

THE EFFECTS OF CHINESE CLIL-BASED ONLINE CULTURE LESSONS ON CULTURAL AWARENESS AND VOCABULARY LEARNING

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Abstract - Although a teaching design based on CLIL methodology has been proposed in the Teaching Chinese as Second Language (TCSL) area, still little to no attention has been paid to the teaching of Chinese Culture and Chinese as a Foreign language (CFL) through this approach. For this study we embrace the CLIL methodology in the delivery of six lessons of Chinese culture to a group of 15 second-year Italian university students with an intermediate level Chinese proficiency. The research was guided by two questions: (1) How effective is the CLIL method for learning Chinese specific vocabulary? (2) To what extent may CLIL-based teaching enhance Chinese FL learners' cultural awareness? Data, collected through pre- and post-test focusing on learners' cultural and linguistic knowledge of Chinese dining manners and etiquette rules seem to back up our initial hypothesis of CLIL providing students with the necessary skills to study and work in a globalized environment thanks to their constant exposure to more authentic materials and the instructor's focus on the scaffolding of cultural awareness and understanding.

Keywords: Chinese vocabulary learning; CLIL; Cultural awareness; Higher Education; Teaching Chinese as Second Language.

1. Introduction

Chinese is increasingly acknowledged as a strategic language worldwide, with a growing number of students having the chance to learn the language through various educational opportunities offered by their national systems or via study trips to China. In the post-pandemic period, these opportunities have been amplified by the growing utilization of technological tools (Chen *et al.* 2024; Jansem 2021; Trentin 2020). Nonetheless, a key feature of complete mastery in a foreign language (FL), alongside formal accuracy, is the ability to use the language properly for the specific context: in addition to learning FL forms, it is crucial to be cognizant of the cultural context surrounding the foreign language being studied. When acquiring a foreign language, students must learn to communicate accurately in that language, they must also recognize the cultural codes and the appropriate linguistic and non-linguistic tactics to engage with them (Meyer 2010a).

The Content and Language Integrated Learning (CLIL) method has gained significant popularity in Europe since it appeared in the mid-1990s, aiming to equip students for life and work in multilingual and multicultural environments (Eurydice 2006; Harrop 2012). It is described as “a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language” (Coyle *et al.* 2010, p. 1).

In this innovative approach, the foreign language serves as a means for real communication; the content is taught through and with the foreign language. To meet the dual teaching goal (language and content), the method combines various elements outlined by Coyle (2008) in the ‘4Cs Framework’, such as contextualized *Content* (subject

knowledge), *Communication* (language learning and usage), *Cognition* (processes of learning and reasoning) and *Culture* (fostering intercultural awareness and global citizenship). The Culture element highlights the significance of thoroughly investigating the culture linked to the foreign language. Employing the CLIL method significantly enhances the opportunity to learn about the cultural elements of different nations.

The connection between language and culture is famously intricate, and immersing oneself in a culture is essential for fully grasping a foreign language, particularly when the cultural setting for using a language skill is far removed from that of learning, similar to the situation of learning FL Chinese within the European context. In the visual representation of the 4Cs framework, Coyle, Hood, and Marsh (2010) illustrate a triangle formed by the three vertices—Communication, Cognition, and Content—situated within the Culture circle, to suggest that gaining knowledge of a language includes grasping and integrating its cultural aspects.

In this project, the condition to enhance the understanding of cultural elements alongside learning the Chinese language and culture inspired the selection of CLIL methodology. Employing the CLIL method not only aids in establishing the creation of an authentic learning environment but also enhances cultural and interdisciplinary skills. Despite the vast number of studies on the effectiveness of the CLIL approach (Poveda-Garcia and Antropova 2024), there is very little research that has considered Chinese as a CLIL language. This study describes a Chinese culture course at Italian university adopting Chinese CLIL. The project was carried out completely online and involved the use of technology. Improvements in technology and Web 2.0 tools can now enhance the authenticity of the lesson and encourage interaction (Li and Lan 2022; Shadiev and Wang 2022). The aim of the research is to investigate the effectiveness of CLIL lessons in achieving vocabulary and cultural awareness in a Teaching Chinese as a Second Language context (TCSL).

2 Literature review

2.1. Fostering leaning through CLIL

The CLIL educational method encourages the instruction and acquisition of both subject matter and a second language. Effective CLIL arises from the integration of the four components (or pillars) outlined above, which include enhancing knowledge, communicating pertinently, refining language abilities, developing cross-cultural awareness, and increasing cognitive abilities (Coyle *et al.* 2010 p.41). By studying *Content*, students gain not only language proficiency but also enhance their knowledge of the subject. They improve *Communication* abilities by articulating opinions and new ideas, creating texts and presentations, and engaging in significant discussions. These activities equip students for real-life scenarios where effective communication is crucial. The CLIL approach encourages learners to develop their *Cognitive* abilities. Learners turn into active participants in the learning process, posing inquiries and enhancing their problem-solving and critical thinking abilities. Every activity must be placed within a particular specific *Cultural* context, helping students to develop intercultural understanding. Together with the FL students learn traditions, values, habits of such FL speakers.

