

Teacher Competence and Bilingual Pedagogy in Sino-Foreign ESP Programs: Insights from Industrial Design Education in China

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Abstract

Sino-foreign cooperative programmes in China increasingly rely on English for Specific Purposes (ESP) to connect local learners with global disciplinary discourse. However, ESP quality remains uneven due to misalignments among teacher qualifications, pedagogy, and institutional priorities. This qualitative case study investigates factors influencing bilingual ESP pedagogy in an Industrial Design English course at the Sino-German Institute of Design (IDI). Guided by the Context–Input–Process–Product (CIPP) framework, data were generated through semi-structured interviews with one programme director and two ESP instructors (60–90 minutes each) and analyzed thematically. Three interrelated themes emerged. They are (1) uneven English proficiency and student diversity complicating pacing, differentiation, and participation in English-medium instruction, (2) a disciplinary knowledge gap among ESP teachers, where strong linguistic pedagogical skills do not align with sufficient industrial design literacy, limiting authentic integration of language and content, and (3) pedagogical adjustment under constraint, with teachers relying on translation-heavy, teacher-centered approaches while selectively experimenting with communicative, project-based, and translanguaging strategies. Across themes, institutional factors of workload, materials, and training focused on compliance rather than pedagogy constrained systematic innovation. The study provides evidence that effective bilingual ESP delivery depends on the synergy of linguistic, pedagogical, and disciplinary competence, supported by institutional structures. Practical implications include embedding dual-competence professional development that includes disciplinary immersion and language pedagogy, establishing co-teaching and mentoring between ESP and subject experts, incentivizing bilingual teaching innovation, and curating locally relevant ESP resources that normalize translanguaging. The findings offer a transferable lens for strengthening bilingual ESP within internationalized higher education.

Keywords: English For Specific Purposes (ESP), Bilingual Teaching, Dual Language Instruction, Teacher Competencies, Context–Input–Process–Product (CIPP) Model, Sino-Foreign Joint Education, Industrial Design Pedagogy

Introduction

The internationalisation of Chinese higher education advances significantly through the growth of Sino-foreign cooperative education programmes. These initiatives, jointly managed by Chinese and international universities, aim to develop graduates with strong disciplinary knowledge, proficiency in English, and intercultural competence. In this context, ESP courses equip students to engage in disciplinary communication and participate in international academic environments. Because most collaborative degree programmes use English as the primary medium of instruction, ESP instruction acts as a conduit between local students and global academic and professional discourse.

Despite the importance of ESP instruction, its quality in Sino-foreign programmes is inconsistent, largely due to variations in teacher qualifications, pedagogical approaches, and institutional priorities. Challenges include ESP instructors often possessing strong language skills but lacking expertise in the relevant specialized fields, and subject-matter experts not having sufficient English proficiency or pedagogical training to deliver effective language instruction.

Bilingual pedagogy in Sino-foreign contexts provides a strategic integration of languages for deepening disciplinary understanding and promoting intercultural communication. Rather than relying solely on translation, effective bilingual instruction incorporates translanguaging, a sophisticated approach where teachers and students fluidly navigate between languages to express ideas and foster learning. This method empowers students to use their entire linguistic repertoire in meaning-making processes, aligning with contemporary bilingual education practices. Teachers in these settings play a crucial role in mediating between distinct educational cultures, aligning domestic academic expectations with international standards a task that requires careful adaptation of Western communicative or task-based pedagogies to Chinese classrooms, where a teacher-centered and examination-oriented tradition predominates.

Previous research, such as Huang, Mustakim, and Ghazali's (2023), identified substantial challenges in curriculum design, material relevance, and student engagement in ESP courses. Building on these findings, the present study shifts focus to the human dimension of ESP implementation, specifically examining teacher competence and bilingual pedagogy. By analyzing the Industrial Design English course at the IDI, this research investigates how teacher preparedness, linguistic proficiency, and pedagogical strategies directly affect the quality of ESP instruction in Sino-foreign cooperative education.

Literature Review

Teacher Competence in ESP Contexts

Teacher competence is central to the effectiveness of ESP instruction, particularly within internationalized and interdisciplinary learning environments. ESP teachers must possess both linguistic expertise and domain-specific knowledge to effectively bridge the gap between language and content learning. However, research in Chinese universities has

consistently reported mismatches between teachers' English proficiency and their understanding of the specialized fields they teach. Many English instructors, traditionally trained in linguistics or general English, face difficulties in accurately interpreting subject matter or contextualizing technical vocabulary for learners (Li, 2021; Liu, 2022). The presence of language-specialist lecturers, who excel in linguistic proficiency but struggle with domain-specific content, contrasts sharply with design professors, who possess a deep understanding of their field yet may lack the English proficiency necessary for effective communication in international contexts.

