhance their language skills for the optimal success of CLIL.

Teachers' overseas experiences

Investigations into the international study and work experiences of teachers have provided valuable insights into the influence of language immersion and global teaching methodologies on their inclination to utilise CLIL techniques. As shown in Table 6, almost half of the participants (48.48%) had foreign study or work experience, and this group demonstrated a clear proclivity towards CLIL methods. It is conceivable that their exposure to diverse educational contexts overseas contributed to this inclination.

Table 6 *Overseas Experiences*

Respondents with overseas experiences	144	 48.48%
Respondents with no overseas experiences	153	 51.52%
Overall Respondents	297	

Teachers with overseas study experiences were found to be more comfortable with CLIL methods: 34.85% of them compared to 25.13% without such experience. It is plausible that the global teaching strategies they encountered enriched their understanding of CLIL. A significant 96.97% of these teachers showed interest in new CLIL resources compared to 88.89% of their counterparts. Their immersion in varied educational environments overseas might have fostered this proactive approach to resource integration.

Furthermore, teachers with overseas study experiences were more confident in crafting activities that focused on both language and content acquisition (64.39% compared to 57.35% without such experience). Their overseas exposure, possibly to innovative teaching methods and diverse language settings, might have enhanced their innovative lesson-planning capabilities. Moreover, a larger percentage (69.70% vs. 62.99%) felt better equipped to tailor educational content for language learning and offered superior language support to enhance understanding.

The ordinal logistic regression analysis shown in Table 7 corroborates the positive influence of overseas studies on the adoption of CLIL methods. Teachers with international experience are 3.9 times more likely to support students in comprehending the target language. This suggests that language immersion boosts educators' confidence in meeting the diverse linguistic needs of students.

Table 7 Ordinal Regression Results for Overseas Study Experience on CLIL Methodology

		Parameter Estimates					95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[Q34 = 1]	-2.486	.276	80.889	1	.000	-3.027	-1.944
	[Q34 = 2]	-1.391	.188	54.531	1	.000	-1.760	-1.022
	[Q34 = 3]	1.043	.175	35.654	1	.000	.701	1.386
	[Q34 = 4]	2.439	.219	124.187	1	.000	2.010	2.867
Location	[Q3=1]	1.361	.229	35.197	1	.000	.912	1.811
	[Q3=2]	0 ^a	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

From the findings, it is evident that international educational experiences significantly affect teachers' CLIL application. Such experiences elevate teachers' familiarity with CLIL techniques, resource-seeking initiatives, instructional confidence, and adaptability to students' language needs. This reiterates the potential advantages of global exposure for teachers in CLIL adoption and highlights the need to incorporate diverse educational experiences in professional development programmes.

Teaching experience and expertise

On the front of teaching experience and expertise, the interplay between teaching duration, subject expertise, and CLIL application is complex. Skilled educators, especially those with extensive English teaching experience (56.57%), excelled in merging linguistic education with broader teaching methodologies. A large portion exhibited confidence in designing activities that catered to both linguistic and content understanding, driven by their rich educational backgrounds.

Additionally, experienced teachers showed a greater willingness to provide language support to aid comprehension and content production (62.37%). As shown in Table 8 and Table 9 below, a Mann-Whitney U-test ($U = 66681.5$, $p = 0.000$) shows that there are significant differences between teachers' confidence in providing language support to help students comprehend and produce content depending on their teaching experience in CLIL. The mean rank for confidence among teachers with teaching experience (172.10) was higher than among those lacking teaching experiences in CLIL. This indicates that their teaching tenure has equipped them with the expertise to navigate linguistic challenges and offer effective support to students.

Table 8 Mean Ranks for Confidence Based on Teaching Experience

		Ranks		
	Do you have any teaching experiences in CLIL	N	Mean Rank	Sum of Ranks
I can provide language support to help students comprehend and export content	Yes	174	172.10	29945.50
	No	123	116.32	14307.50
	Total	297		

Table 9 Mann-Whitney U-test for Confidence Differences by Teaching Experience

Test Statistics ^a	
	I can provide language support to help students comprehend and export content
Mann-Whitney U	6681.500
Wilcoxon W	14307.500
Z	-5.861
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: Do you have any teaching experiences in CLIL

Regarding the impact of experience, the ordinal regression analysis shows (Table 9) that experienced CLIL teachers are 3.9 times more likely to be confident in offering language support than their less experienced peers. Furthermore, teachers with extensive teaching exposure (51.18%) often engaged in knowledge-sharing with colleagues (58.54%), highlighting the value they place on collaborative insights for CLIL success. Subject experts showcased heightened confidence in adapting content for language learners (66.33%) and in seamlessly integrating language and content (63.83%). Such mastery points to an inherent capacity to weave language and content effortlessly.

Table 10 Parameters Estimate Table for Provision of Language Support

		Parameter Estimates					95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[Q34 = 1]	-2.372	.284	69.679	1	.000	-2.929	-1.815
	[Q34 = 2]	-1.279	.200	40.990	1	.000	-1.670	-.887
	[Q34 = 3]	1.177	.196	36.138	1	.000	.793	1.561
	[Q34 = 4]	2.561	.236	118.196	1	.000	2.099	3.022
Location	[Q8=1]	1.362	.235	33.483	1	.000	.901	1.823
	[Q8=2]	0 ^a	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

The findings underline the pivotal contributions of experienced and expert educators to successful CLIL implementation. They adeptly navigate the challenges of blending language with content, curriculum design, and collaborative learning. This reinforces the importance of continued professional development in achieving CLIL success.

