

ASSESSING EMPLOYABILITY FACTORS IN ESP EDUCATION: A MIXED-METHODS STUDY FROM CHINA

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Abstract. *Employment problem has increasingly become a concern in higher education in today's economic situation. This study examines core questions about the employability of university graduates who major in English for Specific Purposes (ESP) like business English. To identify the critical competencies or skills needed for ESP graduates to succeed in China's employment market today, the study builds a new employability framework based on audit tests and semi-structured interviews. Internship experience and business skills are highly valued in the workplace, according to the audit experiments, which evaluate the actual responses of possible employers. "English Skills," "Business Skills," and "Critical & Innovative Thinking" are among the major themes extracted from the interview notes coded by python. While less critical, self-learning and adaptability are still regarded as essential factors. The article offers practical recommendations that could enhance curriculum development in ESP education, aiming to narrow the gap between business requirements and academic preparation so that graduates could better meet labour market demands.*

Key words: *ESP education, employability, audit experiment, interviews*

1. INTRODUCTION

In today's unpredictable and challenging global economic environment, graduate employability has emerged as a major concern in higher education. The instability, fueled by various factors including the past global pandemic, has led to significant job market fluctuations, impacting numerous industries and, as a result, the career opportunities for many graduates, especially in language-related fields (World Bank 2022). This situation calls for higher education institutions and practitioners to rethink their educational models, aiming to boost the competitiveness of their graduates in a tough job market.

The field of language studies constitutes an important part of higher education in China. The role of English related majors, especially English for Specific Purposes (ESP) education is central to this discourse. As of 2024, at least 426 universities in China offer Business English programs. Majors like business English is a specialized program expected to offer students with English language skills and business knowledge, enhancing their employability in multinational corporations and global markets. Despite the rapid growth, these institutions face significant challenges. First, ESP graduates struggle to secure employment. Second, many find it is much

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more difficult to land jobs that match their area of expertise than before. Third, employers frequently report a mismatch between graduates' academic training and the skills required in the workplace, leading to extended training periods. This study aims to address these issues by examining the key competencies and skills needed to enhance graduates' prospects in the competitive job market. Current research mainly focuses on teaching methodologies and curriculum design to improve the learning process of ESP education (Agustina 2014; Paltridge and Starfield 2012; Gatehouse 2001). Some research methods on employment issues are relatively single or outdated, which may lead to a lack of reliability. However, there is a noticeable research gap regarding the specific skill needs and career positioning of ESP students in higher education. This highlights the necessity for more targeted research to develop graduates whose skills are in line with the real market demands. Besides, considering China's rapid economic growth and surging cross-border business activity, China's experience in the field of higher education may provide valuable insights for other cultures around the world.

Therefore, using a mixed-methods approach, this research attempts to perform a comprehensive assessment of the employability factors for ESP graduates. This method includes semi-structured interviews and a quantitative audit experiment. From the perspectives of human resource (HR) and business professionals, the goal is to gain a thorough understanding of the competencies required of ESP graduates and assess how well these competencies perform in the current global economic environment. This study aims to offer higher education institutions some information about improving the employability of ESP graduates as well as practical guidance for graduates who strive in a crowded job market.

The thesis is organized as follows. It begins with a short overview of the literature, followed by a detailed introduction about the methodology, which includes quantitative audit experiment and semi-structured interviews. The results and discussion part then present resume response data from pseudo resume audit experiment and interviews analysis coded from semi-structured interviews with business representatives, offering insights into the implications for ESP education and graduate employability. The study concludes with a summary of practical suggestions for educational institutions and educators to best prepare ESP students for a competitive labor market.

2. EMPLOYABILITY IN HIGHER EDUCATION

Employability, a key concept in higher education and career development, involves more than just getting a job (Clarke 2018). It addresses a person's capacity to find and maintain a job by integrating professional abilities with soft skills like problem-solving, collaboration, and communication (Yorke 2006). Yorke highlights that employability is not just job attainment; it also involves excelling at work and adapting to career changes. Previous studies explore the measurement of employability, showing its multifaceted nature (Harvey 2001). Graduate employability includes a mix of skills, knowledge, and career management, enriched by internship experiences (Lorraine and Sewell 2007). Besides that, Billet (2011) also explores the value of Work Integrated Learning (WIL) and internships in shaping graduate outcomes. According to Clarke (2018), the concept of graduate employability has evolved to contain factors such as human and social capital, individual attributes, and personal character. Despite some efforts done by universities who have already adopted a range of generic skill-based learning, employers still report graduates lacking basic skills necessary for successful employment (Tymon 2013).