Recent studies highlight that effective ESP teachers demonstrate three dimensions of competence: (1) linguistic competence, encompassing mastery of academic and professional discourse; (2) pedagogical competence, including lesson design, classroom management, and assessment; and (3) professional competence, referring to disciplinary literacy and the ability to collaborate with subject specialists (Wang & Zhang, 2023). The lack of balanced development across these domains often limits the effectiveness of ESP course outcomes. For instance, in industrial design education, instructors must not only teach English for communication but also understand design processes, materials, and innovation terminology to provide meaningful learning experiences (Zhou, 2021).

Moreover, the rapid growth of Sino-foreign cooperation has outpaced the professional preparation of university teachers. Many universities recruit ESP lecturers based on English credentials rather than dual qualifications in both language teaching and subject expertise. Consequently, universities provide fragmented and largely reactive professional development, offering limited opportunities for co-teaching, peer mentoring, or collaborative curriculum design with foreign partners (Gao & Chen, 2022). This imbalance reinforces the need for a holistic model of teacher competence that integrates both language and content expertise.

Bilingual Pedagogy in Sino-Foreign Cooperative Education

Bilingual pedagogy in Sino-foreign education involves the strategic integration of English and Chinese to facilitate comprehension, engagement, and cross-cultural communication. The goal is not merely to alternate languages but to foster a learning environment where both linguistic codes support disciplinary understanding. However, implementing bilingual pedagogy effectively requires teachers to make complex pedagogical decisions, such as when to switch languages, how to scaffold content, and how to maintain communicative authenticity while respecting cultural learning norms (Chen, 2023).

Studies on bilingual instruction in cooperative programmes reveal that teachers often struggle to achieve this balance. On the one hand, the exclusive use of English can alienate students with limited proficiency, thereby reducing their comprehension and participation. On the other hand, excessive reliance on Chinese undermines the purpose of English-medium education and limits students' exposure to authentic disciplinary discourse (Li & Xu, 2021). The most effective instructors are those who can flexibly employ translanguaging strategies fluidly moving between languages to clarify concepts, contextualize learning, and promote intercultural dialogue (Zhang & He, 2022).

In practice, bilingual pedagogy in Sino-foreign contexts is also influenced by institutional expectations and requirements from foreign partners. Some programmes mandate full English instruction to align with foreign accreditation standards, leaving little room for linguistic adaptation. Others encourage mixed-language approaches but provide limited training or materials to support teachers. As a result, bilingual pedagogy is often implemented inconsistently, depending on individual teacher judgement rather than institutional frameworks (Wang, 2022).

Challenges in Curriculum Delivery and Implementation

The delivery of ESP courses in Sino-foreign programmes faces multiple systemic challenges related to teacher competence, material design, and classroom interaction. Teachers frequently report difficulty finding or creating textbooks that integrate both professional content and accessible English language structures. Existing materials are often adapted from foreign sources, resulting in cultural and linguistic misalignment with the contexts of Chinese learners (Jiang & Luo, 2023). By involving students in the process of adapting and co-creating learning resources, institutions can both address these misalignments and empower learners. This approach encourages learner agency, fostering a more dynamic and contextually relevant educational experience that enhances engagement and comprehension.

Teacher-centered instruction remains predominant in many ESP classrooms, where lecture-based delivery and rote memorization overshadow communicative and task-based learning. This approach limits opportunities for students to practice discipline-specific communication skills and develop confidence in English (Pan & Yu, 2020). Moreover, inadequate coordination between local and foreign faculty members leads to misaligned course objectives foreign lecturers expect students to demonstrate professional communication skills that local ESP instructors are unable to fully prepare them for (Lin, 2021).

The gap between language and content teaching is further widened by limited collaboration between departments. ESP teachers rarely participate in interdisciplinary meetings or joint lesson planning, resulting in fragmented curriculum design. Institutional factors such as heavy teaching loads, insufficient funding, and a lack of recognition for bilingual teaching innovation exacerbate these challenges (Huang & Zhao, 2022).

