

Language and Professional Integration in Graduate English Teaching: a Blended Learning Case Study

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ABSTRACT

This study explores the enhancement of English proficiency among non-English major graduate students in China, a critical factor for their global academic integration and improvement in international communication skills. Amidst challenges like anti-globalization, COVID-19, and geopolitical tensions, it advocates reforming graduate English teaching through a blended learning strategy that merges language skills with professional knowledge. Through a case study and action research methodology, the research develops a tailored curriculum for science and engineering students, balancing academic English proficiency with professional application. The findings reveal students' English capabilities and professional communication advancements, boosting global competitiveness. This study underscores the potential of integrating language learning with professional competencies to significantly contribute to the internationalization of graduate education in China, aligning with strategic educational initiatives and addressing global demands.

Keywords: Graduate English teaching reform, Blended learning strategy, Professional competency integration, Internationalization of education.

1. INTRODUCTION

Improving the English proficiency of non-English major graduate students in China is critical for their integration into the global academic community and the enhancement of their international communication competencies. This endeavor aligns with the objectives of the "Double First-Class" initiative and the "New Engineering" strategy, which underscore the necessity for graduates to possess both specialized expertise and a global outlook. These strategies are also instrumental in preparing graduates for active participation in international affairs and governance.

The "Graduate English Teaching Syllabus for Non-English Majors (2020)" highlights the dual function of English education at the graduate level: language acquisition and the development of professional competencies. The curriculum aims to broaden international perspectives and fortify research and academic communication abilities. Moreover, there are urgent need to to adapt teaching methodologies in graduate English education, in response to the current global challenges such as anti-globalization sentiments,

the COVID-19 pandemic, and escalating geopolitical tensions sets. This study to employ blended learning strategies for integrating language skills with professional knowledge is a response to these challenges. This approach emphasizes internationalization and personalized learning, utilizing traditional and digital educational resources. The goal is to elevate student engagement and enhance learning outcomes, thereby innovating teaching methods and fostering a professional and international language environment.

We employ a case study and action research methodology to establish a comprehensive curriculum system. We redesign the course curriculum to balance academic English proficiency with professional application, specifically tailored to meet the needs of science and engineering graduate students. Such a curriculum is expected to significantly improve the global competitiveness of Chinese graduates and contribute to the internationalization of graduate education.

The undertaking of this challenge is met with enthusiasm and a belief in the potential to develop a

more effective and innovative system for graduate English education. Through a carefully considered approach that includes personalized learning pathways and embodies core values of national sentiment and international vision, the prospects of this initiative are promising.

2. LITERATURE REVIEW

The reform of higher education in China has spurred extensive research into graduate-level English teaching, focusing on enhancing academic English skills for higher proficiency and practical application (Wu, X., 2014; Shen & Zhang, 2016). Research has specifically targeted the development of these academic English abilities among graduate students (Han, 2012; Zhong & Chen, 2014; Li & Wang, 2015; Liang & Wang, 2020; Liang, 2024) and explored challenges and innovative teaching methods such as project-based, output-oriented, and blended learning (Cai, 2017; Wang, 2020; Chun, L. et al., 2021; Chen & Hu, 2021; Xiao & Cheng, 2022).

It is recognized that academic English varies significantly across disciplines, necessitating specialized learning for effective professional communication (Li, 2017; Zhang & Jiang, 2021; Li, 2021; Cai, 2022). Efforts to boost graduate students' international capabilities have focused on Sino-foreign exchanges, introducing foreign faculty, cross-cultural communication courses, and designing academic writing and international conference communication courses (Tao, et al., 2016; Wang & Song, 2016; Cheng, et al., 2023).

Practically, Tsinghua University has developed a graduate curriculum emphasizing English ability and professional bilingualism (Zhang, et al., 2015). Concurrently, the professional bilingual program, customized by departments, prioritizes disciplinary needs and student objectives, employing foundation and seminar courses that lean heavily on academic journals for teaching material.

Meanwhile, Northwestern Polytechnical University implemented a comprehensive teaching model, blending in-class instruction, small group practice, online self-study, and second-classroom activities to create a multi-level, practical learning environment (Zhang, 2023). Language instructors manage academic English courses, whereas the small group sessions are led by professionals with international expertise, promoting an interactive and discussion-based learning environment. This model allows students to choose courses matching

their proficiency levels and learning needs, thereby spurring educators to enhance their teaching strategies for improved student outcomes continuously.

This study aims to address two major concerns in the current review. Firstly, it focuses on finding effective ways to seamlessly integrate language and professional disciplines through collaboration between language teachers and professional teachers. This collaboration aims to enhance students' research capabilities in their respective fields. Secondly, it aims to identify ways to develop an internationalized curriculum that can adapt to the ongoing COVID-19 pandemic and the volatile international environment. Due to limited opportunities for international exchange programs for graduate students, it is crucial to help them develop their "international" skills.

3. METHODS

This study employs case study and action research as research methods. The case study consists of two stages. The first stage involves a pilot study of 70 graduate students' English classes from the School of Computer Science. The second stage expands the study to include 3 additional departments for a multiple-case study. The objective is to explore a graduate English curriculum system that integrates "professionalism" and "internationalization," suitable for science and engineering institutions through cross-case analysis.

Action research is employed, where the teacher team acts as researchers, identifying and solving problems within their collaborative teaching practice. This process involves a cyclical method of "planning, acting, observing, and reflecting," allowing continuous refinement and improvement of the action, deepening the research, and achieving the goal of improving practice. The project's issues do not have established teaching practices to reference. Translating "professionalism" and "internationalization" construction goals into practical teaching methods requires ongoing exploration. The open and dynamic nature of the spiral cycle process of action research is especially appropriate for the iterative exploration process of curriculum construction.

