

Action Research on English Demand in Vocational Undergraduate Education

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Abstract

Vocational undergraduate education is a new field for cultivating high-level and highly skilled vocational and technical talents. The integration of professional and vocational aspects is an important approach to cultivating "high-end" talents in vocational undergraduate education. However, there are problems in the actual teaching of vocational undergraduate colleges. Taking English teaching as an example, the existing textbooks, talent cultivation plans, and classroom teaching management models cannot meet the English learning needs of students or the demands of society for the English discipline in vocational education. As a result, most students are disconnected from classroom teaching, or they are not interested in English learning, and even give up learning English. In response to this practical problem, the author collected relevant data on English needs in the only vocational undergraduate university in Hainan Province and explored the reform path of English courses in vocational undergraduate colleges from three aspects: students' own needs, social needs, and teaching management.

Keywords: vocational undergraduate education, english demand, curriculum reform, action research

1. Introduction

In 2000, the Ministry of Education of China issued the "Basic Requirements for English Course Teaching in Higher Vocational Colleges and Specialized Schools", comprehensively implementing the teaching guideline of "practicality-oriented and application-driven"[1], aiming to cultivate practical abilities and enable students to possess the skills for international communication and language application. Subsequently, in 2009, the English Teaching Steering Committee for Higher Vocational Colleges and Specialized Schools emphasized the formulation of teaching syllabuses that match students' foundations based on the admission levels and vocational directions of different schools[2]. In 2021, the Office of the Ministry of Education issued the "Curriculum Standards for English in Higher Vocational Education (Specialized)".

The "New Standards for English Courses in Higher Vocational Colleges (2021 Edition)" (hereinafter referred to as the "New Standards") clearly defines the goals of English courses in higher vocational colleges, including meeting workplace demands, promoting cross-cultural communication, enhancing language thinking abilities, and increasing students' initiative in learning [3](Ma Chunyan & Wang Wei, 2021, p. 150), providing a theoretical foundation for the construction of public English courses in higher vocational colleges. Additionally, the "Vocational Education Law of the People's Republic of China", which came into effect in 2022, regards vocational education on an equal status with general education and considers it an important channel for talent cultivation and employment and entrepreneurship [4].

Guided by these driving documents, standards and laws, this research aims to promote the English teaching reform of Hainan Science and Technology University, the only vocational undergraduate college in Hainan Province, through action research. As a vocational undergraduate college focusing on key industries in Hainan, the school is committed to cultivating high-level technical talents to meet social demands. Therefore, there is a need for more practical professional technical talents who, on the basis of solidifying their professional skills, can best match the technical job requirements of employers. This demands that students, while proficiently mastering the basic knowledge of English, continuously enhance their English for Academic Purposes (EAP) or English for Specific Purposes (ESP) abilities to meet the international communication needs of the country in politics, economy, military and other fields[5]. This is to truly achieve the goal of cultivating "internationalized talents with an international vision, familiar with international rules, and capable of participating in international affairs and international competition" set by the Ministry of Education (2010)[6].

2. Theoretical Framework

Needs analysis (NA) is a method of systematic information collection and analysis through questionnaires and other means, used to formulate and establish language courses [7]. In the field of foreign language teaching, NA was initially used in the research of English for Specific Purposes (ESP) [8], while English for Academic Purposes (EAP) focuses on cultivating the English language knowledge and skills required in the academic field to enhance students' professional learning abilities [9]. Needs analysis covers two aspects: target needs analysis and learning needs analysis. The former includes the knowledge that learners must acquire, currently lack, and hope to achieve, thereby determining the teaching content. ESP is a teaching concept based on learners' needs [10]. Jordan emphasized that no single analytical method can comprehensively understand learners' needs and explore the reasons why learners fail to meet their needs [11]. Dudley-Evans and St. John (1998) [12] constructed a needs analysis framework from three aspects: target situation, learning situation, and current situation. Domestic scholar Dingfang Shu (2004) [13] proposed a dual-demand analysis model for foreign language teaching, which was constructed from two dimensions: social demand and individual demand. While Haixiao Wang (2004) [14] constructed a demand analysis model from two dimensions: university English teaching demand and university English teaching conditions. Bingbing Chen (2010) [15] combined Dudley-Evans & St. John's model with the research results of scholars such as Wang Haixiao, and constructed a university English demand analysis model, which consists of two sub-models: student personal demand analysis and social demand analysis. She proposed that the student personal demand analysis model includes "learning ability gap", "learner's individual desires", "learning process requirements", and "learning environment requirements". This model covers comprehensive content, is more reasonable, complete, and practical, and has been widely recognized by the academic community, and has become the main reference model for developing domestic demand analysis questionnaires [16].