Strengthening Professional Development and Pedagogical Practices

Improving the quality of bilingual pedagogy and teacher competence in Sino-foreign ESP programmes requires strategic professional development. Current literature advocates three key approaches: collaborative professional learning, integrated teacher training, and reflective practice.

Collaborative professional learning involves joint workshops and peer observation between local and foreign teachers to share pedagogical methods, classroom management strategies, and disciplinary insights (Yang, 2023). Such collaboration enhances teachers' confidence in delivering content through English and encourages culturally responsive pedagogy. Integrated teacher training, combining language enhancement with discipline-based instruction, has also been found effective in improving teaching outcomes (Liang & Qiu, 2021).

Reflective practice encouraging teachers to analyze their classroom experiences, student feedback, and teaching challenges plays an equally vital role in fostering adaptive bilingual pedagogy (Zhang, 2023). Universities that institutionalize reflective dialogue, mentorship, and teaching innovation awards tend to demonstrate higher satisfaction among teachers and better student performance in ESP courses.

To sustain improvement, professional development should be embedded within institutional policy rather than treated as ad hoc initiatives. As Huang, Mustakim, and Ghazali (2023) noted in their earlier study, curriculum reforms in Sino-foreign programmes succeed only when teacher training and support systems evolve simultaneously. Strengthening bilingual pedagogy, therefore, demands not only individual competence but systemic alignment among curriculum design, teacher preparation, and quality assurance mechanisms.

Methodology

Research Objective

This study poses a guiding question of investigating the factors affecting bilingual ESP pedagogy at IDI, particularly those related to student proficiency, teacher competence, and pedagogical adaptation. This dual challenge highlights the critical role of teacher competence and bilingual pedagogy in ensuring effective ESP delivery. By pursuing these focused aims, the study contributes to the sustainability and pedagogical quality of internationalized higher education in China.

Research Design

This study adopted a qualitative case-study design to explore teacher competence and bilingual pedagogy within the ESP course at the IDI. A qualitative approach enabled an in-depth understanding of participants' experiences, beliefs, and teaching practices in a natural institutional context. As the purpose was exploratory rather than evaluative, this design offered flexibility to uncover both structural and human dimensions influencing ESP course delivery.

The study employed the Context-Input-Process-Product (CIPP) evaluation framework as an organizing lens. Context analysis examined the institutional and cultural environment of IDI; input analysis explored teacher qualifications, training, and resources; process analysis investigated instructional strategies; and product analysis focused on perceived outcomes for teachers and learners. The CIPP framework facilitated a holistic understanding of how bilingual pedagogy and teacher competence interact within Sino-foreign cooperative education.

Participants

Three participants were purposively selected from one programme director and two ESP teachers responsible for Industrial Design English courses. The director provided administrative and policy perspectives, while the teachers contributed classroom-level insights. All participants possessed English-related academic backgrounds and had a minimum of three years of teaching experience in Sino-foreign cooperative programs. Both teachers had studied abroad but lacked formal qualifications in industrial design, making them typical representatives of current ESP faculty in similar Chinese institutions.

Data Collection

Data were collected through semi-structured, in-depth interviews lasting between 60 and 90 minutes. Interview questions addressed four dimensions: (1) teachers' professional backgrounds and perceived competence; (2) approaches to bilingual teaching and material selection; (3) pedagogical challenges and institutional support; and (4) suggestions for improving professional development. Interviews were conducted in both English and Chinese, recorded with the participants' consent, and subsequently transcribed and translated for analysis.

Data Analysis

Data were analyzed using thematic analysis, following the steps proposed by Creswell and Poth (2016) of data familiarization, coding, theme generation, and interpretation. Codes were initially drawn from the CIPP framework and refined inductively as new patterns emerged. Triangulation was achieved through cross-comparison of teacher and director perspectives, and member checking ensured interpretive accuracy.

Findings

Guided by Creswell and Poth's (2016) approach to thematic analysis, this study identified three principal themes influencing bilingual ESP pedagogy at the IDI related to uneven English proficiency and student diversity, a disciplinary knowledge gap among ESP instructors, and pedagogical adjustment within classroom practices. These themes were interpreted through the CIPP framework, which provided a comprehensive lens for analyzing contextual factors, input variables, instructional processes, and evaluative outcomes. Integrating the CIPP framework throughout the analysis facilitated an in-depth examination of how institutional structures and teacher competencies interact to shape the effectiveness of bilingual pedagogy in Sino-foreign educational contexts.

