

# Research of Bilingual Curriculum Instruction in Higher Vocational Colleges with the CLIL Teaching Method — Analyzing “Intelligent Financial Decision-Making” as an Example

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**Abstract:** In the context of ongoing reforms in higher vocational education and deepening international cooperation, bilingual instruction has emerged as a crucial channel for cultivating high-skilled talent with global competitiveness. However, issues such as the disconnection between professional content and language instruction, as well as low student engagement, remain prominent. This study examines the application of Content and Language Integrated Learning (CLIL) methodology in bilingual course instruction, using the “Intelligent Financial Decision-Making” course as a case example. By analyzing the compatibility of CLIL with the characteristics of vocational education, this paper explores its implementation across five dimensions: curriculum restructuring, task-driven learning, resource integration, interactive support, and bilingual assessment. The findings from the teaching practice indicate that CLIL can effectively enhance students’ professional competencies, language proficiency, and overall employability skills, thus providing a viable approach for the development of bilingual courses in higher vocational institutions.

**Keywords:** CLIL teaching method; Higher vocational colleges; Bilingual education; Intelligent financial decision-making; Curriculum reform

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## 1. Introduction

In recent years, the continuous development and expansion of China’s Belt and Road Initiative, alongside the trends of economic globalization and digitalization, have heightened the demands for international competitiveness among technical and skilled professionals in China. The “Vocational Education Law of the People’s Republic of China” emphasizes the importance of moral education alongside vocational training, aiming to cultivate high-quality technical and skilled talent. It also encourages international exchange and cooperation in vocational education, supporting the introduction of high-quality foreign resources to enhance the sector.

Compared to traditional programs, Sino-foreign cooperative education programs offer a higher level of internationalization and possess unique characteristics in cultivating high-end international talent. These programs have become a vital platform for developing globally competitive professionals in higher vocational colleges <sup>[1-2]</sup>. Consequently, amidst the backdrop of high-quality development in higher vocational education, fostering composite, internationally-oriented technical talent that meets the demands of contemporary changes remains a key challenge for Sino-foreign cooperative programs.

Content and Language Integrated Learning (CLIL) is an educational approach that simultaneously teaches a non-language subject and a foreign language, enhancing both content knowledge and language <sup>[3]</sup>. This educational framework involves teaching curricular content through a foreign language, typically within primary, secondary, or tertiary mainstream education settings <sup>[4]</sup>. This paper aims to investigate the implementation of CLIL in promoting bilingual instruction for students in higher vocational colleges, specifically within the course titled “Intelligent Financial Decision-Making.”

The “Intelligent Financial Decision-Making” course serves as a core subject for finance and accounting majors in vocational colleges. It integrates financial management, data analysis, and intelligent algorithms, requiring students not only to master foundational knowledge in financial accounting but also to develop skills in accessing international standards and conducting case analyses. Therefore, exploring the application of the CLIL methodology in this course to facilitate bilingual instruction holds significant practical value.

## **2. The alignment between CLIL and bilingual instruction in higher vocational colleges**

Content and Language Integrated Learning (CLIL) is an instructional approach that organizes all teaching activities around a “student-centered” model. Within the context of disciplinary knowledge, it utilizes the 4Cs framework—Content, Communication, Cognition, and Culture—to structure curriculum design and pedagogical practices. This method primarily enhances language proficiency and intercultural awareness through contextual communication and interaction. Additionally, it fosters cognitive engagement through the understanding and mastery of specialized knowledge and content. CLIL places a strong emphasis on the learning process and the overall learning experience, prioritizing the development of students’ autonomous learning and independent thinking skills <sup>[3]</sup>.

### **2.1. Content-driven teaching philosophy**

Content refers to the subject matter that students are expected to learn. In higher vocational education, this content is organized around the development of professional competencies. For instance, the course “Intelligent Financial Decision-Making” encompasses essential professional topics such as financial statement analysis, financial data forecasting, dimensionality reduction techniques, and the application of machine learning in finance. In a case study conducted by Sampaio et al. (2021) on an accounting module delivered in English at a Portuguese polytechnic institute, findings indicated that students were able to simultaneously enhance their content knowledge and language skills <sup>[5]</sup>. Participants in the study reported that the CLIL module “contributed to improving my knowledge about accounting” and “helped them learn the content of the subject” (p. 251). Likewise, Lysak (2024) observes that CLIL has been effectively implemented across diverse disciplines within European higher education, particularly in technical and vocational fields where precision in content is critical <sup>[6]</sup>.

## **2.2. Language competence in professional contexts**

Communication encompasses the linguistic dimension of Content and Language Integrated Learning (CLIL). Within the 4Cs framework, communication is not merely regarded as the acquisition of linguistic forms; rather, it involves the ability to use language meaningfully within context. CLIL identifies three types of language: the language of learning (the vocabulary and grammar necessary for understanding content), the language for learning (the language required for engaging in classroom activities and interactions), and the language through learning (the emergent language that develops as students interact with content) <sup>[3]</sup>.

Galloway and Numajiri (2019) emphasize the importance of preparing language learners for multilingual encounters—situations in which they must draw upon all available languages and demonstrate creativity in their language use <sup>[7]</sup>. In their study with pre-service and in-service TESOL practitioners, they discovered that while attitudes toward Global English were predominantly positive, there were significant concerns regarding the practical implementation of such approaches. This was particularly evident in contexts where adherence to “standard” English and language assessment practices poses barriers to innovation. These findings have direct implications for higher vocational colleges in China, where English language instruction has historically prioritized native-speaker norms and standardized testing.