Motivation and commitment

Teacher motivation is a key driver in the adoption of CLIL methodologies. The survey delves into how motivational elements influence a teacher's commitment to CLIL and their readiness to apply its pedagogical techniques. The findings suggest that the enthusiasm teachers have for CLIL significantly affects its integration. Teachers with heightened motivation showed a more profound commitment to CLIL's tenets. This motivation often manifests as a keen interest and innovative pedagogical approaches. A majority (63.64%) of the teachers passionate about CLIL reported collaborating closely with their peers. It's evident that individual zeal leads to robust engagement and dedication to CLIL methods.

External motivators, like prospects for career progression, also played a role. Teachers who prioritised professional growth were more inclined to provide language support (65.55%) and reflect on their CLIL teaching methodologies (56.87%). This underscores the influence of career advancement opportunities in fostering dedication.

Another significant internal motivator was administrative support. Teachers who felt well-supported by their administration were more inclined to participate actively in CLIL training sessions, with 68.18% reporting such involvement. A nurturing work environment, bolstered by supportive management, enhances the adoption of CLIL.

According to the survey, motivation tends to increase alongside teaching experience. Veteran educators, with over a decade of experience, frequently associated with their colleagues (58.54% regularly, 26.93% always) and reviewed their CLIL approaches (57.58% regularly, 26.9% always). These findings suggest seasoned teachers recognise the value of continuous learning and collaboration, stemming from an intrinsic motivation fuelled by professional growth.

Table 11 *Correlation Matrix for CLIL Lessons and Motivation*

Correlations			
		I can provide language support to help students comprehend and export content	CLIL lessons help teachers increase their motivation in teaching.
I can provide language support to help students comprehend and export content	Pearson Correlation	1	.178**
	Sig. (2-tailed)		.002
	N	297	297
CLIL lessons help teachers increase their motivation in teaching.	Pearson Correlation	.178**	1
	Sig. (2-tailed)	.002	
	N	297	297

** . Correlation is significant at the 0.01 level (2-tailed).

Both intrinsic and extrinsic factors motivate teachers towards embracing CLIL. The survey found a notable correlation between the number of CLIL lessons taught and a teacher's motivation. A Pearson correlation analysis revealed that the number of CLIL lessons ($r = 1.78$, $p = 0.002$) positively impacted motivation. This implies the more teachers are exposed to CLIL, the more motivated they become. Factors such as personal enthusiasm, opportunities for professional advancement, and administrative support significantly influence teachers' embrace of CLIL, as noted by Pappa et al. (2017). Motivated educators exhibit a proactive stance towards diverse CLIL methods, highlighting the importance of recognising and harnessing these driving forces to foster a constructive CLIL environment.

Learner engagement and learning outcomes

The survey data highlights the relationship between CLIL integration and enhanced student motivation and academic achievement, emphasising the pivotal role of linguistically enriched instruction in fostering an advanced understanding of subject matter and linguistic prowess amongst students. CLIL implementation appears to amplify student participation, with over three-quarters of teachers agreeing that it boosts students' enthusiasm to learn. This synergy of language and thematic content bolsters student engagement, cultivating an invigorating academic environment.

Furthermore, over 70% of educators believe CLIL improves student learning outcomes, reinforcing the power of CLIL in enhancing students' academic understanding whilst honing their language skills. The study also reveals that more than a third of educators (38.38%) and a substantial percentage of key stakeholders including school management, policy makers, and local authorities (35.02%) believe that CLIL lessons notably bolster students' English proficiency. In addition, there's a discernible growth in students' linguistic competence in the target language (66.18%) and their ability to articulate ideas (57.35%).

To summarise, the findings suggest that integrating diverse linguistic content promotes enhanced student engagement, leading to superior learning outcomes. Emphasising both academic content and linguistic skills results in heightened language mastery and refined communication techniques, demonstrating CLIL's potential in enriching educational experiences for students.

Pedagogical challenges and professional development needs in CLIL implementation

The survey paints a detailed picture of the challenges educators encounter when incorporating CLIL and underscores the corresponding professional development needs.

When examining the intricacies of CLIL, the challenges span from concerns about content selection and material adaptation to the delicate equilibrium between language and subject teaching. Sourcing content that aligns with CLIL principles emerges as a primary challenge. Many language educators grapple with locating materials that cater both to linguistic aims and subject content goals. Whilst adapting content for CLIL remains indispensable, just over half of the respondents feel confident in doing so. A pressing challenge involves ensuring the symbiotic integrity of both language and content, skilfully interweaving them. In fact, 54.88% of teachers believe that CLIL instruction demands heightened pedagogical expertise compared to traditional English teaching.

Furthermore, teachers face dilemmas related to time management in CLIL settings. A bit over half feel their time management skills in CLIL contexts are less than exemplary, emphasising the need for meticulous integration of language and content. The challenges also underscore a call for greater expert guidance and administrative acknowledgement of CLIL methodologies. Such backing is pivotal for navigating these challenges and elevating CLIL standards.