Uneven English Proficiency and Student Diversity

Findings indicated that teachers reported that students entered the Industrial Design program with varying levels of English proficiency, as admission criteria emphasized design aptitude rather than language skills. This diversity created challenges in classroom management, instructional pacing, and lesson differentiation, resulting in tension between linguistic and disciplinary objectives. One teacher noted:

Students with weaker foundations showed poor listening and speaking skills at entry, making it hard to participate in English-medium lectures. Those with higher proficiency found the pace too slow.

(Interview T2, coded as Mixed Language Proficiency)

These findings echo earlier studies indicating that uneven English proficiency is a recurrent barrier in Sino-foreign joint programs (Li & Xu, 2021).

Institutional documents at IDI further emphasized that "English language competency is not only a fundamental requirement but also a key enabler for students to succeed in both academic and professional contexts"

(Programme Document, coded as Need for ESP Support).

Students reported difficulties adapting to English-only instruction delivered by foreign lecturers. A focus-group participant stated:

German instructors speak too fast in specialized courses, and it's hard to understand highly specialized design terms immediately.

(FGI 1B, coded as Comprehension Barriers with Foreign Lecturers)

This challenge is consistent with Jiang and Luo's (2023) findings that imported curricula and materials frequently present linguistic complexity exceeding students' proficiency levels.

As a result, less proficient students relied on Chinese explanations and translated concepts to facilitate understanding, which led to disengagement from English-medium discussions.

(Code 1.3: Reliance on Chinese Language).

Although this reliance was practical, it reduced opportunities for authentic communicative practice in English.

Thus, the heterogeneity of students' English proficiency significantly mediates the dynamics of instructional delivery, requiring educators to develop pedagogical approaches that simultaneously scaffold linguistic comprehension and immerse students in authentic disciplinary discourse. This challenge highlights the necessity for adaptive bilingual strategies that are responsive not only to students' immediate language needs but also to the long-term objective of facilitating subject-specific academic literacy. The findings underscore the importance of drawing on sociocultural and translanguaging theories, which advocate for leveraging students' full linguistic repertoires to support both content mastery and communicative competence within the specialized context of industrial design.

Disciplinary Knowledge Gap Among ESP Teachers

The second theme concerns the imbalance between linguistic and disciplinary expertise among ESP teachers.

Instructors acknowledged that limited backgrounds in industrial design constrained their ability to integrate language instruction with specialized content.

(Code 2.1: Lack of Industrial Design Expertise).

One teacher stated:

When teaching English for Industrial Design, I found myself lacking in background knowledge of materials, sketching processes, and critique vocabulary. Lesson preparation required significant self-study and consultation with design faculty.

(Interview T1, coded as Self-Learning and Consultation with Design Faculty)

Teachers addressed this gap through independent learning and informal collaboration with design colleagues. However, these efforts remained unsystematic and time-consuming. One instructor explained:

Students face the dual challenge of learning the language and acquiring professional knowledge simultaneously.

(Chapter 4.4, coded as Integration Challenge: Language + Content)

This dual burden reflects the findings of Zhou (2021), who emphasized the need for ESP instructors in design disciplines to possess at least a foundational understanding of design processes to contextualize language teaching effectively.

The programme director acknowledged this institutional difficulty, stating that it is challenging to recruit teachers who are both linguistically competent and professionally trained in design.

(Code 2.4: Dependence on Foreign Experts)

The majority of industrial design modules were delivered by foreign lecturers, relegating ESP instructors to the role of language facilitators rather than integrative educators. This division mirrors broader national patterns described by Gao and Chen (2022), who observed that ESP instruction often lacks structural integration with disciplinary expertise. Critically, this separation introduces substantive challenges for bilingual pedagogy: the absence of educators with interdisciplinary competence hampers the development of curricula that authentically combine linguistic and disciplinary aims. This not only diminishes the effectiveness of content-language integrated learning, but also weakens the overall coherence of bilingual instruction, risking a reduction in its academic rigor and relevance. The persistence of this structural gap thus raises important questions regarding the sustainability and transformative potential of ESP models in Sino-foreign educational contexts, highlighting the urgent need for systematic professional development and institutional strategies that foster disciplinary-linguistic integration.