To ensure the quality and effectiveness of learning, the methodological aspects of CLIL programming hold a significant position. The defining features of CLIL methodology consist of dual focus, an engaging learning environment, authenticity, scaffolding and collaboration (Mehisto *et al.* 2008). Learning is promoted by the delivery

of rich, understandable input and by the requirement for the student to focus on that input to grasp meanings; noticing processes are naturally activated (Coonan 2010; Schimdt 1990). CLIL also incorporates teaching methods that involve the learner in a more active manner compared to traditional lecture format, offering numerous chances for interaction via classroom activities (Genesee 1991; Lyster 2007), thereby encouraging language production (Swain 1985).

In an authentic and non-simulated language environment, where language serves as a natural means of communication, the learner is not required to imagine a different context for activities. The focus on the context enables the most natural application of FL. This perception fosters increased participation in the lesson by establishing a sense of belonging among the students, resulting in both emotional and cognitive effects (Sisti, 2015).

2.2. Effectiveness of CLIL for promoting linguistic and non-linguistic skills

Numerous investigations into the impact of CLIL have noted its ability to enhance motivation (Doiz *et al.* 2014; Lasagabaster 2011; Ouazizi 2016; Pavón-Vázquez 2014). The CLIL approach, by focusing students' attention mainly on cultural content, enhances the motivation of those who are less interested in the language elements.

Other research has noted CLIL success in target language results (Griva and Kasvikis 2014) as well as lasting advantages for students, motivating learners to generate new understanding and gain new abilities (Pavón-Vázquez 2014; Pavón-Vázquez and Allison 2013). Utilizing FL for interaction or monologuing, along with mastering disciplinary micro-languages, CLIL fosters cognitive and meta-cognitive processes that learners can apply in other learning environments. In addition, CLIL promotes subject-related intercultural learning, enabling students to enhance their academic concepts and build intercultural competencies by examining content from various viewpoints using the foreign language (Montalto *et al.* 2016).

Teaching a foreign language goes beyond enhancing learners' linguistic and communicative abilities in the target language. It also includes sharing insights about the target culture or the environment in which the speakers of that language live. In addition to teachers, textbooks and *realia* can also serve as a valuable resource for offering learners abundant cultural information that reflects the identity or values of the culture (Brown 1994; Lyster and Ballinger, 2011). However, CLIL offers contexts and content that enhance students' comprehension of both their own and other cultures, fostering cultural awareness and presenting valuable chances to explore and contemplate various cultures, traditions, values, and behaviors (Coyle *et al.* 2009).

Technological tools can provide a great support to CLIL in enhancing cultural immersion. While the use of distance or online teaching methods through technological tools is extensively studied for foreign language learning, there is limited research on completely online CLIL programs (Yang and Yang 2022). Technological and web-based tools can enhance the perception of contextual authenticity; learners can engage in environments, even if virtual, that reflect the culture and language being studied; thus, these tools are especially beneficial when the learning context is located at a significant distance from the FL usage context. By utilizing video, audio, and social web communication platforms, students can also experience a fully immersive and engaging learning environment.

2.3. CLIL research in TCSL context

Although CLIL methodology has been promoted primarily in the European context, its principles have also been tested in global educational settings (Hu 2021; Lai 2017; Pistorio 2010; Tsagkari 2019; Zhu 2003). However, to our knowledge, CLIL experiments with the use of Chinese as a vehicular language are very limited. In the international context, some research has documented CLIL experiences in Australian schools (Orton and Zhang 2014).

Orton and Cui (2016) designed Chinese CLIL lessons for young learners, grades 9-10, focusing on technology and its applications. Taking into account the participants' interests, the authors present how to design a CLIL lesson that includes iPad guidance, fundamental iPad apps, and strategies for classroom management. Their findings show that students found the challenges engaging and enjoyable, making them more likely to use the language actively.

Zheng *et al.* (2023) studied the motivating and demotivating factors for CFL students in CLIL program in a British secondary school. The authors state that this is “the first and perhaps the only state school that has implemented a school-initiated Chinese CLIL program”, highlighting that CLIL teaching methods with Chinese are not especially common in the UK. The authors conducted interviews with 15 students, aged between 7 and 12 years. Their findings suggest that the motivating or demotivating factors for learners depend on a student's preference or aversion to a specific subject. They also recommend considering “soft CLIL” (Dobson 2020), which primarily emphasizes enhancing learners' language skills while treating content knowledge development as a significant secondary objective, thus making the teaching goal achievable and sustainable.

In Italy, the CLIL methodology is encouraged in schools and universities; however, only a small number of institutions have implemented Chinese CLIL initiatives. Several secondary schools where Chinese is part of the curriculum have launched projects in line with a Ministry of Education initiative that includes lessons co-taught by native speakers alongside subject teachers (Langé 2018).

