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Designing Effective Academic English Courses for Software Engineering Students in Chinese-Foreign Cooperatively-Run School: A Case Study of Xi'an Eurasia University

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Abstract: This paper explores the development of academic English courses tailored for software engineering students enrolled in Chinese-foreign cooperatively-run schools, with a focus on Xi'an Eurasia University. Given that these students often have limited English proficiency upon entry, the study aims to identify their specific language needs based on the curriculum requirements of the partner institution. By adopting a needs-based approach and leveraging relevant pedagogical theories, the paper proposes targeted strategies to enhance students' academic English skills.

Keywords: Academic English; English for Specific Purposes (ESP); Language needs analysis; Language curriculum design

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1. Introduction

Chinese-foreign cooperatively-run schools have become increasingly popular in Chinese higher education, providing students with opportunities to gain international perspectives and qualifications. As of 24 May 2024, there were a total of 205 Chinese-foreign cooperative education institutions and 1,022 projects in operation across the country for undergraduate education[1]. Research has shown that academic English proficiency is crucial for students' success in higher education, influencing their ability to comprehend course materials, participate in discussions, and complete assignments effectively[2]. However, most incoming students in such projects possess limited English skills, making it challenging to meet the language proficiency requirements within a short timeframe. This paper aims to address this gap and identifying the specific academic English needs. Drawing on theories from ESP and CLIL, the study proposes a structured approach to academic English instruction.

2. Analysis of Students' Learning Needs

The software engineering curriculum often encompasses a range of courses from programming and software development to database management and cybersecurity, each with specific academic and linguistic demands. This analysis highlights the importance of integrating targeted academic English instruction with the technical curriculum to prepare students for academic success in a Chinese-Foreign cooperatively-run program.

2.1 Courses' Linguistic Demands

To succeed academically, students in Chinese-Foreign cooperatively-run programs must develop a robust set of language skills tailored to the specific demands of their field. Mastering technical vocabulary is crucial for understanding and using the specific terms related to programming, software development, and network security[3]. Reading comprehension skills are essential for navigating technical documents, research papers, and textbooks, which often contain dense and complex information[4]. Effective technical writing is necessary for producing clear and concise reports, project documentation, and research papers[5]. Oral communication skills are vital

for participating in team meetings, project presentations, and academic discussions, allowing students to explain technical concepts and collaborate with peers and instructors[6]. Finally, strong listening skills are required to follow lectures, understand instructions, and engage with spoken technical information[7].

2.2 Students' Learning Needs

Students enrolled in the program generally start with a relatively low level of English proficiency. This baseline indicates significant challenges in reading comprehension, writing clarity, listening accuracy, and oral communication. A survey involving graduates of Xi'an Eurasia University's international programs provides valuable insights into students' specific learning needs[8]. The survey indicated that 78% reported challenges in writing detailed technical reports and academic papers, suggesting a need for focused instruction on technical writing. These findings underscore the importance of integrating targeted academic English instruction to address these specific language needs.

3. Academic English Teaching Theories

The academic English curriculum are designed to progressively develop students' language skills to meet the demands of their specialized coursework. These strategies are informed by a blend of pedagogical theories and practical approaches, ensuring a comprehensive and effective learning experience. The focus is on building a strong foundation, developing intermediate skills, and applying these skills in academic and professional contexts.

3.1 Teaching Objectives

The ultimate goal of academic English courses for software engineering students is to equip them with the linguistic proficiency required to excel in their specialized coursework and future careers. This involves not only mastering technical vocabulary and reading comprehension but also developing the ability to write detailed technical reports, engage in academic discussions, and understand complex lectures. Achieving these objectives ensures that students can effectively navigate their coursework, participate in collaborative projects, and meet the academic requirements necessary for graduation and professional success[9].

3.2 Teaching Theory

Designing an effective academic English curriculum should incorporate Task-Based Language Teaching (TBLT) and Computer-Integrated Language Learning (CILL). TBLT emphasizes learning through meaningful tasks that mirror real-life situations, such as project planning or coding exercises, allowing students to use English in contextually relevant scenarios[10]. CILL leverages technology to enhance language learning, providing students with access to online resources, interactive exercises, and virtual collaboration tools. This integration of technology supports autonomous learning and offers students diverse methods to practice and reinforce their language skills[11]. Effective academic English teaching strategies should include a variety of interactive and practical activities. Implementing project-based assignments, such as developing software prototypes or presenting research findings, encourages students to apply their language skills in relevant contexts[12].