Pedagogical Adjustment and Classroom Practice

Despite these constraints, ESP teachers remained committed to bilingual instruction and sought to refine their classroom strategies.

The lack of structured pedagogical training resulted in reliance on teacher-centered and translation-heavy methods.

(Code 3.1: Teacher-Centred Translation Approach).

One teacher commented:

ESP teachers lacked formal guidance on methodology. Most relied on teacher-centred explanations and translation to ensure comprehension.

(Interview T1)

This pattern is consistent with Pan and Yu (2020), who observed that Chinese ESP classrooms are often dominated by lecture-style delivery, which limits interaction and learner autonomy. Teachers in this study recognized these limitations and expressed a desire to implement more communicative and project-based practices. However, cultural learning norms presented challenges. One teacher explained:

We tried discussion and critique sessions, but many students stayed quiet, they were afraid of making mistakes or losing face.

(Interview T2, coded as Student Passivity and Fear of Error)

Isolated examples of effective innovation were observed. One teacher described adapting Western peer-review practices into a culturally responsive bilingual format:

During project assessment, students critiqued each other's design work using English, but I allowed part of the feedback to be given in Chinese so that they could express key design ideas confidently. It helped them transition between languages and eased their anxiety.

(Interview T2, coded as Emergent Translanguaging Practices)

This case of classroom innovation illustrates translanguaging as conceptualized by Chen (2023), wherein strategic use of multiple languages actively fosters both comprehension and intercultural communication in content-rich contexts. However, the capacity for sustained pedagogical advancement was fundamentally constrained by structural factors at the institutional level. As acknowledged by the programme director, professional development opportunities remained narrowly focused on administrative requirements, failing to address the substantive pedagogical skills essential for effective bilingual instruction.

Furthermore, teachers highlighted the sporadic and informal nature of collaboration with design faculty, compounded by substantial workloads and limited time for professional experimentation. (Code 3.4: Lack of Institutional Pedagogy).

In response to these systemic limitations, teachers demonstrated agency by creating bilingual rubrics and adapting course materials to better align design critique terminology with specific learning objectives.

(Code 3.5: Innovation Under Constraint).

While these actions reveal the potential for grassroots innovation, their impact remained circumscribed by the absence of coordinated institutional frameworks and sustained professional support. This study's findings offer the original contribution of situating such innovations within the realities of institutional constraint and underscore that, despite teachers' resourcefulness, meaningful and enduring pedagogical transformation requires formalized structures, collaborative cultures, and targeted professional development. This nuance extends prior claims by Yang (2023), reinforcing the necessity of establishing communities of practice and co-teaching models not only as aspirational ideals but as practical imperatives for advancing bilingual education in the Sino-foreign higher education context.

Bilingual ESP instruction at IDI is shaped by three interrelated challenges: heterogeneous student English proficiency, insufficient disciplinary expertise among ESP instructors, and systemic institutional limitations on pedagogical practice. In response to these constraints, teachers demonstrated adaptability by engaging in pedagogical experimentation, incorporating both bilingual and translanguaging strategies to address learners' diverse needs and promote subject-specific language competence.

These findings support previous research indicating that effective ESP delivery in Sino-foreign cooperative education requires the integration of linguistic, pedagogical, and professional competencies (Wang & Zhang, 2023). Evidence from this study demonstrates that individual teacher competence alone is insufficient to sustain pedagogical quality without institutional alignment, collaborative structures, and ongoing professional development.

The following chapter discusses these findings in relation to existing literature and theoretical perspectives. It examines how the identified themes of uneven student proficiency, teacher disciplinary gaps, and adaptive pedagogical practices interact to influence the quality of bilingual ESP delivery in Sino-foreign cooperative education. Guided by the CIPP framework, the discussion will explore how institutional policies, teacher development models, and translanguaging pedagogy can be aligned to strengthen bilingual teaching competence and sustainability in internationalized higher education.

Discussion

Interaction between Linguistic and Professional Competence

The findings reaffirm that effective ESP teaching in Sino-foreign contexts depends on the synergy between linguistic expertise and disciplinary literacy. Teachers who excel in English but lack domain knowledge may struggle to fully meet learners' expectations for professional communication (Li & Xu, 2021). Conversely, subject experts without pedagogical training struggle to scaffold language learning. Similar patterns were reported in recent studies highlighting that cross-disciplinary competence predicts both teaching efficacy and student engagement (Wang & Zhang, 2023).

