Assessing and Enhancing Core Competencies in Vocational Education: A Case Study of Senior Students at Guangxi Police College, China

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Article Information	ABSTRACT
    Corresponding Author: Savitri Chitbanchong savitri.nan@gmail.com https://orcid.org/0009-0006-0683-9773	This study evaluates the core competencies of senior students at Guangxi Police College within the framework of higher vocational education and provides guidelines for enhancing these skills. A Likert 5-Point Scale questionnaire based on Lin Chongde's 2017 framework assessed these competencies among 155 students. A statistical study of the data, concentrating on mean values and standard deviations, indicated variable levels of competence across six dimensions: moral awareness, social responsibility, cultural comprehension, critical thinking, language competency, and aesthetic appreciation. They demonstrated high levels of ethical awareness, social responsibility, cultural understanding, critical thinking, and aesthetic appreciation, while language abilities were graded as medium, indicating a need for targeted improvement. Recommendations include incorporating interactive language activities and industry-specific training, targeting critical thinking through case studies and debate clubs, broadening cultural understanding through international exposure, cultivating aesthetic appreciation through art classes, and increasing social responsibility through community service and internships. Integrating ethics education across all disciplines and practical ethical dilemma workshops were suggested to promote moral awareness. This study presents a complete examination of basic abilities in a vocational environment and offers actionable suggestions for educational improvement. This paper addresses the critical gap in creating vocational training programs for police officers. It focuses on police students' vocational education and provides a detailed assessment of fundamental abilities adapted for law enforcement training. The study findings give an insightful overview of the viable future revisions in vocational programs that match the educational requirements and practical demands of the police profession. **Keywords:** Core Competencies; Vocational Education; Guangxi Police College; Moral Awareness; Social Responsibility

1. INTRODUCTION

Core competencies have gained significant attention in educational discourse in a rapidly evolving societal landscape. With a particular focus on vocational education, the education system prepares students for specific career paths (Smith & Lee, 2020). Alongside developing a particular skill set or acquiring competency or knowledge required for a particular occupation, vocational education also pays attention to core competencies.

Core competencies, including moral awareness, social responsibility, cultural understanding, critical thinking, aesthetic appreciation, and language proficiency, are essential for equipping students with the skills needed to excel in their professions and acquire an impeccable character in society. These competencies prepare students for the technical demands of their careers but also foster essential soft skills like ethical decision-making and community engagement (Jones & Brown, 2018). Lin's (2017) study identified cultural heritage, self-cultivation, social involvement, and autonomous learning as essential competencies. Lin's theory consists of three domains: cultural foundation, independent development, and social participation. These domains subsume techniques that incorporate curricular integration, holistic evaluation, and collaborative teaching in the curriculum and prepare students for modern societal concerns.

A study by Zhang et al. (2019) investigates the challenges of enhancing core competencies in police training, including critical thinking, decision-making, and interpersonal skills. The report addresses options for addressing these obstacles, such as curricular revisions, updated training methodologies, and improved incorporation of genuine scenarios. It underlines the importance of continuously enhancing training programs to meet the changing demands of law enforcement. Similarly, Zhang's (2023) paper probes the difficulty of aligning vocational education with industry expectations. It focuses on rapid technological development, curricular gaps, and ineffective collaboration between educators and industries. Zhang recommends continuous interaction with corporate executives, curriculum revisions, and higher partnerships to keep vocational education relevant. The report also discusses Guangxi Police College's challenges in modernizing its curriculum, particularly in teaching methods and essential skill development. Zhang emphasizes the importance of curriculum changes and industry-education collaboration to enhance student readiness and job prospects.

Liu (2022) investigates creative teaching strategies in vocational education, proving to be a valuable contributor to improving the learner's overall competency. A case study by Liu (2022) sheds light on this aspect. It emphasizes incorporating technology, problem-based learning and collaborative projects to increase student engagement and skill acquisition. The study found that these strategies improved vocational students' practical abilities, critical thinking, and collaboration. Liu argues that creative teaching methods are crucial for connecting vocational education with industry demands and preparing students for the workforce.