The limited amount of research and experimentation is probably related to the complex challenges of choosing to adopt CLIL in Chinese for teaching a curricular subject. In CLIL application, teacher training is a crucial component. It's not always obvious to have an instructor skilled in the subject being taught in Chinese: in European CLIL situations, educators frequently must teach in a language that is not their mother tongue, which could present a larger challenge (Macaro *et al.* 2020; Olson 2021). Moreover, creating a lesson with the CLIL methodology necessitates very focused teaching planning. An additional challenge of implementing the CLIL method in Chinese pertains to the features of the language system, which necessitates a dedicated effort to learn tones and characters, absent in European languages, along with an extensive, diverse vocabulary that complicate achieving proficiency in Chinese (Orton and Cui, 2016). In the CLIL lesson, consideration should be given to how much content is truly comprehensible to the learner. For students who speak Western languages, the typological distance between their native language and Chinese entails learning an entirely distinct language system (see Li and Thompson, 1981). Additionally, the CLIL lesson that introduces disciplinary content, along with the morphosyntactic skills of the FL, must include the instruction of specialized vocabulary relevant to the subject being taught.

This study describes the positive outcomes of an experimental online CLIL course in a class of Chinese-intermediate-level students at the University in Italy. Our goal was to prove the efficacy of the CLIL methodology in strengthening students' cultural and linguistic competence by exposing them to a fully authentic learning experience.

2.4. Integrating vocabulary learning and cultural awareness in the CFL classroom

Vocabulary plays a pivotal role in second language acquisition, serving as a key element in learners' linguistic development (Alonso *et al.* 2014).

Even in the absence of advanced grammatical or phonological knowledge, a well-developed vocabulary allows learners to express meaning effectively across communicative contexts. Moreover, the development of vocabulary skills significantly contributes to the enhancement of overall language competence, fostering more effective listening, speaking, reading, and writing abilities (Chang 2007). Within the context of teaching Chinese as a Foreign Language (CFL), vocabulary acquisition is widely acknowledged as a particularly complex aspect, often perceived as especially challenging by learners approaching the study of Chinese (Gabbianelli and Formica 2017). This complexity arises from key features of the language which, even at the beginner level, require consistent effort to acquire tones, characters, and a vocabulary that is rich, varied, and lacks regular morphological patterns (Arcodia 2008). These characteristics contribute to making Chinese a demanding language to master (Orton and Cui, 2016). The challenge is further intensified for learners whose first language is typologically distant from Chinese, as the time required to achieve functional proficiency tends to be significantly longer compared to the acquisition of more closely related languages (Bernini 2012). As a result, learners often require extended periods of study before being able to comprehend or participate in lessons delivered even partially in Chinese.

Advanced learners, after overcoming the initial challenges posed by the Chinese lexical system, must then engage with more complex aspects of language competence, such as vocabulary complexity, pragmatic appropriateness, and the use of formulaic language (Yu 2019). One of the major difficulties in learning Chinese is also related to the breadth of vocabulary and the development of domain-specific lexical knowledge (Tao and Chen 2019). The importance of vocabulary size in learning CFL is clearly reflected in the structure of official proficiency tests that define levels of linguistic competence. The New Chinese Proficiency Test 2.0 (*Xin Hanyu Shuiping Kaoshi*, HSK¹), introduced in 2010, is currently the most widely recognized tool for assessing Chinese language proficiency. Proficiency levels are defined by the number of words learners are expected to master at each stage. For instance, current HSK Level 1 requires knowledge of 150 words; Level 4, commonly considered the threshold of the intermediate stage, includes 1.200 words; and Level 6, with nearly 5.000 words.

In a CLIL-oriented learning context, the use of the foreign language (FL) to deliver subject content must align with both the learning objectives of the subject and the learners' language skills (listening, speaking, reading, and writing) in the FL. It is therefore essential to consider how much of the content is comprehensible to the learner, based on the vocabulary they already know. However, a CLIL-based course that delivers subject content through the FL must also include the teaching of subject-specific vocabulary. Moreover, this specialized vocabulary is not always included in the available teaching materials. In a CLIL course, the teacher is responsible for creating teaching materials tailored to the needs of both the lesson and the class, considering the importance of using

¹ The *Hanyu Shuiping Kaoshi* (HSK) is China's official test of Chinese language proficiency. It measures non-native Chinese speakers' language skills in everyday, academic, and professional settings (<https://chinesetest.cn>). The transition to the New HSK 3.0 is underway, which has increased the amount of vocabulary required for each level and introduced three additional levels. Level 7, marking the entry into the advanced stage, requires familiarity with nearly 11.000 words.

authentic materials, such as real-life situations, to increase motivation in language learning (Marsh 2013). The use of authentic materials allows for the presentation of contextualized linguistic content, which also includes cultural elements. This provides students not only with the tools to learn the correct formal use of the language, but also with access to the social and cultural values related to such context. Culture is part of the social context of a community, and language, as the means of communication among its members, is the most visible and accessible expression of that culture (Brown 1994). Indeed, language as a social and cultural experience involves not only knowledge of grammar, phonology, and lexis, but also an understanding of certain features and characteristics of the culture. The study of a foreign language, therefore, cannot be separated from the development of cultural awareness related to the context in which the language is used. In the aforementioned diagram by Coyle, Hood, and Marsh (2010), the three core components of the CLIL triangle — *Communication*, *Cognition*, and *Content* — are encompassed by *Culture*, which serves as an overarching element integrating and contextualizing the others. This positioning highlights that acquiring knowledge through a language also involves understanding and incorporating its cultural dimension. Developing full cultural awareness becomes even more relevant when the context in which the foreign language is used is geographically distant from the learners' environment, and when expressions or vocabulary in the foreign language have no direct equivalents in the students' native languages—as is often the case with Chinese for European learners. In order to master Chinese vocabulary and fully grasp its meanings, it is sometimes necessary to understand the nuances and specific cultural aspects of Chinese society (Zhu 2020).