Based on the previous research results mentioned above, elements were extracted from three aspects: students' learning needs, social needs, and teaching management needs, to generate a preset research model (Figure 1 Three-dimensional English needs analysis model) as the theoretical model for the first round of action research.

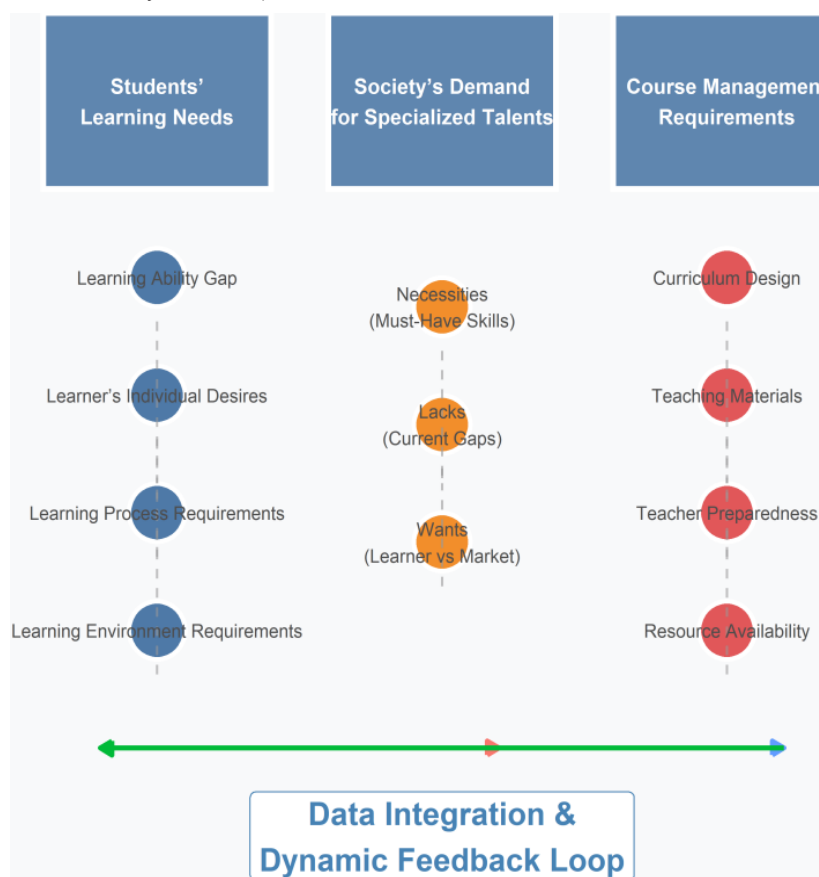


Figure 1. Three-dimensional English needs analysis model

The Three-dimensional English needs analysis model presents a comprehensive theoretical framework designed to systematically address English language education reform by integrating three interdependent dimensions: learner needs, societal demands, and institutional management. The first dimension, Students' Learning Needs,

focuses on individual gaps (e.g., foundational skills, motivation, and learning environments), while the second, Society's Demand for Specialized Talents, aligns curriculum objectives with industry requirements (e.g., must-have competencies, current skill shortages, and learner-employer expectations). The third dimension, Course Management Requirements, evaluates institutional resources (e.g., curriculum design, teaching materials, and teacher preparedness). A dynamic feedback loop at the base underscores the model's iterative nature, ensuring continuous data integration and adaptation. By synthesizing these dimensions, the framework bridges gaps between pedagogy, labor market needs, and institutional capabilities, offering a structured approach to enhance vocational English education's relevance and effectiveness.