Furthermore, to evaluate core competency training at Guangxi Police College, Wang and Chen (2023) conducted surveys and interviews. The study found a significant increase in communication, cooperation, and problem-solving abilities, particularly in practical contexts. The researchers found that including core competencies in vocational training improves students' preparation for professional positions. Likewise, Li (2024) discusses the current state of vocational education in China, noting issues such as obsolete curricula and weak industry linkages. The study suggests updating curricula, strengthening business relationships, and reforming policies to better connect vocational training with market demands.

An action plan, "Quality Improvement and Excellence Action Plan for Vocational Education (2020—2023)", was formulated by the Ministry of Education of China (2020), which discusses ways to improve vocational education quality. The initiative focuses on raising curricular standards, fostering industrial collaboration, and modernizing teaching methods. The goals of this action plan involve enhancing educational standards, combining practical training with industry needs and encouraging innovation to link vocational programs with modern worker demands.

Gao (2006) documented China's national demonstration project for higher vocational institutions, and it focuses on advancing reforms in higher vocational education to increase quality and correspond with economic demands. Curriculum enhancement, industry partnerships, and teaching style innovation represent some of the primary strategies. The document promotes model colleges and encourages national adoption of best practices to enhance professional development. This comprehensive overview enlightens us about the various aspects of core competencies and their overarching merits. It ultimately paves the way for this study to address the gap in the existing core competencies among senior students at Guangxi Police College. Moreover, it suggests a structured development plan.

The goals of this research are to analyze the existing core competencies among senior students at Guangxi Police College and to make practical recommendations for enhancing these core abilities within the higher vocational education framework. Furthermore, this study is essential because it tackles severe deficiencies in the vocational education system for police training at Guangxi Police College. It emphasizes the growing demand for law enforcement officials to have a variety of competencies such as moral awareness, social responsibility, critical thinking, cultural knowledge, aesthetic appreciation, and linguistic ability. With an increasing propensity for such competencies, there is a rise in job demands with holistically competent employees. Despite national reforms, there must still be a disconnection between educational outputs and industry demands. By assessing these competencies and highlighting areas for growth, the study provides insights for improving vocational education and better-preparing students for the challenges of modern police. The program prioritizes holistic development and practical curriculum reforms to provide future law enforcement officers with the necessary skills to successfully and responsibly address social concerns.

This study is crucial because it addresses the need to improve vocational education, particularly for police training at Guangxi Police College. As the demands on law enforcement personnel become more complicated, officers must learn a wide range of core capabilities that extend beyond traditional technical skills. This study assesses competencies such as moral awareness, social responsibility, critical thinking, cultural understanding, aesthetic appreciation, and language proficiency, emphasizing a comprehensive approach to education that prepares students for the multifaceted challenges of modern law enforcement. By identifying gaps between current educational processes and industry needs, the study gives practical insights for better aligning training programs with the profession's changing expectations.

2. LITERATURE REVIEW

2.1 Concept of Core Competency in Vocational Education

The concept of core competencies was introduced in 1990 by Prahalad and Hamel. They defined core competencies as "the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies". The Core Competencies for Student Development in China was officially released in 2016 by a team led by Professor Lin Chongde of Beijing Normal University. This research achievement was commissioned by the Ministry of Education for Beijing Normal University to work with nearly a hundred experts from universities across China over three years to complete (Wang et al., 2021; Lin, 2017). Technical universities were assessed to identify the core abilities of electrical engineering and computer science (EECS) students during their academic journeys. They outlined the primary stages for improving competency development and suggested a better-connected curriculum with industry needs (Chang et al., 2023). Chen et al. (2024) examines competence-based techniques in Russian and Chinese vocational education programs, focusing on commercial training.