In all languages, vocabulary inevitably reflects cultural information (Ping and Zhang 2000). This is especially true for Chinese, due to its logographic nature. Chinese characters, which retain a representative form of meaning, possess a unique capacity to convey cultural elements. They encode both the semantic content and the cultural content of the language (Su 2000). Although modern Chinese employs a standardized writing system (Arcodia and Basciano, 2016), a considerable number of characters still preserve the same meanings they held thousands of years ago. To support vocabulary acquisition, Zhu (2005) proposes a teaching model that integrates cultural content through the analysis of disyllabic compound words, which make up a significant portion of Chinese vocabulary. From the perspective of second language education, a detailed analysis of the cultural load present in vocabulary may enhance its understanding, helping CFL students to better grasp the language (Zhu 2005).

3. Purpose and research questions

This project aims at proving how CLIL approach is particularly effective in pursue a double objective: teaching new cultural contents while developing functional competence in a foreign language, specifically the improvement of students' Chinese vocabulary learning. Through this survey, we also intend to contribute to research on CLIL methodology, particularly in the field of TCSL studies. The research was guided by two main questions:

- How effective is the CLIL method for learning Chinese specific vocabulary?
- To what extent may CLIL-based teaching enhance Chinese FL learners' cultural awareness?

4. Method

4.1. Participants and research context

The participants in the research were 15 first- and second-year university students enrolled in a Chinese language course of the master's degree program in Intercultural Business Communication, with an intermediate level Chinese proficiency test HSK 3-4, the students' age ranged between 22 and 30. The sample included 10 females and 5 males. 5 students had previously studied in China (between 1 month and 1,5 years), while 10 of them had learnt Chinese only in their home countries. Their participation was voluntary, and they were informed that during the course research on TCSL would be conducted, which would ultimately increase their Chinese language proficiency.

The CLIL instructional process consisted of six 120-minute online lessons of Chinese culture, delivered via the University Zoom, whose ultimate cultural objective was related to the main topic area of Chinese table manners and etiquette.

The choice of the topic was guided by the educational objectives of the course, which in the context of a master's degree program in International Business Communication also includes the acquisition of content from the economic and sociocultural areas. In the Chinese cultural context, behaviors at the table are defined by precise and standardized actions and timing, which distinguish roles and relationships between people in the social action represented by sharing a meal, whether family or work. Each aspect is in turn accompanied or described by vocabulary and linguistic expressions that define those roles or those relationships.

Three instructors conducted the project, one of them was Italian and did all the lectures, while the other two, native Chinese speakers, participated in two different lectures presenting supplementary materials. The whole instructional process was conducted over six weeks, almost an entire semester.

For this project, we might relay on a non-native instructor who managed the course with expertise in both language and subject matter. The University provided CLIL training, supplying a CLIL consultant who assisted in the planning, execution, and evaluation phases of the instruction carried out.

4.2. Teaching design

Following the focus of good manners and table etiquette in Chinese culture, each lesson delved into one aspect of the main theme. The whole CLIL course design is described in Table 1. Only lesson number 1 introduced a different topic, namely "negotiation", with the purpose of helping students get familiar with the CLIL methodology. Each lesson was created considering students' needs, linguistic and disciplinary objectives, resources and time, and finally, assessments. All materials, texts, images, exercises and activities used in the course were provided by the teacher, selecting online content, adapted from time to time to the needs of the class. The content related to Chinese table manners and etiquette presented during the lectures was identified in the following seven subject areas:

- 1 Food, /Zhōngguó cài/ 中国菜: Chinese foods, and in which order they are served.
- 2 Beverage, /Zhōngguó yǐnliào/, 中国饮料: what type of beverages are served and consumed at the table, and on which specific occasions.
- 3 Tableware, /cānjù/, 餐具: main tableware used for eating and drinking in China, and description of a typical Chinese table setting.

4 Meaning and use of chopsticks, /*kuàizi de yìyì hé shǐyòng*/, 筷子意义和使用: the cultural meaning of chopsticks used for eating, description of their use, and right and wrong behavior at the table.

5 Seating rules, /*rùzuò, rùxí* /, 入座、入席: descriptions of the seating arrangement in a family and at work; how to behave when taking a seat at feasts/banquets.

6 Table manners and behavior (ordering food, raising a toast, role of guests and hosts, etc.), /*cānzhuō lǐyí (diǎn cài, jìngjiǔ, zhǔrén, kèrén de xíngwéi, děng děng)*/, 餐桌礼仪 (点菜、敬酒、主人、客人的行为、等等): description of Chinese course order; taking turns in helping yourself to food and beverages (eating different foods together, serving someone), how to make and raise a toast, whom to turn to for specific requests (waiting staff or hosts).