3. EMPLOYMENT FACTORS FOR ESP GRADUATES

In the current study on ESP education and employability, the majority of studies concentrate on defining it (Ruiz-Garrido, Palmer-Silveira, and Fortanet-Gómez 2010; Paltridge and Starfield 2012; Hyland 2000), creating curriculum, educational programs (Agustina 2014; Mulyah and Aminatun 2020), and exploring methods for teaching (Gatehouse 2001; Kormos 2017), as well as specific linguistic characteristics of ESP education (Nagy 2014). The employment prospects of ESP graduates are affected by a variety of factors. Internships are essential for language majors, offering vital hands-on experience and enabling the practical application of language, cultural, and linguistic skills in real-world settings (Tran and Trang 2020). They are proven to be instrumental in fostering students' personal and professional growth, significantly contributing to their overall development. Meanwhile, ESP education, tailored to language use in specific professional domains, enhances not only linguistic proficiency but also cultural and vocational understanding pertinent to various industries, thereby augmenting employment opportunities (Rosser 2008). Wang and Stojković (2024) argue that ESP education should integrate a more comprehensive approach, viewing language not merely as a tool for professional communication, but also as a means to foster intellectual development, enhance critical thinking skills, and promote social awareness among students, thus contributing to their overall personal growth. Skills such as leadership, critical thinking, and innovation are increasingly recognized as pivotal in equipping graduates to excel in a dynamic work environment and evolve into versatile professionals. Jackson (2013) assessed the employability of business graduates, pinpointing the educational system's shortcomings in nurturing graduates who align with market needs. Presently, a consensus is yet to be reached regarding the key factors that most significantly impact the job-seeking challenges of graduates from ESP related majors in higher education. Furthermore, the precise requirements that businesses have for language professionals with varied backgrounds, particularly those from ESP education, remain insufficiently explored and understood in existing research.

To conclude, the exploration of ESP education in relation to market demands necessitates a more profound investigation. This article contributes in the following aspects. First, to assess the importance of internship on employability of ESP education, this study uses two graduates' pseudo resumes to conduct audit experiments to track the real response in the labour market. Audit experiments identify bias in real, as opposed to hypothetical, settings, providing insights beyond self-reported data. Meanwhile, this study also employs semi-structured interviews to do a more detailed and concise exploration of factors affecting ESP graduates. The main topic and sub-topic are then presented according to the interview decoding by python, and the influencing factors are ranked in order of importance at last. Compared with the general description in previous studies, it gives an accurate ranking. Consequently, from a demand-driven perspective, this article tries to analyse the discrepancy between the current training of ESP professionals in higher education institutions and societal needs.

4. THEORETICAL FRAMEWORK AND PROPOSED HYPOTHESES

Hypothesis 1: Relevant internship experience has a positive effect on the employment prospects of ESP graduates, especially when it is aligned with their area of specialization.

The first hypothesis suggests a positive correlation between internship experience and a graduate's chances of receiving job offers upon graduation, based on Social Cognitive Career Theory (SCCT). SCCT, which is originally derived from Albert Bandura's Social

Cognitive Theory, developed by Lent, Brown, and Hackett (1994) is a model for understanding career development. This theory emphasizes the significance of outcome expectations (perceptions of the benefits associated with particular career paths), personal goals (individual aspirations and accomplishments), and self-efficacy beliefs (confidence in one's abilities to perform specific career tasks). It also considers the profound influence of environmental factors, such as socio-economic background and cultural norms, on career choices and development. External environment like internship experience can help to shape career interests and decision-making.

Similar to this theory is the essential role of experiential engagement in Experiential Learning Theory. The learning cycle, as proposed by Kolb, includes four stages: engaging an activity (concrete experience), reflecting on it (reflective observation), abstract conceptualizing (drawing lessons from the experience), and applying the lessons to new situations (Kolb 1984; Sims 1983). Therefore, we propose that an enriching and quality internship experience can boost a graduate's self-efficacy, subsequently enhancing job acquisition prospects.

Hypothesis 2: Specialized language proficiency positively influences the employment prospects of ESP graduates.

The second hypothesis proposes that there is a positive correlation between proficiency in language for specific purposes (ESP) and graduates' employment opportunities. According to Pierre Bourdieu's theory (1986) of linguistic capital, language skills can be seen as a kind of capital that can be translated into economic and social benefits in social and occupational contexts. Special language abilities (such as English for special purpose) may enhance an individual's employment prospects, particularly in a globalized job market. Consequently, graduates' competitiveness especially for certain industries can be directly impacted by their level of ESP proficiency.

Hypothesis 3: Personal skills positively affect the employment prospects of ESP graduates.

The third hypothesis suggests that personal skills, including self-management, self-study and communication abilities, significantly affect employment opportunities. It incorporates insights from both theories. Social Cognitive Career Theory (SCCT) emphasizes the role of self-efficacy and outcome expectations in career pathways, while Experiential Learning Theory focuses on the acquisition of skills through active practice and reflection. Recent research highlights the increasing importance of soft skills in a rapidly changing environment (Succi and Canovi 2020).

Thus, this study seeks to address two central questions: 1. What are the corporate expectations for ESP Professionals in higher education? This question explores the specific skills and qualities that employers in the business sector seek in ESP graduates. 2. Is there a gap between business English graduates' skills and current market needs? The focus here is on identifying any discrepancies between the competencies of business English graduates and the actual demands of the job market, aiming to pinpoint areas for curriculum improvement. 3. On average, what is the typical order of importance for factors influencing employability of ESP graduates?