3. Research Design

3.1 Research Object

The objects of this study were the first-year students of Hainan Vocational University (both undergraduate and college to bachelor's degree program students). As the only vocational undergraduate university in Hainan Province, this institution offers two semesters of general English courses for junior college students, two semesters of general English courses and one semester of professional English courses for college to bachelor's degree program students, and three semesters of general English courses and one semester of professional English courses for undergraduate students. The research was designed using the Three-dimensional English needs analysis model as the framework to develop the questionnaire. A total of 699 questionnaires were collected from the first-year students of grade 2023 (both undergraduate and college to bachelor's degree program students), including those from the Nursing College, Urban Construction College, and Medical College. Additionally, 334 questionnaires were collected from the first-year undergraduate-to-graduate students majoring in Nursing of grade 2024. At the same time, interviews were conducted with 3 English teachers who were responsible for teaching tasks for the freshmen of both grades, 1 English teaching supervisor who was in charge of course design and administrative management, and the employment vice-deans of the three colleges.

3.2 Action Research

To make the results more applicable to the teaching reform, the action research method was adopted. Through three rounds of research, an attempt was made to find solutions to the practical problems based on clarifying the issues, and the solutions were corrected and repaired to ensure their feasibility. The advantage lies in the following: firstly, action research helps vocational undergraduate education better adapt to social needs, improve the quality of English teaching, and cultivate talents meeting the requirements of internationalization and specialization; Secondly, action research usually focuses on solving specific problems and is applicable to teachers, managers and other grassroots decision-makers for operation, and can be directly applied to specific problems in schools[17]. Different from the general university English demand research, this study focuses on the problems in vocational undergraduate education and requires specific research methods to solve them specifically; Finally, as educators, action research provides researchers with the opportunity to participate in practical improvement. Educators can actively participate in curriculum reform and teaching management practices, thereby enhancing teaching ability and educational experience.

3.3 Research Process

This research lasted for two years. Through three rounds of action research, it aimed to understand students' attitudes towards English learning, the requirements of society for English proficiency, and the current situation of teaching management. These findings were intended to provide a basis for formulating effective strategies and measures, thereby offering a reference path to meet the needs of vocational colleges for English teaching.

3.3.1 The First Round of Research

A questionnaire based on the Three-dimensional English needs analysis model was designed. It conducted surveys on all first-year students from the Nursing College, Urban Construction College, and Medical College from four aspects: Learning Ability Gap, Learner's Individual Desires, Learning Process Requirements, and Learning Environment Requirements. A total of 699 questionnaires were collected. After data cleaning, it was finally determined that there were 641 participants. The basic situation is shown in Table 1.

Table 1. Basic Information Form for Survey Subject (2023)

	Category	Number of People	Percentage
Gender	Male	208	32.45%
	Female	433	67.55%
College	Nursing College	356	55.54%
	Urban Construction College	111	17.32%
	Medical College	174	27.15%
Enrollment level	College to Bachelor's Degree Program	367	54.13%
	Undergraduate	274	45.87%
English level	Not Yet Graded	285	44.46%
	Pass the A-level Examination	341	53.20%
	Pass the College English Test Band 4	14	2.18%
	Pass the College English Test Band 6	1	0.16%

As can be seen from the Table 1 above, the English proficiency of the tested students is generally low. There are 285 students who have not passed any English proficiency tests, accounting for 44.46%. 341 students have passed the A-level test, accounting for 53.20% of the total. This test was conducted at the end of the first semester for freshmen, even though the students had taken the corresponding level examinations, by the time the data was compiled, the examination results had not yet been made public. Thus, it can be seen that 92.91% of the students who have been promoted from college to bachelor's degree program have passed the A-level test during their junior college years, while only 4% of them have passed the CET-4 or CET-6 tests. Among them, 57 students are very interested in learning English, accounting for 8.9%, 36 students are completely uninterested in English, accounting for 5.6%; and 284 students have a general interest in learning English, accounting for the largest proportion, reaching 44.3%, as shown in the following Figure 2, which basically follows a normal distribution.