A combination of questionnaires and in-depth interviews are used to survey graduate students and their supervisors at the School of Computer Science. Understand the current state of English ability and autonomous learning capabilities among computer

science graduate students, as well as the actual English needs for their professional studies and future work. Gain insights and suggestions from both teachers and students on how English learning services the development of their profession.

Language teachers collaborate with professional teachers to design the curriculum, including teaching objectives, materials, tasks, and evaluation methods. Select audio and video materials and texts that are both at the forefront of computer science and can serve as language models to establish a learning resource library. Integrate traditional language reading and writing tasks with the real needs of professional courses or participation in projects, and design diagnostic language testing tools to effectively assist students in self-assessment.

- The first round of teaching practice is to utilize action research to refine the teaching process, taking the School of Computer Science as a case study and to explore the construction of a graduate English curriculum system deeply integrated with professional depth, organize second-classroom activities such as "5-minute academic speech competitions," lectures, and academic salons, and establish a "Writing Center" to provide personalized assistance to students, as well as laying the foundation for the next round of promotion.
- The second round of teaching practice is to continue to use action research methods, expand the scope of curriculum construction to include 3 additional cooperative departments, and summarize the course construction situation and evaluate the teaching effectiveness.

4. RESULTS AND DISCUSSIONS

4.1 Collaborative Teaching with Deep Integration of Language and Professionalism

Language teachers often lack the scientific and engineering background knowledge to guide students in developing professional thinking and solving practical engineering problems in English. On the other hand, professional teachers who lack specialized linguistic research typically achieve proficiency in writing English scientific papers through long-term imitation and practice. These two types of teachers belong to different colleges and have few opportunities to engage in joint

teaching and research activities or share teaching experiences. This single-model faculty configuration can lead to relatively singular forms of teaching for general English and specialized English courses, with less tight content integration, making it challenging to meet the requirements for cultivating compound talents.

This study adopts an academic community collaboration model, which takes the cooperation between language teachers, foreign teachers, and computer science professional teachers as a case study to reconstruct the graduate English curriculum's teaching objectives, content, and tasks. As the main body of the curriculum implementation, language teachers need to leverage their linguistic expertise throughout various stages, from needs assessment and planning to implementation and testing. They should apply functional linguistics, corpus linguistics, and theories of English for Specific Purposes to analyze and summarize the linguistic characteristics of professional knowledge construction and communication in English. Professional teachers select the latest English literature on the latest developments in their field to conduct content-based teaching that integrates new knowledge. Foreign teachers provide targeted teaching from the perspectives of cross-cultural communication, international academic standards, and standardization, focusing on listening and speaking classes. Through collaboration, they design teaching tasks conducive to language ability development and professional learning application. Based on the differences in students' language proficiency levels and their respective research stages, differential output tasks are set to meet the individualized needs of students. Students form academic communities for collaborative learning, driven by projects and tasks, sharing and inspiring each other to enhance their language application and communication skills. After completing the tasks, students self-assess, peer-assess within the class, and mutually evaluate within their groups. A "Writing Center" is established, mainly staffed by foreign teachers and language teachers with rich academic writing experience, with professional teachers providing support to help graduate students improve their academic writing and communication skills.

4.2 Ideological and Political Leadership in International Curriculum Construction

The internationalization of the curriculum requires the integration of international factors into

the content and teaching tasks of the curriculum. This model involves increasing international content, cultivating students' international awareness and ability to interact and communicate with other outstanding cultures, and fostering an open and inclusive mindset. The practice of international curriculum construction needs to be comprehensively adjusted regarding teaching content, teaching tasks, and evaluation systems. The internationalization concept guided by curriculum ideology aims to build an international curriculum system that includes knowledge acquisition, capability construction, attitude shaping, and emotional development. The focus is on embedding national and international elements into curriculum construction, cultivating students' cross-cultural capabilities and international perspectives.

This study includes incorporating learning resources around international development and cross-cultural communication to enhance students' sensitivity to different cultures and their awareness of proactive communication in different cultural environments. It also involves strengthening the connection to the discipline's knowledge while grounding in the local context, integrating domestic discipline development, challenges, and wisdom into the teaching content to establish a national academic identity.

The approach also aims to create simulated and natural international environments, such as academic poster exhibitions, 5-minute academic speech competitions (3MT China version), and online international conferences, with the output goal of cross-cultural capabilities and international vision. Additionally, it explores establishing a transparent, diverse, and highly operable evaluation mechanism to assess the learning outcomes of the internationalized curriculum system.

This study proposes an academic community collaboration model, exemplified by the cooperation between language teachers, foreign teachers, and computer science professional teachers. The aim is to reconstruct the graduate English curriculum, integrate international factors into the content and teaching tasks of the curriculum, and cultivate students' cross-cultural capabilities and international perspectives.

5. CONCLUSION

The collaborative efforts of language, professional, and foreign teachers in the academic

community aim to enhance teaching efficiency and foster professional development. Integrating language learning into professional studies effectively promotes interdisciplinary growth among teachers and fosters students' collaborative skills. The internationalization of graduate courses should be grounded in national traditional culture, integrating global concepts and achievements while promoting local academic contributions. This approach fosters genuine cross-cultural academic exchange. Considering faculty and class hours constraints, this study uses innovative course strategies for personalized student learning. Online diagnostic tests identify students' language levels and areas for improvement. The online platform offers self-learning resources for independent study. Varied learning tasks allow for student choice, and the Writing Center provides targeted assistance for writing needs.

This study underscores the importance of collaborative teaching and internationalization in graduate English education. It further emphasizes the critical role of innovative course strategies and personalized learning platforms in supporting students' academic growth. The findings of this study could potentially inform future initiatives at enhancing the quality of English education at the graduate level.

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