Table 12 *Challenges and Professional Development Needs in CLIL Implementation*

Variable	Confidence Rank					
	1	2	3	4	5	
Lack of appropriate CLIL resources and materials	11(3.7%)	20(6.73%)	50(16.84%)	112(37.71%)	104(35.02%)	3.94
Limited teacher training and professional development opportunities.	14(4.71%)	30(10.1%)	53(17.85%)	104(35.02%)	96(32.32%)	3.8
Insufficient English proficiency of teachers.	10(3.37%)	24(8.08%)	62(20.88%)	117(39.39%)	84(28.28%)	3.81
Insufficient English proficiency of students.	16(5.39%)	25(8.42%)	60(20.2%)	104(35.02%)	92(30.98%)	3.78
Time constraints and curriculum demands.	11(3.7%)	27(9.09%)	62(20.88%)	106(35.69%)	91(30.64%)	3.8
Difficulty in finding time to integrate language instruction into subject lessons.	22(7.41%)	21(7.07%)	57(19.19%)	97(32.66%)	100(33.67%)	3.78
Pressure to cover content within a limited timeframe.	11(3.7%)	26(8.75%)	53(17.85%)	108(36.36%)	99(33.33%)	3.87
Lack of support from colleagues and administrators.	19(6.4%)	22(7.41%)	64(21.55%)	105(35.35%)	87(29.29%)	3.74
Inadequate assessment tools or methods for CLIL implementation.	12(4.04%)	29(9.76%)	56(18.86%)	116(39.06%)	84(28.28%)	3.78
Maintaining student engagement during language-focused activities.	12(4.04%)	26(8.75%)	50(16.84%)	115(38.72%)	94(31.65%)	3.85
Parent perceptions and expectations.	17(5.72%)	25(8.42%)	56(18.86%)	120(40.4%)	79(26.6%)	3.74
Technology limitations for accessing online resources or digital tools.	11(3.7%)	27(9.09%)	58(19.53%)	115(38.72%)	86(28.96%)	3.8
	166(4.66%)	302(8.47%)	681(19.11%)	1319(37.01%)	1096(30.75%)	3.81

The data also provides valuable insights into teachers' professional development desires within the realm of CLIL pedagogy. Notably, approximately 65% have pursued CLIL training, showcasing their dedication to honing their skills. Moreover, 57.91% have undergone formal CLIL training, indicating a keenness to excel in this teaching approach. These development needs correlate directly with enhancing proficiency in CLIL teaching. A notable inclination is evident among educators to deeply understand CLIL's goals (64.43% agree or strongly agree). They also emphasise the need for support

in adapting educational materials (65.68% agree or strongly agree), reflecting a tangible need for resources optimal for CLIL delivery.

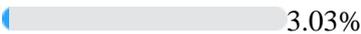
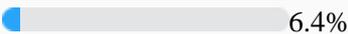
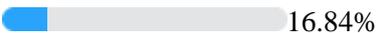
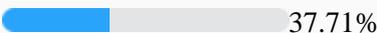
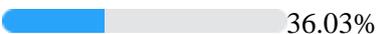
A spotlight on the types of professional development shows educators expressing enthusiasm for both traditional CLIL sessions, like those on Safety and Health Education (80.13% agree or strongly agree), and innovative tools such as virtual reality (VR) with 80.13% in favour. Continuous guidance and collaboration are fundamental. With 33.51% of teachers frequently collaborating and an additional 24.74% often doing so, collective learning becomes evident. A striking 73.74% affirm the significance of administrative backing and expert aid, emphasising institutional support's role in their professional journey.

In essence, these insights elucidate educators' aspirations to refine their CLIL techniques through targeted professional development. Embracing diverse training methods, ensuring ongoing mentorship, and appreciating institutional support can cultivate a community of educators adept at implementing CLIL strategies with finesse.

Institutional support for CLIL integration

The findings from the survey shed light on the pivotal role of organisational strategies, resources, and recognition in promoting CLIL among educators and underscore the impact of these aspects on their readiness to integrate CLIL. According to the data shown in Table 13, robust school leadership and management are paramount for the successful uptake and implementation of CLIL practices. A notable 73.74% of teachers believe that CLIL demands heightened professional support, emphasising the necessity of institutional backing to elevate the quality of CLIL delivery. Furthermore, 74% of educators underscore the importance of school policies that champion and streamline CLIL techniques.

Table 13 *CLIL Teaching Requires More Professional Support*

Response	Frequency	Percentage
Strongly Disagree	9	 3.03%
Disagree	19	 6.4%
Neutral	50	 16.84%
Agree	112	 37.71%
Strongly Agree	107	 36.03%
	297	

With the provision of unwavering institutional support, there is a palpable uplift in teachers' motivation and confidence in CLIL. This is evidenced by over 65% of educators expressing confidence in customising resources to facilitate language absorption in CLIL contexts. A conducive environment, it seems, emboldens educators to adeptly meld language and content.

Additionally, the data suggest that educators' embrace of CLIL is influenced by the perceived enhancement of the school's stature and students' global accreditation opportunities, with 73.06% concurring. Data indicate that educators discern the incremental benefits of CLIL, not just in pedagogical terms, but in elevating the institutional profile and bolstering student prospects. The research also indicates that a majority of schools, recognising the value of CLIL, are offering relevant courses (63.92%). It insinuates a tangible commitment by educational establishments, likely channelling funds towards resources that capacitate educators in CLIL deployment.

In essence, the survey crystallises the criticality of administrative endorsement for CLIL endeavours. It is evident that institutional mechanisms, resources, and commendation influence educators' propensity to adopt CLIL. This bolstered backing correlates with heightened educator enthusiasm, adaptability, and an appreciation of CLIL's multifaceted benefits. Cultivating a supportive environment underpinned by institutional aid can expedite CLIL integration and elevate the quality of pedagogical delivery.

Qualitative findings

Major findings (highlights/themes)

- Teachers reported relatively high autonomy over the CLIL lessons, including the classroom activities and the teaching methods they used and how they planned and prepared lessons.
- The CLIL safety and health courses enhanced students' comprehension of content and language skills, employing a mix of their native language (Mandarin) and target language (English) and adjusting materials based on proficiency levels.
- While teachers expressed anxieties about student proficiency and meeting CLIL outcomes, diverse teaching methods, multimedia tools, and tailored materials led to often surprising student success, emphasizing the importance of adaptability and support in CLIL instruction.
- Teacher collaboration in pre-class preparation and teaching plans, often interdisciplinary, enhanced the delivery of CLIL courses.
- Lower autonomy over curriculum and their professional development goals in the long term were found among teachers.