7 Arriving, staying, and leaving time at the Chinese table, /*chūxí yànhuì de huānlè shíjiān, dòuliú hé líkāi de shíjiān*/, 出席宴会的抵达时间、逗留和离开的时间: describe when you should arrive and leave, and how much time you should spend at a party/meal.

Given the language proficiency of the participants, we chose to employ the *hard* CLIL methodology², therefore, all lessons were conducted in Chinese with specific objectives related only to the cultural content displayed. Guiding students' attention primarily to the cultural content without giving attention to the linguistic content is supportive both to the motivation of even those who are not interested in the linguistic aspects and to learning: the use of FL becomes essential to convey content as clearly as possible, encouraging participation in language production despite any errors. However, although the key to CLIL methodology is conveying a foreign language content, the use of FL is not the only component that defines the orientation of the CLIL lesson, equally important are the teaching strategies and methods. As per methods and instruments, a multimodal pedagogy and communication was adopted: the whole course was delivered online, so we employed textual, aural, and visual input, as well as online platforms for sharing activities.

In addition to plenary activities, students were often asked to work in pairs or small groups, supported by Zoom breakout rooms, to practice the four language skills (*tīng shuō dú xiě* 听, 说, 读, 写, listening, speaking reading and writing). In line with the CLIL methodology principles, activities were designed to promote interaction among participants, fostering hypothesis formulation and content interpretation, while providing opportunities for comparisons and discussions through both individual and group productions to maximize the active use of language, both independently and collaboratively. To enhance students' creativity and autonomy, each lesson included collaborative or paired activities involving the use of platforms and web applications for sharing their creations. Different platforms were tested, including Padlet.com and Wordclouds.com, and devices like smartphones or PC apps for recording audio and video of their projects to be submitted to the teacher for assessment.

² The terms “soft” and “hard” are employed to differentiate linguistic (soft) from content (hard) methodologies (see Ball *et al.* 2015). “soft CLIL” pertains to language goals, whereas ‘hard CLIL’ mainly emphasizes the presentation of subject matter using another language.

Lesson	Cultural objectives	Methods/Instruments	Duration
Lesson 1	Sample lesson on negotiation in Chinese business	Multimodal pedagogy and communication: textual, visual and auditory input, group and in pairs work (Zoom breakout rooms).	2h
Lesson 2	Usage and meaning of chopsticks	Multimodal pedagogy and communication: input video from the Internet, group work (Zoom breakout rooms); dramatization: role play in pairs, recorded audio dialogue sent to teacher.	2h
Lesson 3	Seating rules at the Chinese table (family and business)	Multimodal pedagogy and communication: textual and visual input, group work (Zoom breakout rooms); role-play in pairs; online presentation.	2h
Lesson 4	Arriving, stay, and leaving time at the Chinese table	Multimodal pedagogy and communication: input video from the Internet, group work (Zoom breakout rooms); comprehension activity in pairs, recorded audio answers sent to teacher.	2h
Lesson 5	Tableware and their usage	Multimodal pedagogy and communication: textual input and writing activities work in pairs (Zoom breakout rooms); group work, sharing activity on Padlet.	2h
Lesson 6	Manners and behaviors at Chinese table	Multimodal pedagogy, audio input, work in groups, group presentation of a news report.	2h

Table 1
Lesson plan description.

4.3. Data Collection and analysis

In order to investigate the effectiveness of the CLIL course, data were collected by means of two tests: a content-specific pre speaking test and a content-specific post speaking test. Pre- and post-tests were designed to examine the students' improvement in cultural awareness and content vocabulary. They consisted of a content picture narrative, an oral description, and open question responses. Students were asked to look at some pictures representing Chinese business and family dinner environment, and describe the situational context, what was in the picture (objects and people) and talk about Chinese table manners and etiquette that they know or were already familiar with. The tests were conducted in small groups of 2/3 people, to favor unprompted responses and allow students to spontaneously interact with the instructor. Students were asked to be speaking for about 2 to 4 minutes, showing their knowledge about table manners in Chinese society and

families, with a specific focus on the Chinese business dining context related on the seven content areas that explored the course. In addition, the instructors asked questions to guide students' conversation to examine learners' specific cultural and vocabulary-related knowledge. Data of the two speaking tests were then transcribed and analyzed.

The tasks were based on a set of cultural awareness and content vocabulary acquisition-oriented items. Cultural knowledge was assessed by means of students' command in the seven areas, by analysing their responses to the instructors' requests to describe culture related images. The two tests assessed how many words and how much information related to the selected topics the learners know. Assessment criteria employed to establish the score of cultural awareness were based on students type of outcome: the responses are correct and well explained, 2 points; the responses are not elaborated; 1 point; no response, no description, or admitted lack of knowledge on the subject: 0 point.

For measuring vocabulary knowledge, in the speaking pre-post test data, we considered the specific vocabulary related to the seven content areas employed by students. Lexical items were identified according to the online Netease Youdao dictionary, 网易有道词典. Not correctly used vocabulary, such as inversions or omissions (*zhuō* /桌/ for *zhuōzi* /桌子/table), wrong words creation (*cài shū*/菜书/ or *dān cài* /单菜/ for *càidān*/菜单/ menu), or vocabulary employed in the instructor's questions, was not included in the analysis. Each correctly used term or expression related to the topic area was scored as 1 point.