They noticed that Russian courses emphasize theoretical knowledge and standardization, whereas Chinese ones concentrate on practical skills and flexibility, reflecting each country's unique educational and economic interests. In another significant research study to observe the development of competency-based education in China, Zhao (2020) criticized the emphasis on critical competencies in Chinese education, claiming that it falls short of promoting holistic development. The study identifies obstacles in implementing competency-based education, such as an excessive focus on measurable abilities at the expense of larger educational objectives. The study advocates for a method that combines skill development with a growth of values, creativity, and emotional wellbeing. Researchers have begun constructing frameworks for core professional competencies based on different perspectives and needs for an extended period.

2.2 Chinese Students' Core Competencies

The study's variables investigated the current level of core competencies among senior students at Guangxi Police College. These variables were derived from Lin's (2017) research on Chinese students' core competencies. Lin's study comprehensively addresses various aspects of student development and provides a framework for understanding core competencies in Chinese education.

2.2.1 Language Skills

Wilson and Bishop (2021) used an innovative online assessment questionnaire to distinguish pragmatic and core language skills (grammar and vocabulary) in children aged 7 to 13. They discovered that, while these skills are unique, they are interconnected, with each domain facilitating the development of the other. They suggested considering pragmatic skills as a broad group of abilities rather than a single area, emphasizing the complexities of language development. Meanwhile, Park (2022) studied the effect of technology-enhanced language learning (TELL) on teachers' competencies, finding it beneficial in improving problem-solving and convergent thinking for effective classroom management and student learning outcomes. Likewise, Wang and Luo (2019) analyzed the 2017 adjustment to China's senior middle school English curriculum requirements. It considered shifting from traditional topic teaching towards improving students' fundamental abilities through English language instruction. The updated standards emphasized critical thinking, cultural awareness, and communicative skills to develop well-rounded, globally capable individuals. The researchers examined how these changes mirror broader educational reforms in China to align English instruction with the country's changing educational objectives.

2.2.2 Critical Thinking Skills

Giselsson (2020) highlighted the challenges children with language impairments face in developing verbal pragmatic skills, showing significant discrepancies compared to their peers. Concurrently, Rodzalan et al. (2020) presented evidence that concept mapping outperforms traditional teaching methods in fostering students' critical thinking abilities, with a more pronounced effect in randomized study settings. Lv et al. (2022) conducted a longitudinal investigation on the relationship between student engagement and critical thinking among Chinese upper vocational college students. According to the findings, higher levels of student engagement are positively associated with the long-term development of critical thinking skills. The study emphasized encouraging students to participate in academic activities to improve their critical thinking skills in vocational education settings.

2.2.3 Cultural Understanding

Kong and Sung (2020) analyzed the representation of cultural content in secondary English textbooks, advocating for a balanced approach that fosters cultural pride and openness. Park et al. (2022) found that effective communication and self-awareness are pivotal in enhancing nursing students' caring capabilities, thus improving their professional competencies. Furthermore, Hui and Cheung (2015) investigated the effect of cultural literacy on student participation in technical and vocational education and training (TVET) in Hong Kong. They discovered that higher levels of cultural literacy correlate with improved student engagement, implying that incorporating cultural understanding into TVET programs can boost students' enthusiasm and interest. The study underlines the importance of cultural literacy in raising educational outcomes in vocational contexts.

2.2.4 Aesthetic Appreciation

Aesthetic education plays a crucial role in the holistic development of students by fostering an appreciation for beauty, creativity, and emotional growth across various educational settings. Wang et al. (2022) emphasize the significant impact of art and music education on developing aesthetic appreciation, which not only enhances creative thinking but also fosters innovation. Yuan et al. (2023) illustrate how sports aesthetic education is instrumental in developing core literacy among students. He (2022) looks at the abilities, traits, and talents needed for employment among Chinese graduates with undergraduate degrees in fine art in China's creative industries. It emphasizes crucial factors such as inventiveness, technical proficiency, adaptability, and networking talents as essential for obtaining a job. Its study also stresses the disparity between academic training and industry demands, implying that graduates must possess artistic and professional skills to flourish in the competitive creative sector.