5. METHOD

5.1 Audit Experiment

Audit experiments, mostly seen in the social sciences, are often used to assess the degree and existence of discrimination, mainly in the housing and labour markets (Bertrand and Mullainathan, 2004). An audit experiment's basic idea is to send out fake employment

applications or pseudo resumes that are the same except for one important factor, such as race, gender, age, or ethnicity. This approach aims to identify the impact of this variable on the probability of obtaining a positive response. One of their greatest benefits is its potential of audit experiments to identify discrimination in real-world contexts as opposed to hypothetical, with information beyond self-reported statistics or fictitious scenarios.

Conducting an audit experiment mainly need the following four steps: (1) Design phase: The initial steps include carefully crafting the experiment. This step is very crucial as it involves creating two or more profiles (such as resumes) that are identical except for characteristics that need to be scrutinized (such as names that suggest race or gender). (2) Implementation phase: These profiles or resumes are then submitted to real job openings or real estate listings. To achieve statistical significance, the experiment often requires sending out a substantial number of applications, potentially in the hundreds or thousands. (3) Response Monitoring: The experiment tracks and records responses to these applications. This encompasses not just the receipt of a response but also its nature (e.g., interview invitation, further information request, direct rejection). (4) Data Analysis: The gathered data is analysed to discern any notable differences in response rates or types between the various profiles. Statistical methods are typically employed to control for confounding variables and validate the findings.

Table 1 Snapchat of resumes of tester 1 and tester 2

Resume of Tester 1	Resume of Tester 2
<p style="text-align: center;">Resume of Li Ran</p> <ul style="list-style-type: none"> Personal Information Name: Li Ran Email: liran@email.com Phone: 18810566566 Address: No. 103, Zhichun Road, Haidian District, Beijing, China Educational Background Beijing International Studies University Major: Business English Bachelor's Degree, September 2019 - June 2023 GPA: 3.7/4.0 Relevant Courses: International Business Communication, Translation Studies, Intercultural Communication, Advanced English Writing Internship Experience Standard Chartered Bank, Intern, Business Operations Department July 2021- December 2021 Conducted comprehensive customer satisfaction surveys, developing analytical abilities and customer service insights. Help to craft business plans, enhancing strategic thinking and problem-solving proficiencies. Analyzed financial reports, demonstrating proficiency in financial analysis and data interpretation. Unilever, Beijing Marketing Intern February 2022 - August 2022 Aided in the strategic planning and execution of promotional campaigns, showcasing creativity and project management skills. Analyzed consumer data, strengthening data analysis and consumer psychology understanding. Worked closely with the sales team to amplify product visibility, improving teamwork and communication skills. Skills and Certifications Languages: Native Mandarin, Fluent in English Certificates: Test for English Majors-Band 8 (TEM-8), College English Test Band 6 (CET-6) Technical Skills: Proficient in MS Office Suite, experienced in CAT tools Extra-Curricular Activities Member of the Student Finance Association, organized guest speaker events and workshops Volunteer at local community center, providing English tutoring to children Hobbies Football: Member of the university team, participated in intercollegiate tournaments Photography: Enjoy landscape and portrait photography, with a focus on cultural Travel: Passionate about exploring new cultures and languages Enjoy writing short stories and blogs, particularly focusing on travel experiences 	<p style="text-align: center;">Resume of Zou Tianhua</p> <ul style="list-style-type: none"> Personal Information Name: Zou Tianhua Email: zoutianhua@email.com Phone: 18810566576 Address: No. 102, Zhichun Road, Haidian District, Beijing, China Educational Background Beijing International Studies University Major: Business English Bachelor's Degree, September 2019 - June 2023 GPA: 3.7/4.0 Relevant Courses: International Business Communication, Translation Studies, Intercultural Communication, Advanced English Writing Internship Experience Global Translation Services, Beijing Intern Translator June 2021 - November 2021 Translated a wide range of business documents between English and Mandarin, showcasing fluency and precision in both languages. Delivered professional interpretation services during online international conferences, demonstrating the ability to convey complex information accurately and concisely. Collaborated closely with senior translators on translation projects, gaining valuable experience in team dynamics and knowledge transfer. Skills and Certifications Languages: Native Mandarin, Fluent in English Certificates: Test for English Majors-Band 8 (TEM-8), College English Test Band 6 (CET-6) Technical Skills: Proficient in MS Office Suite, experienced in CAT tools Extra-Curricular Activities Member of the Student Finance Association, organized guest speaker events and workshops Volunteer at local community center, providing English tutoring to children Hobbies Soccer: Active participant on the university team, competing in intercollegiate tournaments. Photography: Enthusiast of landscape and portrait photography, with a cultural perspective. Travel: Driven to explore diverse cultures and immerse in new linguistic environments. Writing: Enjoys penning short stories and blogs, with a focus on travel experiences.