This section offers a qualitative examination of participating teachers' perceptions and their practice on CLIL class observed by the researchers. Using a combination of video recorded classroom observations and semi-structured interviews, this section presents a multifaceted view of CLIL's implementation by delving into various aspects regarding CLIL teachers. Data from classroom observation and interviews highlighted noticeable teacher agency in tailoring the CLIL lessons to the specific needs and interests of the students while incorporating some prominent elements of CLIL (e.g., communication, thinking skills and culture). Teachers were found to utilize real-life connections, multimodal learning, collaboration, and a reflective and responsive approach in their implementation of CLIL lessons. Teachers reported relatively high autonomy over the CLIL lessons, including the classroom activities and the teaching methods they used and how they planned and prepared lessons, but lower autonomy over curriculum and their professional development goals in the long term. The themes are explored thoroughly, providing a comprehensive insight into the complex interactions among factors that influence the successful implementation of CLIL in local schools in Chongqing.

Teacher autonomy in CLIL lessons

Significant teacher autonomy in selecting content that aligns with their students' interests, needs, and curriculum was identified among participating teachers during classroom observations and interviews. Factors such as relevance to students' lives, student language proficiency, and the connection to existing curriculum materials were meticulously considered by the teachers when preparing CLIL materials. This approach and materials, with a strong focus on experience diverges from the traditional textbook-oriented teaching and materials preparation, which was highly appraised by participating teachers. As pointed out by Priestley, Biesta, and Robinson (2015), the achievement of teacher agency is always informed by experience –professional and personal experience. Collected data showed that teachers' CLIL practices were often informed by personal observations and reflections, including their personal histories, such as family, learning and previous teaching experiences. Topics like traffic rules, food safety, non-nuclear family structures, and more were contextualized within the local cultural and geographical milieu of Chongqing. Several teachers incorporated daily life events, including personal experiences and current affairs, to make lessons more relatable. For example, Teacher 8 integrated themes from picnics and food safety concerns, while Teacher 10 discussed non-nuclear family structures, striking a chord with many of her students. Teacher 7 emphasized practical contexts, addressing traffic rules and safety from the perspectives of both Chinese and English-speaking countries.

Teachers made deliberate efforts to anchor their lessons in students' everyday lives and experiences, selecting themes such as daily routines, dining etiquette, balanced diets, and study pressures. This approach aligns with CLIL principles, promoting a more authentic language learning environment. In certain lessons, teachers also augmented students' cross-cultural understanding by contrasting practices from various cultures. This strategy not only bolsters language proficiency but also fosters cultural awareness, a cornerstone of CLIL.

Our findings showed that students were also actively engaged in class activities, self-assessment, and peer evaluations. For instance, Teacher 6 employed self and group evaluations, alongside showcasing standout work to reinforce the significance of eye care. Methods such as role-playing, singing, game-based learning, and situational teaching were prominently featured. Teacher 7 emphasized role-playing in traffic safety education, while Teacher 8 creatively meshed situational teaching techniques with vocabulary related to "food safety," connecting the lessons to real-world contexts.

The pedagogical choices reflected the teachers' understanding and commitment towards achieving the teaching objectives. Based on the observations, a variety of teaching methods were used, accommodating students' different learning abilities and styles. For example, in the "Healthy Food" course, students had engaged in group work, pair work, and individual tasks, which stimulated their learning interest and motivation. The student-centred approach, widely adopted in these classrooms, had enabled active exploration and discovery. This method had promoted self-directed learning and cultivated critical thinking and problem-solving skills. Additionally, project-based and task-based learning had been incorporated, providing students with practical experiences that deepened their understanding of the subject matter.

Effectiveness of CLIL lessons and language proficiency

The implementation of CLIL safety and health courses was aimed at enhancing students' comprehension of safety and health content, as well as improving their language skills and proficiency. The findings suggested that these courses successfully met their established teaching objectives in terms of content, which was supported by positive feedback from students and parents after class. As observed, these courses had been taught using the target language (English), supplemented by the students' first language to enhance comprehension. This method stimulated active participation in class and encouraged students to express themselves with greater confidence.

Teachers reported that they had to ensure that they tailored their language use to the students' comprehension levels when complex terms and notions had been challenging for younger students

(e.g., those in Grade 4). Hence, it had been beneficial to modify or even translate some of these terms to facilitate understanding. Teachers had employed scaffolding techniques that aligned with students' learning capacities, thus ensuring the delivery of instruction in a manner best suited for each student.

Although the CLIL safety and health courses had catered to different language proficiency levels among students from Year 4 to Year 7, providing suitable academic support as needed, and most teachers perceived their students had improved their language skills and broadened their knowledge in relevant topics on safety and health in the interviews, a strong sense of anxiety and confusion was common among all participant teachers when students' English proficiency doesn't align with CLIL learning outcomes. Concerns range from effectively addressing diverse proficiency levels to ensuring fair assessment and equitable opportunities for all students. The pressures of continuous lesson adaptation and fears of external judgments (e.g., peer observation and teaching demos) further exacerbate these anxieties. It was also found that proper training and support were crucial for effective and inclusive CLIL instruction, and useful to alleviate teachers' negative feelings towards CLIL.