2.2.5 Social Responsibility

Wevers and Voinea (2021) explored the elements of corporate social responsibility (CSR) that are crucial in crafting sustainable business models for social start-ups, and they examined the evolution of social responsibility in universities, linking it to broader social impacts and institutional strategies. Similarly, Lu et al. (2019) investigated the significance of social responsibility for employees in fostering career development and sustainability during China's manufacturing revolution. The study found that firms prioritize employee wellbeing, such as training and career progression chances, contributing to long-term career growth and organizational performance. They suggest that socially responsible practices are critical for maintaining employee engagement and adaptation in an ever-changing industrial context.

2.2.6 Moral Awareness

Spekkink and Jacobs (2020) explored educational strategies to enhance moral sensitivity among nursing students, identifying key dimensions contributing to ethical decision-making. Similarly, Nita et al. (2022) studied moral reasoning in accounting students, emphasizing the role of individual and contextual factors in shaping ethical behaviours. Deng and Zhengmei (2023) perform a comparative examination of important competency frameworks in China and the United States, focusing on the importance of moral versus skill priority. They report that China's framework prioritizes moral education and collective ideals, whereas the United States' framework focuses on individual abilities and practical competencies. They emphasize how these variances reflect each country's broader cultural and educational ideologies, which influence the implementation of competency-based education.

2.3 Enhancing Vocational Core Competencies in Higher Education

This section consolidates strategies and research findings on improving the core competencies of students in vocational colleges to prepare them for the workforce. Chen (2019) emphasizes incorporating basic vocational skills into college curricula to fulfil industrial demands. Hua and Zeng (2019) construct outcome-oriented programs to promote occupational competencies. Xie (2019) investigates how professional dedication influences the vocational core competencies of higher vocational students and focuses on the mediation function of learning engagement. Study findings show enhanced professional dedication and improved learning engagement and capabilities.

Xiao (2021) suggests a "four-in-one" mechanism integrating practical teaching with systemic curriculum approaches. Through empirical research, Lu et al. (2019) explore the competencies needed for high-quality talents in the information age. (Byoun & Han 2022) and (Kwon & Kim 2022) elaborate on methods to enhance professional training and learning outcomes through innovative educational frameworks and community learning initiatives. Transitioning the implementation of these competencies, Qiu (2024) proposed a unique teaching model focused on core literacy for vocational English. Jiang (2024) highlighted the need for core literacy in I.T. courses, including information awareness and digital innovation. Ma (2020) examines the essential competencies required by the service industry in Jiangxi Province, emphasizing professional ethics and technological skills. Lastly, Shi et al. (2021) and Xie et al. (2023) discuss the impact of blended learning and the cultivation of innovative behaviours through enhanced vocational core competencies, stressing the importance of aligning educational strategies with professional standards and student innovation.

3. METHODOLOGY

3.1 Study design

This study employs a quantitative approach, namely ordinal, with ranked responses to evaluate fundamental abilities among students enrolled in vocational speciality programs at Guangxi Police College. It used a cross-sectional design with a Chinese-language Likert 5-Point scale questionnaire administered at a single point, resulting in cross-sectional data that does not monitor changes over time to assess abilities in linguistic skills, critical thinking, cultural comprehension, artistic appreciation, social responsibility, and moral and ethical awareness. Each dimension was thoroughly evaluated, with ten questions ensuring a comprehensive examination of each topic. These six core skills depend on Lin's (2017) research on Chinese students' core competencies, which provides a framework uniquely adapted to the Chinese educational setting. Furthermore, the "Guideline for Developing Core Competencies at Guangxi Police College, China" specifies guidelines for this examination.

3.2 Ethical Consent

All Guangxi Police College students were informed about the study's objectives and intended usage in the researchers' master's thesis and journal publication. An online questionnaire was implemented to acquire informed consent. The study's ethical components were examined and authorized by Bansomdejchaopraya Rajabhat University, where the researcher is studying for a master's degree.

3.3 Target Population

The study included 254 senior students from the Traffic Management Engineering College at Guangxi Police College. A sample of 155 students was drawn through simple random sampling, as defined by Krejcie and Morgan (1970).