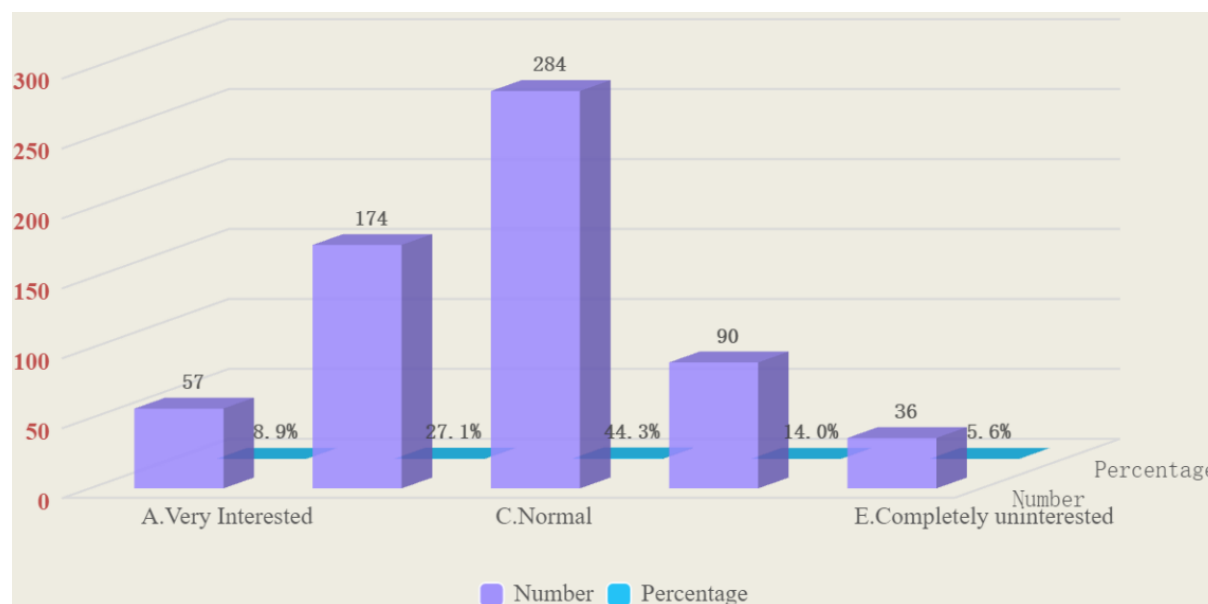


Figure 2. Degree of Interest in English

Given that the majority of students' interest in learning English is described as normal, this is precisely what is confirmed again in the subsequent responses regarding the skills that students need to enhance in English. Due to the lack of students' interest in learning English, they do not have clear learning goals in English, and are even less clear about where to start improving their English learning to enhance their own English proficiency. For details, see Figure 3.

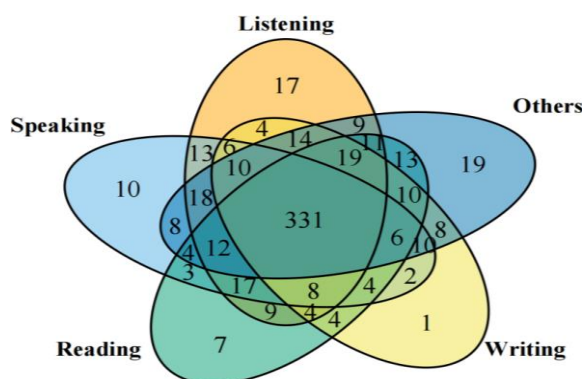


Figure 3. 5-Set Venn Diagram

Figure 3 shows that the proportion of students who have a single clear need to improve in English learning is very small. Among them, there are 17 for listening, 10 for speaking, 7 for reading, 1 for writing, and 19 for other skills. Most students have multiple needs in the areas of English skills that need improvement. There are 331 students who need to improve all five skills, accounting for 51.64% of the total tested population. This might be a sign of weak foundation or it could be due to the lack of interest and unclear goals.