However, in many cases, findings showed that students' performance exceeded expectations even though their teachers initially felt anxious about their students' ability to grasp linguistic outcomes, noting an initial hesitation to use English in class, especially for CLIL lessons with many new words and phrases. One teacher was surprised by how quickly students adapted, with her students appreciating the knowledge gained through visuals and discussions, despite language barriers at their young age.

In courses like "School Bullying", diverse materials tailored to students' backgrounds fostered interest and understanding, with limited linguistic learning outcomes. In many other lessons, materials were modified based on language proficiency, and digital tools were employed to further enrich learning and boost student engagement. Our findings showed that among the CLIL lessons on safety and health, a diverse array of learning materials and instructional techniques, such as videos, images, group activities, and visual aids were employed to accommodate various learning styles. This not only stimulates engagement but also augments understanding of subject and language. From the classroom observation, there was a consistent application of multimedia tools like videos, audio recordings, and images across the teaching spectrum. To engage students, various creative means were employed. For example, teacher 5 used a WHO video to illustrate the symbolism of depression, while Teachers 7, 8, and 9 harnessed videos to elucidate topics from traffic rules to food safety and hygiene. This multifaceted approach emphasized the dynamic nature of CLIL and indeed helped reduce stress regarding linguistic performance.

Interdisciplinary collaboration in CLIL lessons

Collected data suggests that there was a varying degree of collaboration among teachers, with some displaying a strong sense of agency in integrating knowledge and seeking advice and support across disciplines. Some teachers actively engage with peers to provide a comprehensive learning experience. Though not directly observable during CLIL class sessions, teacher collaboration and development were evident in the pre-class preparation and teaching plans. For instance, in the "Traffic Safety" course, the teaching plan reflected a degree of cooperation and communication among the teachers. This collaboration was essential to ensure continuity and effectiveness in delivering the course content. Specific examples include Teacher 6's collaboration with literature and art teachers to impart lessons on eye care, and Teacher 7's focus on interdisciplinary learning by merging diverse academic thinking. CLIL encourages collaborative learning, with teachers often designing activities that require students to work together, discuss, and share, thus enhancing language skills and promoting a sense of community within the classroom. Moreover, several teachers, such as Teachers 2, 8, and 9, believe in the power of peer support and cross-disciplinary collaboration, sharing resources or coordinating with teachers from different subjects. This collaborative approach, when applied, seems to enrich students' understanding by showing them interconnected knowledge across subjects, demonstrating a sense of community, and interdisciplinary learning.

Parental involvement also played a significant role in supporting the CLIL courses, as the subjects related closely to daily life. Therefore, parents' engagement may help consolidate the application of knowledge and skills learned in school.

Teacher autonomy and professional development

While the implementation of CLIL lessons on safety and health were successful to some degree, it faced a series of challenges. Teachers reported having less control over curriculum design and expressed concerns about their professional development paths in the long term.

The analysis of data obtained from CLIL teachers suggests that most participants spoke highly of the CLIL lessons. However, data related to the long-term operation and further development of the course indicate a different perspective.

In the interviews, it emerged that there were considerable challenges, and further reflections on the role of the teacher and the importance of professional development. For these teachers, challenges extended beyond integrating cross-cultural elements, subject content, and language learning or dealing

with diverse linguistic abilities; data revealed a deep reflection on their identity and emphasized that the importance of continuous professional growth was linked to lower teacher autonomy.

Some underlined the obstacles they had for implementing CLIL, some of which are teachers' lack of time and materials, the negative attitude of subject teachers, and lack of motivation and inadequate language ability of the students. In particular, all participants said that English teachers do not have sufficient information about CLIL, or they are not competent enough, while four of them referred to a likely negative attitude of the subject teachers.

Several obstacles were highlighted by the teachers, including a lack of time and resources, negative attitudes from subject-focused teachers, and students' lack of motivation and abilities. Notably, all participants indicated that English teachers were lacking in sufficient CLIL information or competency. Four teachers even specifically mentioned the possibility of negative attitudes among subject teachers towards the CLIL approach. This unfamiliarity with CLIL, coupled with self-doubts in material preparation and lesson delivery, led some teachers to question their role as 'subject' teachers. Some were even reluctant to conduct CLIL lessons, feeling under-qualified in the relevant field.

However, these challenges also prompted a positive transformation. Many teachers began to view their roles in a new light, considering themselves as more than just subject-matter instructors, but holistic educators invested in overall student development. This paradigm shift was accompanied by adjustments in teaching strategies that were more responsive to student feedback, needs, and preferences.

PART 6 Summary of the findings and discussion

This research focused on primary school teachers in Chongqing, China, and provides a comprehensive understanding of the determinants influencing the implementation of CLIL (Content and Language Integrated Learning) teaching practices. Four core questions were explored, revealing a nuanced web of interconnected factors that shape educators' CLIL journeys.

The interplay of language teacher agency and CLIL implementation:

Language teacher agency emerged as a cornerstone in the successful integration of CLIL methodologies. Those educators possessing a robust sense of agency—believing in their capability to shape and influence their teaching environment—were found to be at the vanguard of CLIL adoption. Their proactive stance, marked by resource-seeking and innovative strategy deployment, demonstrated

that fostering a strong sense of agency could be instrumental for schools aiming to successfully integrate CLIL. It underlines the importance of cultivating an environment where teachers feel empowered and in control.

The crucial role of English language proficiency:

Proficiency in the English language was found to be more than just a tool; it is a catalyst in the CLIL implementation process. Teachers with heightened proficiency not only conveyed content with more clarity but also seamlessly integrated language nuances, embodying the essence of CLIL. This finding suggests that schools must prioritize professional development opportunities that enhance English language mastery among their educators.