3.4 Data Collection and Analysis

The questionnaires were modified using Wen Juan Wang (www.wenjuanwang.com) and distributed via WeChat, with the study's purpose communicated to participants. The completed questionnaires were collected as selected samples and screened to exclude invalid responses for data analysis. Data analysis involved calculating frequencies, percentages, means, and standard deviations to understand the distribution of responses and the general agreement level among participants. The data interpretation for the average values is as follows, based on Likert (1932).

- ➢ 4.50 - 5.00: Agrees at the highest level.
- ➢ 3.50 - 4.49: Expresses high-level agreement.
- ➢ 2.50 - 3.49: Expresses medium-level agreement
- ➢ 1.50 - 2.49: Expresses low-level agreement
- ➢ 1.00 - 1.49: Indicates agreement at the lowest level.

These ranges indicate how strongly participants agree with the items on the Likert scale. The content validation process for the research instruments involved a review by three independent experts. Gathered expert opinions and feedback to refine and finalize the questionnaire items. All questions display consistency with the measurement target, as proven by an average score between 0.67 and 1.00 on the acceptable consistency index (IOC).

4. RESULTS AND ANALYSIS

4.1 Demographic Information of the Respondents

Table 1 presents data from 155 respondents. There were 85 men (54.84%) and 70 women (45.16%). Regarding their majors, 102 respondents (65.80%) were in urban rail transit safety technology management, while 53 (34.19%) were in Civil Aviation Safety Technology Management.

Table 1. Demographic Information of the Respondent

Item	Option	Frequency	Percentage (%)
Gender	Male	85	54.84
	Female	70	45.16
Major	Urban Rail Transit Safety Technology Management	102	65.80
	Civil Aviation Safety Technology Management	53	34.19

4.2 Descriptive Analysis

The study employed means and standard deviations to assess students' levels of agreement on a Likert scale, with scores ranging from 1.00 (lowest) to 5.00 (highest).

As stated in Table 2, the average score for core abilities across 155 students was 3.87, indicating great success in most domains. Furthermore, it can be observed in Table 2 that students got high scores in moral awareness, social responsibility, cultural understanding, critical thinking, and aesthetic appreciation. However, language skill was assessed as a medium, with an average score of 3.49, indicating that it is an area that needs improvement.

Table 2. Mean ($\bar{x}$) and Standard Deviation (S.D.) of Core Competencies among Six Dimensions

Dimension	$\bar{x}$	S.D.	Level	Rank
Language Skill	3.49	1.08	Medium	6
Critical Thinking Skill	3.89	1.02	High	4
Cultural Understanding	3.99	0.97	High	3
Aesthetic Appreciation	3.78	0.78	High	5
Social Responsibility	4.03	0.99	High	2
Moral Awareness	4.05	0.93	High	1

Table 3 ranks 155 respondents' language skills from highest to lowest. The overall average score is 3.49 (standard deviation = 1.08). The top skill is successful collaboration ($\bar{x}$ = 3.93, S.D. = 1.05), followed by reading complicated Chinese texts and actively seeking language progress ($\bar{x}$ = 3.86, S.D. = 1.05). Passing a language competency test ranks fifth ($\bar{x}$ = 3.66, S.D. = 1.17) and understanding industry jargon comes fourth ($\bar{x}$ = 3.84, S.D. = 1.07). Understanding worldwide viewpoints ($\bar{x}$ = 3.33, S.D. = 1.04) and practical use of English ($\bar{x}$ = 3.14, S.D. = 1.04) rank sixth and seventh respectively. Comfort in technical English talks ($\bar{x}$ = 3.13, S.D. = 1.03) and comprehension of vocational materials in other languages ($\bar{x}$ = 3.12, S.D. = 1.05) rank eighth and ninth. The ability with the lowest ranking is proficiency in a second language other than English ($\bar{x}$ = 3.03, S.D. = 1.11).