The data collected from the analysis were turned into numeric values and graphs for the descriptive analysis. Paired sample t-tests were then conducted to compare the pre-test and post-test performance results of the two groups' vocabulary knowledge and cultural awareness.

5. Results

Statistical results in Table 2 show that students improved their vocabulary performance after attending the CLIL course ($t = (28) 5.39$; $p = .000$), with an increasing mean difference of 9.60. The findings of cultural awareness also showed a significant value ($t = (28) 11.57$; $p = .000$). Additionally, for cultural awareness, the mean difference (7.87) also indicated a positive impact of the CLIL course on learners' outcomes.

	Mean (SD)	Mean difference	t-test	df	sd	Sig. (p)
Vocabulary outcomes						
Pre-test	11,60	9,60	5,3988	28	6,13	0.000
Post-test	21,20				3,12	P <0,05
Cultural awareness						
Pre-test	3,6667	7,87	11,5709	28	1,95	0.000
Post-test	11,5333				1,76	P <0,05

Table 2
Results of Vocabulary outcomes and Cultural awareness.

Figures 1, 2 and 3 present the descriptive statistics of the vocabulary and cultural

awareness improvements.

The overall observation of vocabulary improvement has proved that the quantity of specific vocabulary has highly increased in the post-test graph (Figure 2): the total score of specific vocabulary used after the CLIL instructional process has boosted from 175 to 381. In the pre-test (Figure 1), most of the specific vocabulary was only used once or twice, while in the post-test, the content-related vocabulary shows a significantly higher usage.

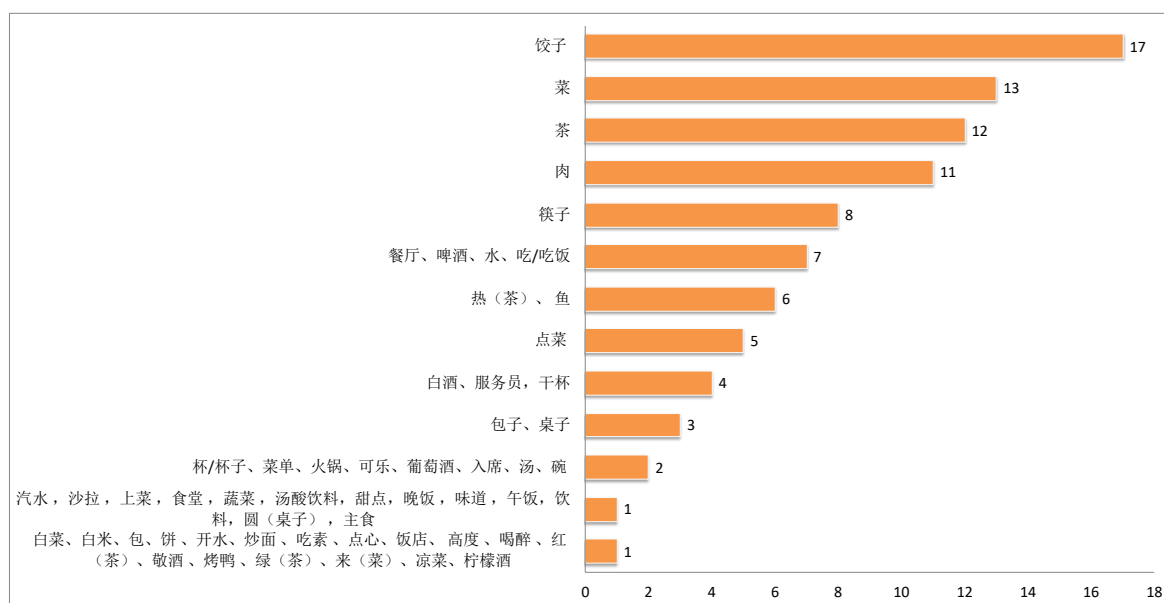


Figure 1
Descriptive analysis of pre-test vocabulary results.