Developing this dual competence requires institutional commitment to integrated professional pathways. Joint appointments between language centers and faculties, co-developed syllabi, and industry-linked projects can help teachers bridge linguistic and disciplinary divides. Without such mechanisms, bilingual pedagogy risks remaining superficial, focusing on translation rather than conceptual integration.

Cultural Mediation and Bilingual Pedagogy

Bilingual teaching at IDI illustrates the delicate cultural balance between Western communicative models and Chinese educational traditions. Teachers must reconcile divergent expectations: foreign partners favor student-centered, inquiry-based learning, whereas local students prefer structured guidance. Literature suggests that successful bilingual pedagogy requires teachers to act as cultural mediators, adapting Western pedagogies to align with local classroom realities while maintaining communicative authenticity (Chen, 2023).

The participants' reliance on translation and lecture-style teaching reflects transitional pedagogy rather than resistance. Their challenge lies in the lack of exemplars of effective bilingual instruction in design-related disciplines. Institutions should therefore promote contextualized pedagogical research where teachers experiment with translanguaging, visual aids, and project critiques that naturally blend English and Chinese discourse.

Professional Development and Institutional Responsibility

The study underscores that teacher competence cannot evolve in isolation from institutional structures. Professional learning opportunities remain uneven across Sino-foreign programmes. As noted by Yang (2023), isolated workshops yield limited impact without ongoing mentoring and evaluation. The IDI case exemplifies this: despite teacher motivation, the absence of co-teaching, workload adjustment, and financial incentives restricted progress.

To address this, a comprehensive systems thinking approach is necessary, integrating workload policies, recognition systems, and mentoring into a cohesive ecosystem. Within such a framework, workload adjustments should be balanced with recognition systems that acknowledge teachers who engage in bilingual instruction and interdisciplinary collaboration. Mentoring and peer observation should be woven into this framework to reinforce professional growth, creating an interdependent system that emphasizes institutional responsibility over individual effort. Such a system should be adaptable, with regular feedback loops to refine and adjust strategies, ensuring continuous improvement in teacher competence and pedagogical effectiveness.

A more sustainable model involves communities of practice linking English lecturers, subject experts, and foreign partners. Within these networks, teachers can co-design lessons, observe one another, and exchange feedback with each other. Research by Liang and Qiu (2021) demonstrates that such collaborative frameworks significantly improve teachers' confidence and students' communicative competence in bilingual environments.

Conclusion

This study examined teacher competence and bilingual pedagogy within an ESP course at the Sino-German Institute of Design. The findings indicate that teachers work under complex constraints, including uneven student proficiency, limited disciplinary expertise, and insufficient institutional support. Despite these obstacles, teachers remained committed to promoting bilingual learning and cultural understanding.

To advance bilingual pedagogy and enhance teacher competence in Sino-foreign cooperative education, several key recommendations can be made. First, there is a pressing need to implement systematic training programs that integrate English proficiency enhancement with subject-specific knowledge acquisition and innovative pedagogical practices. Such comprehensive development initiatives will ensure that teachers are not only linguistically capable but also confident in effectively delivering specialized content. In addition, fostering collaborative teaching models is essential. Co-teaching arrangements and mentoring partnerships between English language lecturers and subject-matter experts can help bridge the gap between linguistic and professional learning outcomes, allowing students to experience more coherent and contextually relevant instruction.

Institutions should also establish incentive mechanisms to motivate and recognize teachers involved in bilingual or cross-disciplinary instruction. These could include workload credits, awards for teaching innovation, or career advancement pathways linked to bilingual teaching excellence. Equally important is the creation of updated and locally relevant ESP resources. Teaching materials should reflect industrial and professional contexts while incorporating

translanguaging strategies that promote inclusivity and deeper comprehension among learners of varying English proficiency levels. Institutions should encourage a culture of research and reflection by supporting action-research projects. Through such initiatives, teachers can experiment with new strategies, assess their effectiveness, and share successful bilingual teaching practices across departments. Collectively, these measures can strengthen bilingual pedagogy and elevate the overall quality of teaching and learning in Sino-foreign cooperative education.

Teacher competence and bilingual pedagogy form the foundation for sustainable Sino-foreign cooperation in higher education. As Chinese universities further internationalize, supporting teachers as bilingual professionals will ensure that ESP courses facilitate both language acquisition and the development of globally competent graduates prepared for interdisciplinary and multicultural contexts.

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