Table 3. Mean ($\bar{x}$) and Standard Deviation (S.D.) of Language Skill

Language Skill	$\bar{x}$	S.D.	Level	Rank
I have passed a recognized language proficiency test (e.g. Pre-intermediate English，CET-4 or CET-6) in English.	3.66	1.17	high	5
My English language skills aid in my understanding of international perspectives in my vocational field.	3.33	1.04	medium	6
I am able to understand and interpret complex Chinese texts related to my vocational field.	3.86	1.05	high	2
My language skills enable me to collaborate effectively with others in my field.	3.93	1.05	high	1
I am proficient in a second language except English.	3.03	1.11	medium	10
I frequently use my English language skills in practical vocational scenarios.	3.14	1.04	medium	7

Language Skill	x̄	S.D.	Level	Rank
I am comfortable engaging in technical discussions in English within my vocational field.	3.13	1.03	medium	8
I regularly read and comprehend vocational materials in languages other than my native tongue and English.	3.12	1.05	medium	9
I actively seek opportunities to improve my language skills that are relevant to my profession.	3.86	1.17	high	3
My language proficiency allows me to interpret industry-specific jargon and terminology effectively.	3.84	1.07	high	4

Table 4 shows the mean and standard deviation of critical thinking skills for 155 respondents, with an overall mean of 3.89 (S.D. = 1.02), indicating a high significance of critical thinking. The highest-ranked talent frequently questions assumptions and seeks different views (x̄ = 3.96, S.D. = 1.04). It is followed by effectively using critical thinking to solve real-world problems (x̄ = 3.94, S.D. = 0.99) and critically examining vocational approaches (x̄ = 3.90, S.D. = 0.99). Identifies source credibility and evaluates information reliability (x̄ = 3.90, S.D. = 1.00 and 1.06) rank fourth and fifth, respectively. Synthesizing information from multiple sources rates sixth (x̄ = 3.89, S.D. = 1.03), while developing unique solutions ranks seventh (x̄ = 3.88, S.D. = 0.98). Participating in critical thinking discussions ranks seventh (x̄ = 3.88, S.D. = 1.00), followed by identifying underlying principles (x̄ = 3.87, S.D.= 1.02), and independent thinking to question instructors (x̄ = 3.86, S.D. = 1.06).

Table 4. Mean (x̄) and Standard Deviation (S.D.) of Critical Thinking Skill

Critical Thinking Skill	x̄	S.D.	Level	Rank
I am confident in my ability to evaluate the reliability and validity of information.	3.90	1.06	high	5
I can synthesize information from various sources to form a coherent understanding.	3.89	1.03	high	6
I regularly question assumptions and explore alternative perspectives in my studies.	3.96	1.04	high	1
I am skilled at identifying the underlying principles in complex vocational scenarios.	3.87	1.02	high	9
I can think independently and challenge my instructor's perspectives in my vocational area.	3.86	1.06	high	10
I effectively apply critical thinking to solve real-world problems in my vocational field.	3.94	0.99	high	2
I can critically analyze and evaluate the strengths and weaknesses of different vocational approaches.	3.90	0.99	high	3
I frequently engage in discussions that challenge my critical thinking in vocational subjects.	3.88	1.00	high	8
I can formulate innovative solutions by applying critical thinking to vocational challenges.	3.88	0.98	high	7

Critical Thinking Skill	x̄	S.D.	Level	Rank
I assess the credibility of sources when researching vocational topics.	3.90	1.00	high	4

Table 5 shows the mean and standard deviation of cultural knowledge skills across 155 respondents, with an overall mean of 3.99 (SD = 0.97), suggesting significant cultural understanding. The most important skill is knowing how cultural differences affect professional practices (x̄ = 4.06, S.D. = 0.95), followed by enjoying and valuing cultural variety (x̄ = 4.05, S.D. = 0.99). Active participation in intercultural events scores third (x̄ = 4.03, S.D. = 0.97). Understanding other cultures and changing communication techniques rank fourth (x̄ = 4.02, SD = 0.95). Cultural competence's importance in global markets is ranked sixth (x̄ = 4.02, S.D. = 0.98). Collaborating with people from different backgrounds is ranked eighth (x̄ = 3.97, S.D. = 0.98), followed by negotiating and mediating in varied settings (x̄ = 3.96, S.D. = 0.95). Recognizing cultural impacts on decision-making rates ninth (x̄ = 3.95, S.D. = 0.99), while understanding the global and local cultural concerns ranks tenth (x̄ = 3.87, S.D. = 1.04).