Based on the above data, the author conducted interviews with the corresponding teachers and confirmed that the occurrence of these data was not accidental. According to the responses of the English teachers who teach at a certain nursing college, "The students' initial academic foundation is poor, and the textbook difficulty is relatively high. However, in the stipulated 48-hour period, it is almost impossible to complete the teaching content specified in the syllabus. There is basically no time to narrow the gap between the students' current foundation and the difficulty of the textbook, which has led to a situation where most students cannot understand, do not understand, are afraid to ask, and do not know where to start in class." "Of course, for the teachers, the separation of students from classroom teaching over time has led to the loss of students' interest in English learning, and thus they have left the English teaching classroom. The disconnection between most students and the classroom will directly affect the interest of other students in English learning, thereby affecting the overall English learning outcomes of the English teaching class." "Due to the lack of basic English proficiency, this part of the students' learning effect in the professional English study during the second semester of their undergraduate program is directly caused by this. Students simply cannot integrate into the classroom because of the complexity of professional terms, and more importantly, professional English teaching focuses more on practice and requires students to solve professional problems in English based on their basic abilities of listening, speaking, reading, and writing. Applying what they have learned. However, the students' weak foundation and the loss of interest in English learning in the first semester directly lead to a clearly polarized situation in the professional English study in the second semester. Some students even cannot complete their homework independently." "But professional English teaching is indispensable and important because students with good English grades are more likely to obtain high-paying jobs in the annual job applications compared to those with poor English grades or without any English certificates." This is a statement from an administrative manager responsible for student employment at the nursing college.

After the first round of action research, taking into account the current learning needs of students in the English subject, the feedback from public English teachers and professional English teachers, as well as the opinions of administrative managers in charge of employment in each major, the information was uniformly fed back to the person in charge of formulating the talent training plan of the public English teaching department. After consultation, it was decided to replace the existing English textbooks, select more applicable English textbooks, separate the English textbooks for undergraduate and College to Bachelor's degree program students of different levels for teaching, and re-formulate the talent training plan according to different levels of students. The professional English course was adjusted from the second semester to the first semester, and at the same time, a set of quality courses related to professional employment was offered as a compulsory course in the first semester. After the adjustment, new data will be collected to prepare for the second round of the action research.

3.3.2 The Second Round of Research

The preliminary data analysis in the first cycle of action research indicates that 356 nursing students participated, accounting for 55.54% of the total test population. Notably College to Bachelor's degree program students demonstrated higher engagement rates compared to traditional undergraduate students. This distinction arises from

their prior completion of clinical internships during their associate degree phase. As nursing diploma graduates, these students are required to complete 8-10 months of clinical practice as a prerequisite for obtaining professional nursing certification. Consequently, they possess a more comprehensive understanding of employer expectations regarding essential professional competencies than their undergraduate counterparts. Therefore, in the second round of the action research, the subjects selected were 699 students from the 2024 grade of the nursing major who had transferred from lower grades, accounting for 2024 students in total, and 352 questionnaires were collected, accounting for 50.4% of the total, with more than half of the participants. Among them, there were 284 female students, accounting for 80.7%, and 68 male students, accounting for 19.3%. The number of students who had not taken any English proficiency tests before enrollment was 268, accounting for 76.1%. The number of students who passed the English A-level test was 57, accounting for 16.2%. The number of students who passed the College English Test Band 4 was 27, accounting for 7.7%. The basic situation is shown in Table 2.

Table 2. Basic Information Form for Survey Subject (2024)

	Category	Number of People	Percentage
Gender	Male	68	19.3%
	Female	284	80.7%
English level	Not Yet Graded	268	76.1%
	Pass the A-level Examination	57	16.2%
	Pass the College English Test Band 4	27	7.7%

As can be seen from the table above, the majority of students did not pass any English proficiency exams before entering the university, and only 84 students passed relevant English exams. In order to understand the learning goals of the tested students, the questionnaire collected data on three aspects: the students' expectations for their English learning at the end of the semester (short-term goals), their expectations for English learning during the College to Bachelor's degree program (long-term goals), and their job requirements after graduation. Details are shown in Table 3.