Overseas study experience as a differentiator:

The potency of overseas study experience in shaping CLIL methodologies was evident. Teachers with such exposure brought a global perspective, enriched by diverse teaching methodologies, into their classrooms. Their reflective practices, honed by international exposure, added a layer of pedagogical depth to CLIL implementation. Institutions might consider encouraging or facilitating overseas study opportunities for educators to tap into this reservoir of enhanced pedagogical insight.

The double-edged sword of teaching experience:

While teaching experience brings undeniable advantages, its impact on CLIL adoption presented a dichotomy. Experienced educators, drawing from their extensive pedagogical reservoir, sometimes found it challenging to pivot to the demands of CLIL, indicating that entrenched teaching habits can be barriers to innovation. In contrast, less experienced teachers, albeit sometimes shaky in classroom management, embraced CLIL with a fresh perspective. It's imperative for training programs to be tailored, recognizing the diverse needs of novice and veteran teachers alike.

Motivation as the driving force behind CLIL execution:

The research vividly showcased that motivation isn't merely an internal driver but is also the engine that powers CLIL integration. Teachers driven by both intrinsic and extrinsic motivators actively championed CLIL, adapting, collaborating, and evolving in their teaching journeys. The findings accentuate the need for schools to recognize and nurture this motivation, through both accolades and tangible support, ensuring a sustained commitment to CLIL.

These findings provide more than just insights; they present a roadmap for institutions aiming to deepen their CLIL practices. The intertwined nature of individual attributes, experiences, and

motivations in influencing CLIL adoption emphasizes the need for a holistic approach. It's clear that beyond foundational skills like language proficiency, experiential factors and intrinsic motivations play pivotal roles in shaping a teacher's approach to CLIL.

Furthermore, the central role of teacher agency and motivation, as highlighted by the research, underscores the pressing need for robust institutional frameworks. Such frameworks, if designed thoughtfully, can cultivate an environment where educators not only feel empowered but are continuously motivated to enhance their CLIL practices.

To sum up, for a rich, effective, and sustainable integration of CLIL in primary education, institutions such as those in our study must view their teachers not just as implementers, but as dynamic agents of change, whose growth, experiences, and motivations shape the pedagogical landscape of the future.

PART 7 Conclusion and recommendations

The fusion of Safety and Health Education delivered in English within Chinese schools in the Chongqing high-tech development zone encapsulates the very ethos of a progressive educational paradigm. As our research illuminated, such an approach is not just about linguistic competence but is also a gateway to an array of profound advantages. These span from bolstering global communication to facilitating access to a treasure trove of international resources, fostering cultural interactions, amplifying career prospects, and positioning students at the forefront of international collaborations.

The ascent of CLIL in the realm of Safety and Health Education is unarguable. Yet, the trajectory of its evolution is punctuated with challenges that warrant attention. There exists a tangible disparity between the rapidity of policy implementation and the paucity of empirical research underpinning it. This research void underscores the urgency for a structured, collaborative platform where knowledge amalgamation can transpire.

Recommendations:

Establishment of a UK-China online network: a proactive step towards bridging the existing research lacuna is the formulation of a UK-China online consortium. This network envisioned as a crucible of innovation, would bring together researchers, pedagogues, and policymakers. Such a collective would not just facilitate research-driven dialogues but would also be pivotal in shaping CLIL's future trajectory, ensuring it's underpinned by empirical evidence.

International collaborative endeavours: the core ethos of conducting Safety and Health Education in English is collaboration. Chinese educational institutions should be encouraged to foster partnerships with global counterparts, including schools, think tanks, and experts. Such symbiotic relationships would catalyse the cross-pollination of innovative educational strategies, best practices, and research methodologies, fortifying the quality of Safety and Health Education.

Amplifying marginalised voices: as our research pivoted around the High-tech Zone in Chongqing, it became palpable that there remains a vast reservoir of untapped potential. It's imperative for future endeavours to be inclusive, ensuring that voices from marginalized communities and ethnic minority groups are not just heard but are integral to the research process. Their perspectives, experiences, and insights would provide a richer, more holistic view of CLIL's landscape.

Continued feedback loop: The challenges identified in our study are not static but dynamic. To ensure the continued relevance and efficacy of CLIL, a feedback mechanism should be institutionalized.

Regular feedback from educators on the ground can provide real-time insights, allowing for agile modifications to CLIL strategies.

Holistic teacher training programs: Building on our findings, there is a pressing need for comprehensive teacher training modules that cater to the diverse needs of educators at different stages of their professional journeys. These programs should focus on fostering teacher agency, enhancing English language proficiency, and equipping educators with tools to seamlessly integrate CLIL methodologies.

In summation, while the trajectory of CLIL, especially in the context of Safety and Health Education, is promising, it necessitates a concerted, collaborative, and research-driven approach. As we stand on the cusp of an educational revolution, these recommendations offer a roadmap, ensuring that the evolution of CLIL is both impactful and sustainable.

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APPENDIX

Appendix 1: Curriculum Outline of the CLIL Safety and Health Course

Lesson	Teaching hours	Topics
Starter Lesson	5	• What is a healthy life?
		• What is emergency prevention?
		• What kind of emotions do we feel when faced with an emergency?
		• How do we prepare for emergencies?
		• Be your own hero.
		• Linking Story: "To Have a Well-thought-out Plan"
		• What is a healthy life?
Module 1 Healthy Behaviours	9	• Healthy habits
		• Personal hygiene
		• Eye care habits
		• Healthy eating
		• Medication safety
		• Regular work and rest
		• Reasonable access to the internet
		• Building up the body
Module 2 Mental Health	9	• What is mental health?
		• What are the causes of mental health problems?
		• Study stress
		• School bullying
		• Family relationships
		• Treating yourself well
		• Learning to communicate
		• Mapping mental health
Module 3 Safety Awareness	9	• What is safety awareness?
		• Electricity safety
		• Food hygiene and safety
		• Internet security
		• Traffic security
		• Wading safety
		• Safety of public facilities
		• Epidemic prevention and safety
Module 4 Earthquake and Escape Safety	9	• What is an earthquake?
		• What are the effects of an earthquake?
		• Earthquake warning (pre-earthquake)
		• Earthquake protection (in-earthquake)
		• Secondary hazards (post-earthquake)
		• 2008 Wenchuan earthquake
		• 2004 Indian Ocean Tsunami
		• First aid for earthquakes
9	• What is a flood?	