## **2.3. Authentic contexts for dual-focused learning**

Cognition refers to the mental processes that students engage in during learning. Content and Language Integrated Learning (CLIL) is designed to foster cognitive engagement by requiring students to process complex content through a second language. Lysak (2024) emphasizes that CLIL enhances cognitive skills such as critical thinking and problem-solving, based on the principle that learning through a second language facilitates the development of these cognitive abilities <sup>[6]</sup>. The cognitive dimension of CLIL closely aligns with the objectives of higher vocational education, which seeks to cultivate not only technical competencies but also innovation, decision-making, and adaptive problem-solving skills. In the “Intelligent Financial Decision-Making” course, for example, students are tasked with analyzing complex financial data, evaluating alternative investment strategies, and making recommendations based on both quantitative and qualitative factors. Engaging in these activities in English necessitates that students simultaneously process information at multiple levels—linguistic, conceptual, and analytical.

## **2.4. Cultivating intercultural competence and global awareness**

Culture emphasizes the importance of developing intercultural awareness and fostering global citizenship. Within the CLIL framework, culture is not merely an optional addition; rather, it is an essential component of the learning process. Shcherbakova and Nikiforchuk (2023) illustrate how cultural elements can be effectively integrated into CLIL lessons <sup>[8]</sup>. In their lesson on floating islands, they incorporated cultural content that addressed diversity and legends associated with these islands, examining myths from Greek, Irish, and Roman traditions. This integration of cultural content not only enriches the learning experience but also enhances students’ appreciation for the various ways in which natural phenomena are understood and represented across different cultures. In the “Intelligent Financial Decision-Making” course, elements of Chinese corporate culture and ideological education could be incorporated to highlight the influence of culture on business practices and data analysis.

## **3. Advantages of CLIL in bilingual instruction in higher vocational colleges**

Compared to traditional bilingual education models, the CLIL approach offers distinct advantages in higher vocational education. These advantages are particularly evident when applied to specialized courses such

as “Intelligent Financial Decision-Making”, which integrates financial management, data analysis, and intelligent algorithms.

### **3.1. Promoting deep integration of content and language**

Traditional bilingual education often prioritizes the formal aspects of language over content comprehension, resulting in a disconnect where students memorize terminology without fully grasping fundamental concepts. In contrast, CLIL effectively integrates language learning within authentic professional content, achieving a meaningful synergy between the two. In the “Intelligent Financial Decision-Making” course, this integration is essential. By engaging students with real business case information and company data through English input, they are able to acquire practical financial data. As a result, students naturally develop specialized vocabulary and expressions within context, moving beyond the isolated memorization of terms such as “current ratio.” Instead, they encounter the term while analyzing a company’s ability to meet short-term obligations, leading to a deeper understanding of its meaning and practical application. This contextualized learning approach avoids the pitfalls of rote memorization and mechanical practice, ensuring that language serves as a tool for professional reasoning rather than an end in itself.

### **3.2. Enhancing student engagement and motivation**

The task-driven and project-based approach of CLIL enhances student engagement by immersing learners in authentic professional contexts. When students recognize a direct connection between their learning and their future careers, their intrinsic motivation is activated. In the “Intelligent Financial Decision-Making” course, a typical CLIL task might involve using factor analysis to examine the influencing factors on a company’s financial status. Students access publicly available data to obtain financial reports, employing English-language financial statements to extract what they consider to be essential professional information. They then utilize information technology and software to analyze this data and ultimately present their findings in both English and Chinese. Through this CLIL task-driven approach, students are able to accomplish the following: (1) retrieve and interpret financial data from English-language sources; (2) apply analytical models such as ratio analysis or cash flow forecasting; (3) synthesize their findings into a professional report in English; and (4) present their conclusions in a bilingual format, thereby simulating a realistic business presentation.

### **3.3. Cultivating interdisciplinary competencies**

CLIL promotes the integration of multiple disciplines, which aligns with the complexities of contemporary professional practice. In the context of “Intelligent Financial Decision-Making”, this interdisciplinary approach is particularly advantageous. Under the CLIL framework, students apply English-language financial theories, such as capital budgeting models and portfolio optimization strategies. They utilize data science tools to analyze financial data while simultaneously explaining their outputs and documenting the processes in English. Furthermore, they communicate complex findings to various stakeholders, simulating the typical cross-functional collaboration found in multinational corporations.

## **4. Conclusion**

The CLIL teaching method offers a robust theoretical framework and practical pathway for bilingual curriculum instruction in higher vocational colleges. Using “Intelligent Financial Decision-Making” as a case study, this research has developed a CLIL-based bilingual teaching model that encompasses curriculum

restructuring, task-driven practices, digital resource integration, interactive support mechanisms, and bilingual assessment. The findings indicate that the CLIL approach effectively addresses the disconnect between content and language often observed in traditional bilingual instruction, enhances students' professional competencies and language proficiency, and nurtures interdisciplinary talents with an international perspective.

Nevertheless, the implementation of CLIL also presents challenges, such as a shortage of bilingual teachers and varying levels of language proficiency among students. Future research could further investigate strategies for teacher development, the establishment of bilingual teaching resource libraries, and the application of artificial intelligence to provide personalized language support.

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