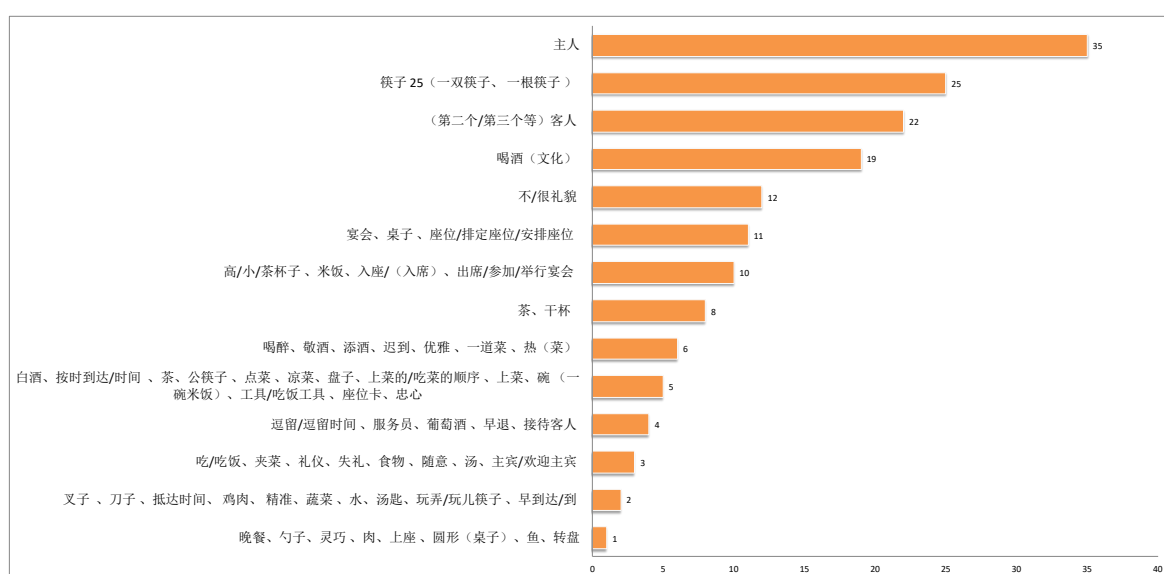


Figure 2
Descriptive analysis of post-test vocabulary results.

Moreover, the pre-test results include high-frequency words commonly introduced during the initial years of Chinese learning that aid in establishing fundamental communication skills (dumplings, *jiǎozi* /饺子/, vegetables, *cài* /菜/, tea, *chá* /茶/, meat, *ròu* /肉/, chopsticks, *kuàizi* /筷子/, restaurant, *cāntīng* /餐厅/), whereas the post-test

incorporated many new terms related to the specific cultural topic discussed during the CLIL project. The words that were most commonly found in the post-test, did not appear in the pre-test or were mentioned with less detail, such as without the use of classifiers, these include: host *zhǔrén*/主人/, a pair of chopsticks *yīshuāng kuàizi*/一双筷子/, guest *kèrén* /客人/, drinking *hējiǔ* /喝酒/, very/not polite *hěn/bù lǐmào* /很/不礼貌. These data show a growing skill in vocabulary related to content.

Results in Figure 3 show that students also implemented their cultural knowledge in all seven areas. Beverage is the subject area that shows less difference between pre- and post-test results; whereas seating rules, meaning and use of chopsticks, and arriving, staying, and leaving habits obtained opposite results: students didn't have any knowledge about these subjects before participating in the project and gained almost a full score after the CLIL course. These results clearly show that embracing CLIL methodology is extremely effective for enhancing cultural awareness.

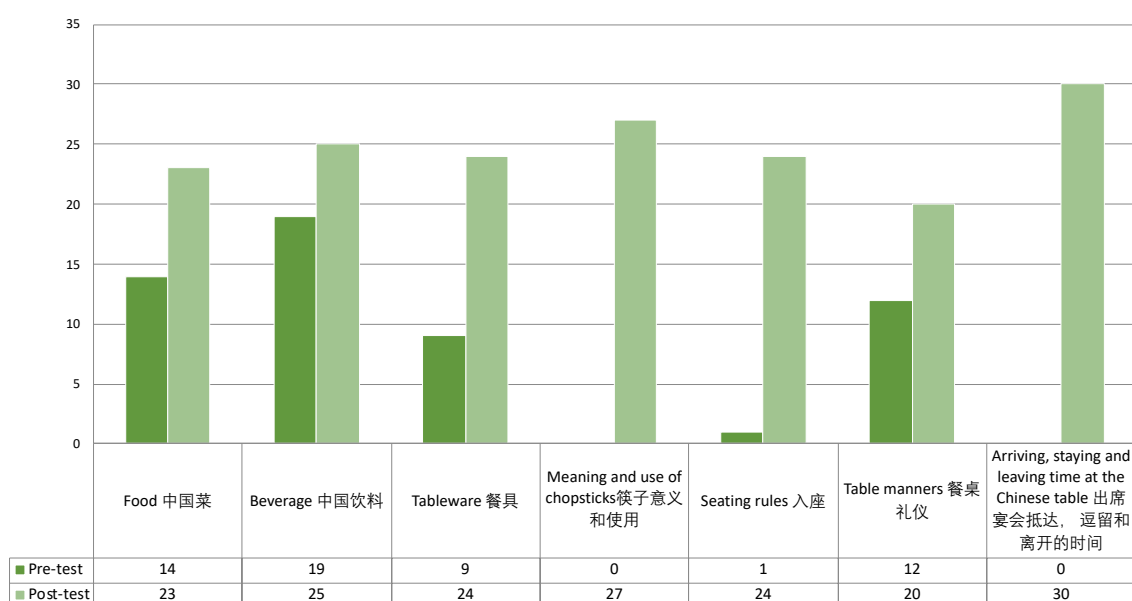


Figure 3
Descriptive analysis of cultural awareness results.