In this study, we adopt a modified approach by designing two ESP graduate profiles that are similar in most aspects but differ in key variables (detailed in table 1). By engaging these profiles with market entities, we aim to uncover how such differences impact market responses. Initially used to study discrimination in labour markets, such as the exploration of racial biases in resume screening by Bertrand and Mullainathan (2004), the audit

experiment here is tailored to assess the employability factors, especially the attractiveness of internship experiences and business skills to potential employers for ESP graduates. As Lu (2014) notes, the success of audit experiments hinges on three critical aspects: (1) maintaining homogeneity and differentiation, ensuring that non-key information is consistent across testers, except for the specific variable being tested; (2) concealing the experimental nature to elicit genuine market responses; and (3) effectively collecting and analysing feedback to draw informed conclusions about differentiated treatment.

5.2. Design and Implementation

In this study, we carefully designed two resumes, respectively named as Li Ran and Zou Tianhua¹, to make sure they are identical in terms of their educational background, educational courses, academic performance, extra-curricular activities and technical skills, with the exception of a few crucial areas to assess market reactions. Both candidates are displayed as Business English undergraduates from Beijing International Studies University (BISU). Business English is a specialization or discipline within ESP education. The past ten years has witnessed an increasing number of undergraduates enrolled in ESP education, particularly Business English related programs across various universities in China. Among these institutions, BISU stands out, with its Business English program recognized as a “National First-Class Program”. This program serves as a representative example of the quality and scope of ESP education in China. This study focuses specifically on the graduates of BISU, providing valuable insights into the employability factors of ESP graduates in a leading institution. Business English major aims to cultivate interdisciplinary talents who can master an economy, management and other specialized fields on the basis of mastering English. Li Ran’s resume highlights his business-related internship experience, especially his marketing internships at Standard Chartered Bank and Unilever. On the other hand, Zou Tianhua’s resume emphasizes his language skills, highlighting his TEM-8 certification² in English and his translation experience. In order to make the experiment (resume) look more real, a minor variation was added to each resume’s “Hobbies and Interests” section, making sure that the difference would not have a major impact on the applicant’s chances of getting an interview. Through this design, we want to test whether quality business internships or business skills really have a statistically positive correlation with job acquisition for an ESP graduate.

In this experiment, we select 200 companies based on job search keywords from a top job recruitment website³ for graduates. The required majors are listed as “English major, Business English Major or other related major”. The screening time is set to be from 2023 March 15 to May 30, as this is the spring recruitment season in China.

We email these two resumes from different email address to targeted companies every five hours, especially during peak hiring periods (8 a.m. and 1 p.m.), to mitigate potential suspicion from recruiters regarding the similarity of the resumes. Then we collect and record resume response rate mainly by business HR’s notification, either by email, short messages or phone calls. This approach allows for a quantitative assessment of the impact of internship experience and skills on the employability of ESP graduates in the real job market.

¹ Both are typical Chinese male student names.

² Passing the TEM-8 indicates a higher level of English proficiency in China than CET-6, especially in an academic context.

³ Famous Job-hunting website for fresh graduates in China <http://www.yingjiesheng.com/>, is currently the most visited job recruitment website for fresh graduates and recruiting companies.

5.3. Qualitative Analysis

In this study's mixed-method approach, semi-structured interviews play a crucial role in enriching and deepening the insights gleaned from the quantitative audit experiment. These interviews, conducted with corporate HR personnel or representatives involved in their recruitment, aim to explore the effects of internship experience and comprehensive skill development on the employability and market success of these graduates. The open-ended nature and depth of interviews provide rich qualitative data, capturing participants' personal experiences and perceptions for a more nuanced understanding of the research question.

At present, with the progress of science and technology and the high popularity of the Internet, more and more enterprises have their own customized online recruitment systems. For example, the four top largest banks and four top famous accounting firms in China have their own recruitment systems on their respective official websites. "Sending resumes" is no longer as simple as sending traditional resumes by e-mail. It is necessary to register companies' online system and complete all personal information and experience according to the requirements. However, it is time-consuming to fill in the recruitment system one by one. It takes about 6-7 hours to complete a complete system of the company (take the famous consulting firm KPMG as an example), and it is difficult to simulate the effect of differentiation and homogenization of tester content in the resume, because the recruitment system of many companies requires the submitting of personal ID number. And there are great differences in the design of the recruitment system of each enterprise. In this case, the way of sending resumes through the above audit experiment alone is not enough to obtain comprehensive and unbiased information about the needs and preferences of enterprises.

Qualitative research can make up for the above deficiency effectively. One of the advantages of the semi-structured interview method used in this study is that it allows researchers to flexibly process the interview questions according to the actual interview situation, which helps to deeply understand the intention of the interviewed enterprises. The main questions of the interview include, (1) "From the perspective of the enterprise, what skills or qualities should the business English talents recruited by your enterprise have?" (2) "How much do you think the students' business internship experience has an impact on getting the job?" (3) "What level of foreign language ability do you think students need to reach to meet the needs of enterprises?" (4) "To what extent do you think students' skills and credentials have an impact on getting a job?" (5) "What credentials do you prefer for new job candidates?" (6) "From the perspective of the past enterprise recruitment experience, what are the main aspects of the gap between the fresh graduates cultivated by colleges and universities after the recruitment and the needs of enterprises?"