Table 3. Needs for Survey Subject (2024)

	Category	Number of People	Percentage
Short-term Learning Goals	Pass the Final Exam	193	54.8%
	Pass the A-level Examination	35	9.9%
	Pass the College English Test Band 4	111	31.5%
	Pass the College English Test Band 6	8	2.3%
	None	5	1.5%
Long-term Learning Goals	obtained the graduation certificate	151	42.9%
	Pass the A-level Examination	31	8.8%
	Pass the College English Test Band 4	121	34.4%
	Pass the College English Test Band 6	24	6.8%
	None	25	7.1%
Job Requirements	No Plans Made	131	37.2%
	Engage in Work Related to the Industry	119	33.8%
	Prepare for Postgraduate Study	40	11.4%
	Obtain a Position in the Establishment	52	14.8%
	Engage in Other Industries	10	2.8%

The Table 3 outlines the short-term and long-term learning goals, as well as the career aspirations, of 352 survey respondents. The data reveals key trends in educational priorities and job requirements, offering insights into the

motivations and future plans of the participants. In the short term, the majority of respondents (54.8%) prioritize passing their final exams as their immediate academic goal, indicating a strong focus on completing their current courses successfully. Additionally, 31.5% aim to pass the College English Test Band 4 (CET-4), which is a common requirement for Chinese undergraduates. Only a small percentage (9.9%) are preparing for the A-level examination, while very few (2.3%) target the more advanced CET-6. This suggests that most students prioritize foundational academic achievements over more specialized or advanced certifications in the short term.

While in the long term, 42.9% of respondents aim to obtain their graduation certificate, reinforcing the importance of degree completion. A significant portion (34.4%) still focuses on passing CET-4, while a smaller but notable group (6.8%) aspires to pass CET-6, showing a gradual shift toward higher English proficiency. However, 7.1% have no long-term learning goals, which may indicate a lack of clear academic direction for some students.

Regarding career plans, 37.2% of respondents have not yet made concrete plans, suggesting uncertainty or flexibility in their future paths. Meanwhile, 33.8% intend to work in industries related to their field of study, while 14.8% seek stable positions in established organizations (e.g., government jobs). A smaller group (11.4%) is preparing for postgraduate studies, indicating an interest in further education. Only 2.8% plan to switch to unrelated industries, showing that most students remain aligned with their academic background.

The data collected in the second round of the action research reflects that the most urgent short-term needs of the students in this stage are to pass the final exams to address the concern about basic academic pressure. Secondly, the CET exam holds an important position in both long-term and short-term goals and is a common proof of students' English proficiency. Therefore, in the third round of the action research, the teaching arrangements were promptly adjusted accordingly, focusing on the contents related to the final exams and the degree English exam. At the same time, special tutoring was provided for the CET exam needs, and learning guidance was given to students without clear goals to help them establish a reasonable learning plan.

3.3.3 The Third Round of Research

In the third phase of the action research, questionnaires were administered to the 352 participants from the second cycle. Since these students had completed both the first-semester survey and professional English courses alongside career guidance programs, they had developed a clearer understanding of their learning needs, the institutional teaching management framework, and employment prospects. Consequently, continuing longitudinal testing with this cohort could effectively evaluate the appropriateness of adjustments made during the second research cycle. The survey was conducted prior to the end-of-term examinations in the second semester, with questionnaire items refined based on preceding data cycles. The focus areas included: targeted English skill enhancement, the correlation between language learning objectives and vocational requirements, and desired institutional support. A total of 348 valid responses were collected, yielding a 98.86% response rate (see Table 4 for detailed results).