4. Implementation of Teaching Strategies

The implementation of these teaching strategies involves a structured and phased approach that spans the duration of the program. This approach includes intensive language training in the first year, followed by advanced academic writing courses in the second year. By integrating language learning with technical content and practical applications, students are equipped with the necessary skills to excel in their academic and professional pursuits.

4.1 Foundation Phase (12 Months)

The foundation phase is a critical component of the academic English instruction, designed to establish a solid linguistic base for students with initial IELTS levels of 3-4. Students undergo 512 hours of intensive English language training, segmented into listening, speaking, reading, and writing modules. This comprehensive approach ensures that each fundamental skill is adequately developed to meet the rigorous demands of subsequent specialized courses. This phase is pivotal as it sets the foundation for students' academic success. The effectiveness of this phase is regularly assessed through tests and feedback, ensuring that students are on the right path to achieving their academic and professional goals.

4.2 Development Phase (6 Months)

In the second phase, students focus on developing intermediate skills and integrating language with technical content. They will take a course named Expository Writing, which emphasizes academic skills crucial for their specialized studies. Activities include intermediate reading and writing tasks, such as summarizing technical articles, writing short technical reports, and engaging in small group discussions. This phase lays the groundwork for technical documentation by helping students articulate their ideas

clearly and coherently. Technical texts and software engineering case studies are incorporated into the curriculum to provide contextual learning.

4.3 Application Phase (6 Months)

The final phase involves applying language skills in real-world contexts. Students will take the course Research and Argumentative Writing, focusing on developing foundational academic abilities. During this phase, students will concurrently apply their academic English knowledge in their professional courses. Project-based assignments, such as developing software prototypes and preparing detailed technical documentation, encourage students to use their language skills practically. Collaboration between English instructors and professional course instructors ensures that language skills are directly applied and reinforced in technical contexts. This phase ensures that students are well-prepared to meet the academic and professional demands of their field.

4.4 Expected Outcomes

The proposed teaching strategy is designed to progressively build students' academic English proficiency, enabling them to meet the rigorous demands of their software engineering coursework and future careers. By the end of the program, students should demonstrate significant improvements in their technical vocabulary, reading comprehension, writing clarity, and oral communication skills.

5. Conclusion

Academic English courses are vital for students to meet the linguistic demands of their coursework and future careers. The structured, phased approach has effectively raised students' English proficiency from a basic level to the required academic and professional standards. Future academic English teaching must continue to evolve, incorporating specialized vocabulary, enhancing digital literacy, and integrating new technologies.

In conclusion, the structured approach at Xi'an Eurasia University has laid a strong foundation for student success, highlighting the importance of targeted language training. Continued innovation and research will be crucial to meet the evolving needs of software engineering students and ensure their academic and professional success.

References:

[1] Ministry of Education of the People's Republic of China. (2024, May 24). List of undergraduate Chinese-foreign cooperatively-run schools and programs. Retrieved June 3, 2024, from https://www.crs.jsj.edu.cn/aproval/orglists/2

[2] Hyland, K. (2006). English for Academic Purposes: An Advanced Resource Book. Routledge.

[3] Nation, I. S. P. (2001). Learning Vocabulary in Another Language. Cambridge University Press.

[4] Grabe, W., & Stoller, F. L. (2019). Teaching and Researching Reading. Routledge.

[5] Huckin, T. N., & Olsen, L. A. (1991). Technical Writing and Professional Communication. McGraw-Hill.

[6] Gerson, S. J., & Gerson, S. M. (2006). Technical Communication: Process and Product. Pearson.

[7] Field, J. (2008). Listening in the Language Classroom. Cambridge University Press.

[8] Yu, W., & Gao, M. (2023). Analysis of academic English course needs for non-English major students in international programs. Overseas English, (11), 188-190.

[9] Flowerdew, J., & Peacock, M. (2001). Research Perspectives on English for Academic Purposes. Cambridge University Press.

[10] Ellis, R. (2003). Task-based Language Learning and Teaching. Oxford University Press.

[11] Chapelle, C. A. (2003). English Language Learning and Technology: Lectures on Applied Linguistics in the Age of Information and Communication Technology. John Benjamins.

[12] Beckett, G. H., & Slater, T. (2005). The project framework: A tool for language, content, and skills integration. ELT Journal, 59(2), 108-116.