Thus, key interview topics include: (1) Corporate expectations of skills and qualities in Business English talents. (2) The impact of business internship experiences on job acquisition. (3) The level of foreign language proficiency desired by companies. (4) The influence of skills and certifications on employment, and preferred certifications. (5) The discrepancies between university-trained graduates and actual corporate employment needs.

BISU held a large job fair in March 2023, with about 100 companies attending it. We selected 57 recruitment booths who had job openings for ESP related specialties according to the recruitment request form; after that, we went to each booth and conducted face-to-face interviews.

By encouraging open-ended responses and allowing for follow-up inquiries, these interviews provide a wealth of detailed information. To ensure the reliability and validity of the data, all interviews are recorded in the form of notes. The subsequent analysis involves familiarizing with the text, coding, identifying key themes, and interpreting these findings

(detailed in Figure 1). This process not only uncovers central themes and patterns in graduate employment but also ensures the thoroughness and comprehensiveness of the research outcomes.

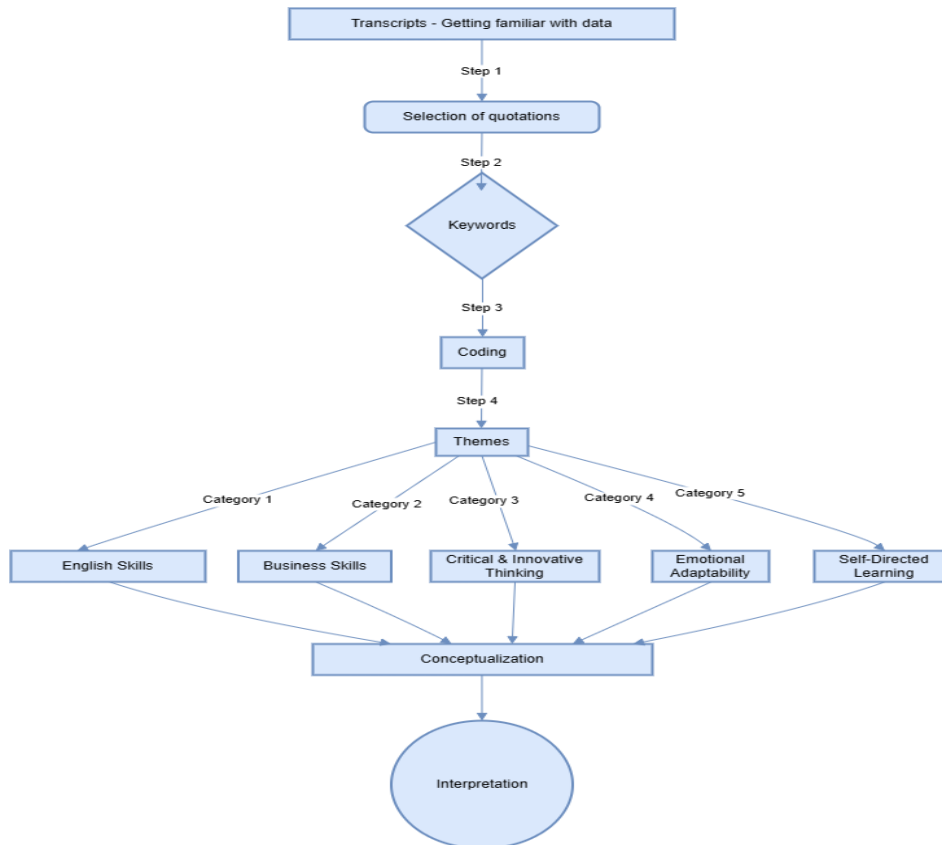


Fig. 1 The process of qualitative analysis

In this study, the coding process of qualitative data utilized the Python to enhance efficiency and accuracy. The key to this approach lies in employing Python for the identification and categorization of key terms and phrases within interview texts. To ensure the consistency and reliability of the coding, the study involved two experienced coders (both post-graduate students in English studies) who conducted the coding independently. They initially read and coded the transcripts independently, and then resolved any coding discrepancies through discussion meetings to reach a consensus.

To verify the reliability of the coding process, we use the Kappa coefficient to check the consistency between two encoders, which is a statistical measure used to assess the consistency between different evaluators. In our case, the calculated Kappa coefficient is 0.697, indicating a high level of agreement between the coders. The closer the Kappa coefficient is to 1, the higher the consistency among coders. Through this method, we ensured the scientific nature of the coding process and the reliability of the coding results, providing a solid foundation for subsequent data analysis and research findings. Additionally, using Python for automated

preliminary coding not only increased efficiency but also reduced the likelihood of human error, offering additional assurance for the precision and reliability of qualitative research.

Combining quantitative findings from the audit experiment with qualitative insights from interviews, this study aspires to present a well-rounded, multidimensional perspective on the employability of ESP graduates in higher education. This combined method aims to capture the full range of important factors influencing ESP graduates' employment and yield robust conclusions and recommendations related to graduate employment in the ESP field.