Table 4. The third round of English needs survey (2024)

	Category	Count	Percentage
Learning Needs	Speaking	211	61.0%
	Listening	70	20.2%
	Reading	27	7.8%
	Writing	24	6.9%
Professional Needs	Medical professional terms understanding (such as medical records, drug names)	267	23.4%
	Patient communication (such as consultation, explanation of doctor's orders)	257	22.5%
	Academic English (such as literature reading, paper writing)	210	18.4%
	Cross-cultural communication (such as collaboration with foreign medical teams)	210	18.4%
	Understanding of nursing operation instructions (such as equipment usage guidelines)	198	17.3%
Supports Needs	Specialized Training in Medical English Vocabulary	245	35.4%
	Simulation Dialogues in Nursing Scenarios (such as emergency situations, ward rounds)	193	27.8%
	Academic English Writing (such as nursing research reports)	133	19.2%
	International Nursing Case Discussions (such as nursing norms from Europe and America)	122	17.6%

The provided table outlines the learning, professional, and support needs of individuals, likely medical or nursing students, regarding their English language proficiency. The data reveals a strong emphasis on practical

communication skills, specialized medical terminology, and scenario-based training, reflecting the demands of a globalized healthcare environment.

The majority of respondents (61.0%) prioritize improving their speaking skills, which is critical for effective patient interactions and teamwork. Listening follows at 20.2%, underscoring its importance in understanding patients and colleagues. In contrast, reading (7.8%) and writing (6.9%) are less emphasized, suggesting that oral communication is perceived as more urgent for their roles.

The top professional need is medical professional terms understanding (23.4%), such as interpreting medical records and drug names, which is foundational for accuracy in healthcare. Close behind is patient communication (22.5%), including consultations and explaining doctor's orders, highlighting the human-centered nature of medical practice. Academic English (18.4%) and cross-cultural communication (18.4%) share equal importance, reflecting the need for research collaboration and interaction with international teams. Understanding nursing operation instructions (17.3%) rounds out the list, emphasizing technical clarity in procedures.

To address these challenges, respondents most frequently request specialized training in medical English vocabulary (35.4%), aligning with their need for terminology mastery. Simulation dialogues in nursing scenarios (27.8%), such as emergency responses, are also highly desired, indicating a preference for hands-on, practical learning. Academic English writing (19.2%) and international nursing case discussions (17.6%) are secondary but still significant, supporting professional growth and global best practices.

In a word, the data reveals a clear demand for spoken English and medical terminology training, driven by the practical requirements of patient care and interdisciplinary collaboration. Educational programs should prioritize interactive speaking exercises, vocabulary drills, and simulated medical scenarios to meet these needs. Additionally, integrating cross-cultural communication and academic writing could further prepare students for global healthcare environments. Addressing these gaps will enhance both individual competency and overall healthcare communication standards.

4. Conclusion and Discussion

The collected data highlight critical gaps in the current structure of the professional English courses offered at the institution, which are limited to three semesters for undergraduate students and two semesters for College to Bachelor's degree program students. This truncated framework poses significant challenges for conducting longitudinal action research within the same cohort, as the discontinuity prevents consistent data collection and comparison across all three phases of the study. The lack of uniformity in participant sampling and temporal alignment undermines the validity of cross-phase analysis, thereby limiting the ability to draw definitive conclusions about pedagogical efficacy.

Furthermore, the absence of post-graduation tracking for the 2023 and 2024 cohorts means that the long-term impact of curriculum adjustments on industry-specific employment outcomes remains unverified. Without longitudinal data on graduates' career trajectories, it is impossible to assess whether the reformed courses effectively align with labor market demands or enhance employability in target sectors, such as healthcare.

To address these limitations, the following steps are recommended:

- (1) Longitudinal Tracking: Implement systematic follow-up studies to monitor graduates' employment status, job roles, and skill utilization in the workplace. This will validate the relevance of curriculum reforms and identify areas for further refinement.
- (2) Cohort Consistency: Design future action research with overlapping or extended course sequences to ensure participant continuity across all study phases, thereby improving data comparability.
- (3) Stakeholder Collaboration: Engage industry partners to collect real-time feedback on graduates' performance, ensuring that course content remains responsive to evolving professional requirements.

By integrating these measures, the institution can establish a robust feedback loop between education and employment outcomes, ultimately optimizing the professional English curriculum to better serve student career readiness and industry needs.

Acknowledgments

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