6. Discussion

The results of this study demonstrated an improvement in both aspects of the two research questions. Regarding vocabulary acquisition, all participants enriched their knowledge of the specific vocabulary related to the topic covered in the course. In fact, while the pre-test revealed that only some students knew specific words related to the subject studied, after the CLIL course their performance became more uniform. Our results demonstrate that CLIL methodology facilitates learners' linguistic and content acquisition and increases their performance. These results are in line with previous research on the effectiveness of CLIL for learning FL vocabulary (Xanthou 2011).

With reference to the second research question, the increase in cultural awareness has been significant. The chosen theme was particularly motivating for students enrolled in a degree program in Intercultural Business Communication. The CLIL environment allows students to engage with an authentic cultural context, and the topic of table manners and etiquette is very relevant for the effective dynamics of

business and social interactions in Chinese culture.

The comparison of the results from the pre-test and post-test showed that during the course, students completely grasped cultural and linguistic elements related to table manners of which they had no prior knowledge. These results clearly show that embracing the CLIL methodology is extremely effective for enhancing cultural awareness, confirming previous studies on the application of CLIL for teaching culture (Coyle *et al.* 2009; Meyer 2010b). These data also demonstrate the effectiveness of applying the *hard* CLIL methodology in higher education settings, contrary to what is recommended for younger students (Zheng *et al.* 2023). The use of the FL to convey cultural content and the lack of focus on linguistic aspects *per se* enhance the perception of authenticity and allow university students to engage with potential real-world work contexts for which they are preparing.

The results of this study offer useful teaching indications in the field of TCSL. Students learning Chinese as a foreign language encounter many challenges; Chinese is significantly distant from Italian and other Indo-European languages regarding its syntactical and vocabulary system (Li and Thompson 1981). Supporting learning within an authentic CLIL setting can enhance the teaching and learning process.

Instructing a topic in the medium of Chinese provides the opportunity to create both a necessity and a chance to use the language adopted in the classroom and to engage in activities during the learning process. Furthermore, approaching language competence through cultural content useful for future professional experiences can be very stimulating for learners. When learning a foreign language, students must gain the ability to communicate accurately in that language; they must also recognize the cultural codes along with the suitable linguistic and non-linguistic methods and strategies to tackle these codes (Meyer 2010a). Through the cultural content proposed in the CLIL lesson, students learn linguistic uses in an authentic manner, within a highly engaging and motivating educational atmosphere that boosts and improves student productivity. This is particularly beneficial in situations where opportunities to practice the FL outside of classes are very rare. Instructing and acquiring Chinese language and culture within a European setting presents different challenges than teaching and learning languages and disciplines through some European languages (Zheng *et al.* 2023). Experiencing an authentic context in Chinese CLIL lessons can be a way to facilitate the success of foreign language Chinese students, helping them learn the language *through* and *with* Chinese culture. Furthermore, through the study of FL culture, students develop greater empathy and open-mindedness, which helps them prepare for new professions in the international context (Coonan 2010).

Finally, since language education is increasingly integrated with the use of technology, this study introduced some potential of integrating technology into the CLIL methodology. According to our results, when used in a well-designed CLIL framework, technology can, on one hand, amplify exposure, interaction, and the sense of immersion in the culture of the foreign language, which are typical of the CLIL method. On the other hand, engaging in activities through Web 2.0 tools broadens students' subject-oriented and linguistic skills while enabling them to develop their technological abilities and interdisciplinary cognitive skills, including teamwork and peer correction.

7. Conclusions and limitations

Despite its long history in CLIL-based teaching and learning at the secondary and university levels education in more traditional foreign languages, much has yet to be done when it comes to TCSL.

The aim of CLIL methodology, since its beginnings, is to enhance language acquisition. Additionally, it seeks to assist students in developing international and intercultural skills that will enable them to navigate and succeed in a more multicultural society (Coyle *et al.* 2010; Eurydice 2006; Cenoz 2015).

In the global context where multilingualism and multiculturalism are integral to everyday life, creating CLIL language projects could be a requirement rather than an advantage. Results of this study revealed progress in Chinese vocabulary learning and cultural awareness that could be attributed to the CLIL implementation. Certainly, additional studies should be carried out in the field of CLIL with the Chinese language to support these findings.

The current study has several limitations that indicate directions for future research. First, the small sample used for data collection and analysis focused only on vocabulary use. The few students who participated in the project were all enrolled in the same academic program, had similar proficiency levels, and worked entirely within a university setting. Future research needs to explore the application of Chinese CLIL in varied teaching setting and test the effectiveness of this methodology with different groups of CFL learners, possibly including schools-aged students.

Secondly, the present study focuses exclusively on spoken vocabulary and cultural knowledge. Further research should examine other skills—such as writing, reading, listening and pragmatic competence—, and investigate the impact on the soft skills that students may develop.

Ultimately, this research aims at increasing the limited resources currently accessible for teaching CLIL Chinese by showcasing findings from a project executed entirely online. Additional comparative studies are required to evaluate its efficacy compared to CLIL approaches that incorporate technology in the classroom. Introducing CLIL methodology to enhance Chinese language and cultural education is promising within TCSL. Nonetheless, appropriate training for teachers is necessary to achieve this. Our findings aim to inspire educators and trainers who wish to embrace the challenge of Chinese CLIL.

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