6. RESULTS AND DISCUSSION

6.1. Audit Experiment Results

The data from the audit experiments reveal that internship experience plays a pivotal role in enhancing job application success rates. Out of 200 resumes sent, Tester 1 received positive responses or further invitations from HR in 47 cases, resulting in a response rate of 23.5% (47 out of 200). In the same way, Tester 2 received positive feedback 23 times, making a response rate of 11.5% (23 out of 200). Either 23.5% or 11.5% is relatively low response rate, indicating the challenging job market that current graduates are facing in the higher education sector. Meanwhile, there is a statistically significant difference in response rate between Tester 1 and Tester 2. Tester 1's response rate was 23.5% (47 out of 200), whereas Tester 2's 11.5% (23 out of 200). The results of the Chi-square test revealed a value of 9.16, with a p-value less than 0.005 ($p < 0.01$). This suggests that testster1's resume is likely to be more attractive to most corporate HR or potential employers than tester 2's. Moreover, we can also observe that there is a relatively stable preference in specific industries. In international construction and financial services related companies, test1 has a response rate of 23% and 20%, respectively, which is higher than tester 2's 15% and 13% in the same industry. These findings highlight the value of internships in the hiring process.

Table 2 Response rates of tester 1 and tester 2 in different industries

Industry	Tester 1 response rate (47/200)	Tester 2 response rate (23/200)	HR main feedback
International Construction	23%	15%	Feedback confirms that knowledge in the constructional sector is favored and internship experience is a plus
Education	12%	14%	Responses stress the importance of educational background and language ability
Financial Services	20%	13%	Feedback highly values internships and related skills
Information Technology	15%	10%	Responses emphasizes on technical skills and internship experience
Marketing	20%	30%	Feedback highly stress marketing internship experience
Health Care	10%	18%	Responses emphasizes the value of health care internships and knowledge in the health domain

These results show that candidates with internship experience (tester 1) generally receive higher response rates across industries. Table 2 above provides a detailed breakdown of the response rates received by tester 1 and tester 2 in different industries, as well as the

feedback obtained from contact HR as validation. Feedback from HR further highlights the importance of internship experience in hiring decisions, especially in industries such as international marketing and financial services. In addition, specific industry preferences for other qualifications can be observed. For example, the education sector prioritizes educational background, while non-educational institutions, particularly business and financial institutions, focus on technical skills that value internship experience.

Through contact with HR professionals, we also gained insight into the criteria used to evaluate potential job candidates in different industries. At international construction companies, HR departments clearly prefer candidates with industry-relevant internship experience. While the education sector prioritizes educational background, internship experience is also seen as a vital complement. The financial services and information technology industries highly value relevant skills, such as financial analysis and technical competence, as well as internship experience. Similarly, in the fields of marketing and healthcare, the importance of internship experience in candidate evaluation was also highlighted.

These findings provide a valuable reference for understanding the employment criteria for ESP graduates in different industries, indicating that the market has a strong preference for practical experience gained through internships.

6.2. Qualitative Analysis and Coding Approach

In this study, we employ a systematic coding process by python to organize and analyse the qualitative data obtained from interview texts. This method could facilitate the extraction and classification of key information into distinct categories and sub-categories of skills relevant to the study's objectives. The specific coding steps are as follows:

- a) Subcategory division: First, find key information related to the research topic, and determine the subtopic according to the meaning expressed by the interviewee. For example, "good oral English" is labelled as "oral ability", "good writing skills" is labelled as "writing ability", and "knowledge related to the construction field" could be marked as "industry knowledge" (detailed in table 3).
- b) Consolidation of similar items - Identify broad themes: This part of the consolidation work mainly defines major categories based on previous research hypotheses and research theories. For example, "speaking ability" and "writing ability" are identified as the broad categories of English skills, "negotiation skills" and "trade practical knowledge" are merged into business skills.
- c) Data coding and classification: Relevant instances in the text are tagged and categorized into appropriate subcategories, including a detailed review of context and content for precise classification.
- d) Continuous verification and adjustment of the code: Ongoing review and modification of the coding framework to ensure accurate representation of the content of the interview. This iterative process involves re-examining the text to fully capture all relevant information.