Module 5 Flooding and Water safety		• What are the effects of a flood?
		• Floods and rainy season (pre-flood)
		• Flood emergency (in-flood)
		• Flood relief (post-flood)
		• China's historical flood fight
		• Recognizing different waters
		• First aid for drowning
Module 6 Fires and fire safety	9	• What is a fire disaster?
		• What are the effects of the fire?
		• Fire safety tips (pre-fire)
		• Fire survival (in-fire)
		• Fire rescue (post-fire)
		• 2022 Chongqing's Mountain Fires
		• 2019-20 Australian Bushfires
• First aid for burns		

Appendix 2 Sample of Classroom Observation Protocol

Building up the body (Unit 8, Module 1)

1. LINGUISTIC ASPECTS

Item	Extensively	Considerably	Moderately	Not at all	Not observed
1. Learners in the CLIL lesson have different levels of ability in the foreign language.			X		
2. Learners in the CLIL lesson have different levels of ability.		X			
3. Scaffolding is used to cater for different abilities.		X			
4. Repetition in the L1 is used for parts of the CLIL lesson.			X		
5. Communication skills in the target language (BICS) on the part of the teacher are evident.	X				
6. Communication skills in academic language (CALP) on the part of the teacher are evident.		X			
Note:					
a) During the teaching session, the teacher combines the topic "Sports and Exercise" with the expected English language points (words, sentence patterns, and specialized terms related to the field) that students should grasp. Throughout the lesson, the teacher guides students in repetitive reading. Notably, with the use of multi-modal teaching tools (PPT, videos, images, word cards, etc.), students receive the course-related content, vocabulary, and sentence patterns through multiple senses, which enhances their oral and expressive abilities.					
b) It's worth noting that, considering the younger age of the target students and their lower language proficiency—resulting in limited comprehension and expression capabilities—the teacher has designed the PPT in a combination of Chinese and English. This approach supplements and prompts students with uncommon words and sentence structures in Chinese, with a particular emphasis on repetition and training of the expected language materials.					
c) From the final poster presentation, it is evident that after a lesson, students indeed grasp the main theme of the course. After learning the key sentence patterns and vital word chunks in the teaching session, they comprehend the primary objectives of the lesson. Consequently, they design meaningful and relevant poster content and present it in class, thereby enhancing their vocabulary and oral expression skills.					

2. METHODS

Item	Extensively	Considerably	Moderately	Not at all	Not observed
7. Learners of different abilities are attended to in the CLIL lesson.	X				
8. A repertoire of methods to cater for different abilities is evident.		X			
9. The CLIL lesson involves student-centred methodologies.	X				
10. The CLIL lesson uses cooperative learning to cater for different abilities.	X				
11. The CLIL lesson involves multiple intelligence theory to cater for different abilities.		X			
12. The CLIL lesson involves project-based learning to cater for different abilities.	X				
13. The CLIL lesson involves task-based learning to cater for different abilities.		X			
14. The CLIL lesson is teacher-led to cater for different abilities.	X				
15. The CLIL lesson involves group work to cater for different abilities.			X		
16. The CLIL lesson involves pair work to cater for different abilities.			X		
17. The CLIL lesson uses different types of groupings to cater for different abilities.	X				
18. Personalized attention (individual or in smaller groups) is provided (e.g., through push-ins or pull-outs).		X			
19. Peer mentoring and assistance strategies are employed to cater for different abilities in the CLIL lesson.		X			
20. Classroom layouts are varied to meet the needs of different types of learners in CLIL.	X				
Note:					

d) In this class, the instructor designed several teaching sessions with the principle of "student-centred and teacher-led" to achieve the anticipated educational objectives. For instance, after watching a video, the teacher poses questions to the students, inviting them to share their viewpoints. Eventually, the teacher summarizes these insights, listing them one by one. Moreover, the teacher creates multiple open-ended questions and organizes group discussions, allowing students to exchange opinions among themselves. After the discussion, representatives are chosen to provide a summary of the conversation. During these student discussions, the teacher continuously moves among the different student groups, offering guidance and answering questions. In the final poster design and presentation segment, every member of the student groups gets an opportunity to present, introducing and showcasing the results of their group discussions and poster projects to the teacher and the entire class.