Table 3 Topics, sub-topics and some keywords

Skills Category	Sub-Categories	Brief Explanation	Keywords in Interview
English Skills	Oral Proficiency	Ability to express and understand spoken language, focusing on fluency, clarity, and appropriateness.	“Fluent communication”, “Clear articulation”
	Writing Skills	Ability to produce clear, accurate, and persuasive texts, focusing on grammar, spelling, and structure.	“Strong grammar”, “Effective writing”, “good at writing”
Business Skills	Negotiation Skills	Ability to communicate effectively in business negotiations, find common ground, and achieve win-win outcomes.	“Negotiation strategy”, “Conflict resolution”
	Trade Practices	Knowledge of standard practices in trade, including regulations, customs, and effective strategies.	“Trade knowledge”, “Regulatory understanding”
	Industry Knowledge	Understanding of specific industries, including trends, challenges, and key players.	“Industry insight”, “Industry or knowledge”, “Market trends”
	Quality Internships	Experience in high-quality internships, providing practical skills and industry insights.	“Internship experience”, “Practical skills”
	Critical Thinking	Ability to analyze issues logically, identify patterns, and make reasoned decisions.	“Problem-solving”, “Logical analysis”
Critical & Innovative Thinking	Innovative Thinking	Capacity to think creatively and bring new, unique solutions to problems.	“Creative solutions”, “Innovative ideas”
	Resilience	Ability to recover quickly from difficulties and adapt to change.	“Adaptability”, “Overcoming challenges”
	Emotional Intelligence	Understanding and managing one’s own emotions and empathizing with others.	“Self-awareness”, “Empathy”
	Confidence	Belief in one’s abilities and skills, and projecting assurance in various situations.	“Self-confidence”, “Assertiveness”
	Integrity	Adherence to moral and ethical principles, and consistency in actions and values.	“Ethical standards”, “Consistent values”
	Self-Directed Learning	Ability to set goals, plan steps, and manage time effectively.	“Goal setting”, “Career planning”
Self-Directed Learning	Self-Monitoring	Regularly checking and assessing one’s own progress and performance.	“Self-assessment”, “Performance tracking”
	Self-Evaluation	Ability to assess one’s own strengths and weaknesses and seek improvement.	“Self-reflection”, “Continuous improvement”

Based on semi-structured interviews with HR managers or company representatives, themes and sub-topics extracted from the transcript of the interviews identify the key skills needed for ESP graduates. These insights provide a foundation for understanding industry

expectations. This qualitative analysis identified five main subject areas, ranked in order of importance by frequency, as shown in figure 2; each contributing to the employability of ESP graduates to varying degrees.

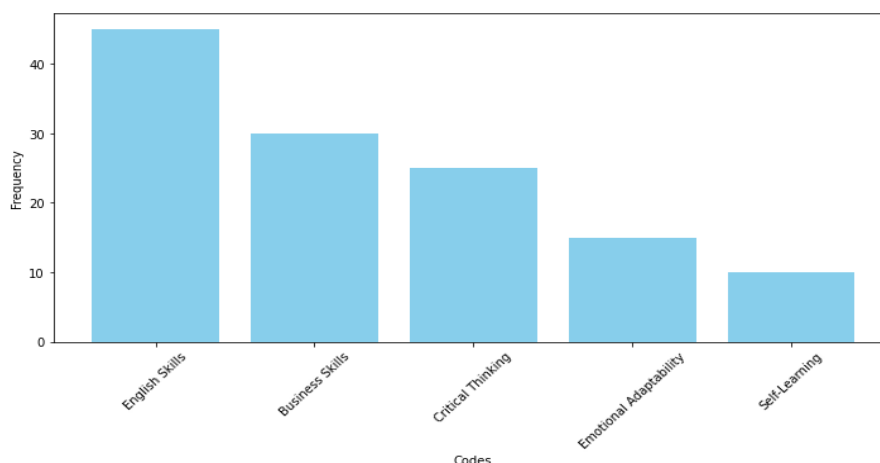


Fig. 2 Theme frequency in text data

Besides, the variation of importance could also be examined in the relationship graph as shown in figure 3. There are many nodes in the graph illustrating the various factors that contribute to “Employability”. The size of each node reflects different importance or weight, indicating a stronger relationship to employability compared to other factors. The closest nodes to “Employability” are mainly five larger nodes, including “Business Skills”, “English Skills”, “Critical & Innovative Thinking”, “Emotional Adaptability”, and “Self-Directed Learning”. Meanwhile, smaller nodes connected to those above modes are key attributes or components that contribute to the concept of each node. To be more specific, English Skills emerging as the most significant, emphasizes the importance of both oral and written communication competencies in a global professional context. Then, Business Skills as a category encompasses essential skills like negotiation, understanding of trade practices, industry-specific knowledge, and the value of quality internships. Critical & Innovative Thinking as a critical area mainly includes skills related to critical analysis, evaluation, and innovative problem-solving capabilities. Moreover, Emotional Adaptability focuses on emotional intelligence, resilience, confidence, and integrity, crucial for navigating interpersonal dynamics in working place. At last, Self-Directed Learning representing the ability to engage in autonomous learning activities, underscores the importance of continuous personal and professional development.

These represent key skills and attributes that are considered valuable for an ESP graduate’s employability, corresponds to the main topics and sub-topics directly related to topics and keywords listed in table 3. A deeper discussion about the employability framework derived from the above analysis can be presented as follows:

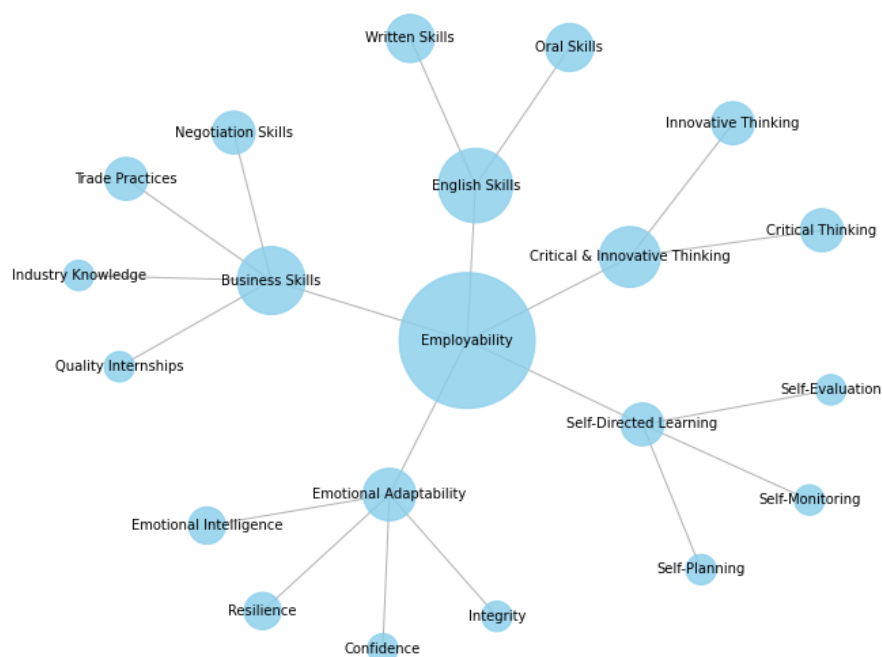


Fig. 3 Relationship graph of employability framework (based on adjusted weights)

English Skills (30% importance): As the most crucial factor, English proficiency is not only vital for effective communication but also for understanding and navigating diverse cultural contexts in global business environments. Previous study highlights the role of English as lingua franca for international business purposes in European case studies, and the results also show the importance of English for International Business (EIB) in multilingual environments, as well as participants' awareness of strategies to overcome language barriers (Rogerson-Revell 2007). Language ability remain the core competitive edge for ESP students in higher education in international business context. ESP educational programs should therefore continue to emphasize advanced English language training, including aspects of intercultural communication, to prepare graduates for international client interactions and effective teamwork in multicultural settings.

Business Skills (25% importance): These skills, encompassing negotiation, trade practices, and industry knowledge derived especially from internship experiences, as Usunier (2019) argues, are essential for handling international business transactions and challenges. Curriculum integration of practical business skills through case studies, simulation negotiations, and industry internships would provide ESP graduates with a blend of theoretical knowledge and real-world application. For an ESP graduate, accumulating quality internship experience before graduation can reduce a company's future training and communication costs, thereby generating more job opportunities, especially in a challenging job market.

Critical & Innovative Thinking (20% importance): In line with Karapetian's (2020) emphasis on dynamic work environments, fostering innovation and critical thinking is key.

ESP educational design in universities might encourage and exercise students to develop problem-solving skills and creative solutions through project work, research activities and innovative workshops.

Emotional Adaptability (15% importance): Skills such as resilience, emotional intelligence and integrity are increasingly valued when entering a highly competitive job market. ESP education might integrate emotional intelligence training and human development programs to help students develop these abilities.

Self-Directed Learning (10% importance): The ability to continuously self-learn and adapt to new market trends and technologies is essential in today's job market. ESP educational design might support this by encouraging and promoting self-directed learning resources, including research methods workshops, online courses, and creating a knowledge sharing culture.

By emphasizing these key areas - English proficiency, business skills developed especially through internships, innovative and critical thinking, emotional resilience, and self-directed learning - ESP education in colleges and universities can better prepare graduates for a complex global job market. This integrated approach ensures that ESP graduates are not only proficient in language and business skills, but also adaptable, innovative and emotionally intelligent, enabling them to excel in a challenging and dynamic job-hunting environment.

7. CONCLUSIONS AND RECOMMENDATIONS

In the rapidly evolving global job market, the employment of college graduates is a widely concerned issue. Based on quantitative audit experiments and semi-structured interviews, the study aims to examine the factors influencing ESP graduates in higher education to ensure that the educational curriculum could be better aligned with the actual needs of the market. The most important of these is English skills, which are the most critical component. In addition, business skills, including negotiation, trade practices and industry-specific knowledge gained primarily from internship experience, are also considered essential. This confirms the conclusions of previous audit experiment. Other important skills include critical and innovative thinking, emotional adaptability, and self-directed learning. To conclude, the findings of this study shows that though the consolidation of language ability is still the basis for the training of ESP talents, it should not be overlooked that the enrichment of internship experience and the all-round development of personal qualities and abilities make them more likely to get a job.

Our recommendations are as follows. First, universities could continue to focus on enhancement of target language proficiency of ESP students, emphasizing not only their fluency, but also mastery of domain-specific industry terminology and cross-cultural business communication. In addition, deepen business skills by enriching students with high-quality internships that foster a blend of critical and innovative thinking. Both on - and off-campus processes should be integrated with the development of individual emotional resilience and self-directed learning skills to prepare graduates for diverse and complex workplace interactions. Taken together, these strategies might be designed to provide ESP graduates with professional and diverse skills that are essential to thrive in today's dynamic environment.

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