3. MATERIALS AND RESOURCES

Item	Extensively	Considerably	Moderately	Not at all	Not observed
21. The materials in the CLIL lesson take into account different levels of ability among students.	X				
22. The materials in the CLIL lesson have been adapted to take into account different levels of ability among students.	X				
23. The materials in the CLIL lesson have been created to take into account different levels of ability among students.		X			
24. Information and Communication Technology (ICT) is used to cater for different abilities.	X				
25. A combination of visual, textual, and/or numeric input is used to cater for different abilities.		X			

Note:

e) The choice of course materials closely aligns with the cognitive level and prior knowledge of the target students. For instance, when illustrating exercises and physical activities students might engage in their daily lives, examples such as "radio calisthenics, eye exercises, Liu Genhong (an influencer) fitness exercises, and long rope jumping" are cited, which are consistent with the daily lives of primary school students in China. Similarly, when discussing "potential dangers encountered during exercise", examples like Tai Chi and Kung Fu are mentioned, matching the cultural background of Chinese students and demonstrating audience awareness. Moreover, in the selection of multi-modal teaching materials, a combination of gymnastics videos and TED talks has been utilized. The range of teaching resources chosen is extensive, engaging students in interactive activities like follow-along exercises. This allows students to genuinely experience the benefits of exercise and physical activity during their learning process, achieving a dual interdisciplinary teaching objective of "health education + English proficiency enhancement".

4. TEACHER COLLABORATION AND DEVELOPMENT

Item	Extensively	Considerably	Moderately	Not at all	Not observed
26. Coordination/collaboration between different types of teachers is evident in the CLIL lesson.	X				
27. Multi-professional teams (special education support staff/psychologists/social workers) are evident in the CLIL lesson.	X				
28. Parental support and engagement in CLIL are evident.		X			

Note:

f) Teachers and students engage in a warm-up dance together. This demonstrates the coordination and cooperation between the teachers and students as they jointly undertake physical exercises to prepare for bodily activities.

g) The teacher provokes thought by showing pictures of famous personalities,** asking students why they appear youthful. Through students' responses, it's evident that both the teacher and students collaboratively discuss the benefits of sports and physical activities, enhancing their understanding of the importance of a healthy lifestyle.

h) In the "Star of Wisdom" activity, students develop digital resources on safety and health.** The teacher, through question-answer evaluations and student participation, promotes interaction and cooperation between them, jointly exploring the positive effects of sports on age, energy, and health.

i) The teacher organizes group discussions among students** to understand the sports activities they partake in during their daily lives and physical events. At the same time, students have the opportunity to showcase sports they excel in. This collaboration and discussion foster communication and mutual assistance among the students.

j) Students design sports safety posters in groups. With the teacher's guidance and provision of related sentences, students collaborate in groups to design and present safety-related information. This encourages cooperation and collaboration among students, collectively promoting awareness of sports safety.

Summary of Main Difficulties

- **1. Student participation:** student engagement is a challenge. Interest and involvement in sports and physical activities vary among students. To stimulate interest and encourage participation, teachers can employ diverse teaching methods. For example, classroom activities integrating elements of games and competitions, designing engaging sports programs, and fostering collaboration among students through group cooperation and discussions. Moreover, teachers can focus on students' individual goals and interests to provide a personalized learning experience, thereby inspiring enthusiasm and initiative in students.
- **2. Safety awareness:** when teaching sports and exercise courses, special attention should be paid to students' safety awareness. Teachers should ensure that students understand the potential risks involved in sports and offer relevant safety tips and advice. Through regular safety talks and demonstrations, teachers can instruct on the correct techniques and postures in sports to reduce the risk of injury. Furthermore, teachers should monitor students' activities, provide timely guidance and feedback, and encourage them to maintain proper safety awareness during exercises.
- **3. Interdisciplinary collaboration:** the module covering topics like health, sports, and age requires interdisciplinary cooperation and knowledge. The teacher could collaborate with other educators and professionals, integrating knowledge from different academic domains to provide a more in-depth discussion on related concepts and ensure comprehensive understanding for students. For instance, health experts, sports scientists, or psychologists can be invited as guest lecturers, introducing their specialized knowledge and practical experiences. Moreover, using case studies and scenario analysis, real-world problems and situations can be discussed, helping students apply what they've learned in real-life contexts and deepening their understanding of interdisciplinary connections.

Summary of best practices

- **Personalized teaching:** understand the interests and capability levels of each student, and provide personalized guidance and support based on individual differences. Teachers can engage in one-on-one communication with students and adjust teaching methods and content based on their needs and goals. Through differentiated instruction, teachers can better meet the needs of students, encouraging their participation and progress.
- **Interactive learning:** actively encourage student interaction and collaboration. Stimulate communication and cooperation among students through group discussions, collaborative designs, and role-playing. Furthermore, teachers can introduce student-led projects and activities, allowing them to plan and solve problems on their own, enhancing their autonomous learning abilities.
- **Introducing Real-world Cases and Applications:** By incorporating real-world cases, celebrity instances, and health data, students can relate what they learn to real life, deepening their understanding of sports and exercise. Teachers can organize field trips, watch sporting events or health exhibitions, and guide students to analyse and discuss related issues. Such hands-on experiences can spark student interest, making the curriculum more practical and meaningful.
- **Comprehensive evaluation:** adopt various assessment methods to evaluate students' learning outcomes and skill development. Beyond traditional written exams, oral reports, group presentations, and poster designs can also be used for assessment. Teachers can create challenging and integrated projects, encouraging students to apply their acquired skills and knowledge

comprehensively. A holistic evaluation encourages active student participation and provides a more comprehensive view of their overall development.

- Through best practices like personalized teaching, interactive learning, practical applications, and comprehensive evaluations, teachers can overcome challenges in the "Sports and Exercise" curriculum and provide students with a positive, all-rounded, and practical learning experience. Students can achieve better learning outcomes and establish positive habits in the health and sports domain.

In summary, this module recording exhibits the collaboration and development between teachers and students. The teacher leads students in thinking, participating in discussions, and group collaboration, while integrating various forms of interaction and the "Star of Wisdom" activities in the curriculum, fostering students' interactive cooperation and problem-solving skills. This collaborative teaching and development provides students with a positive learning environment, promoting their holistic development and heightened awareness of health.