Table 5. Mean (x̄) and Standard Deviation (S.D.) of Cultural Understanding

Cultural Understanding	x̄	S.D.	Level	Rank
I appreciate and respect cultural diversity in the workplace.	4.05	0.99	high	2
I understand the impact of cultural differences on professional practices.	4.06	0.95	high	1
I can adapt my communication style to suit diverse cultural contexts.	4.02	0.95	high	4
I know the global and local cultural issues affecting my vocational field.	3.87	1.04	high	10
I actively seek to understand and engage with cultures different from my own.	4.02	0.95	high	4
I can effectively collaborate with individuals from diverse cultural backgrounds in vocational projects.	3.97	0.98	high	7
I understand how cultural differences can influence decision-making in my vocational field.	3.95	0.99	high	9
I actively participate in multicultural events to enhance my cultural understanding.	4.03	0.97	high	3
I can negotiate and mediate in culturally diverse vocational environments.	3.96	0.95	high	8
I recognize the importance of cultural competence in global vocational markets.	4.02	0.98	high	6

Table 6 displays the mean and standard deviation of aesthetic appreciation skills among 155 respondents, with an average of 3.78 (SD = 0.78). The most important talent is appreciating aesthetics' significance in improving vocational products (x̄ = 4.10, S.D. = 0.99). The study found that the impact of self-image on job performance ranked second (x̄ = 4.05, S.D. = 1.04). Confidence in aesthetic appreciation outside the professional area scores third (x̄ = 4.01, S.D. = 0.95), while enjoying and evaluating design features ranks fourth (x̄ = 4.00, S.D. = 0.95). Regularly engaging in activities that improve aesthetic sensitivity ranks fifth (x̄ = 3.94, S.D. = 0.97).

Valuing invention and innovation is ranked sixth ($\bar{x}$ = 3.59, S.D. = 0.96), followed by critically analyzing aesthetic excellence ($\bar{x}$ = 3.55, S.D. = 1.03) as seventh in ranking. Understanding aesthetics' impact on customer perceptions ($\bar{x}$ = 3.51, S.D. = 0.98) as eight and examining aesthetic ideals across cultures rank ninth ($\bar{x}$ = 3.51, S.D. =0.97) respectively. Discussions on aesthetics rank tenth ($\bar{x}$ = 3.50, S.D. = 0.97).

Table 6. Mean ($\bar{x}$) and Standard Deviation (S.D.) of Aesthetic Appreciation

Aesthetic Appreciation	$\bar{x}$	S.D.	Level	Rank
I recognize the impact of self-image and appearance on job performance and opportunities in my vocational field.	4.05	1.04	high	2
I understand the role of aesthetics in enhancing the functionality of vocational products.	4.10	0.99	high	1
I value creativity and innovation in the design and execution of vocational tasks.	3.59	0.96	high	6
I can critically assess the aesthetic quality of work in my vocational area.	3.55	1.03	high	7
Beyond my professional field, I am confident in my aesthetic appreciation of fine arts, movies, music, etc.	4.01	0.95	high	3
I actively discuss the aesthetic aspects of vocational products and services.	3.50	0.97	high	10
I understand how aesthetics influence consumer perceptions in my vocational field.	3.51	0.98	high	9
I can appreciate and critique the design elements in vocational work settings.	4.00	0.95	high	4
I often explore how aesthetic values are expressed differently across various cultures in my vocational context.	3.51	0.97	high	8
I regularly participate in activities that enhance my aesthetic sensitivity and creativity.	3.94	0.97	high	5

Table 7 shows the social responsibility of 155 respondents, with an aggregate mean of 4.03 (SD = 0.99), implying strong social responsibility. Colleges provide the most internship chances ($\bar{x}$ = 4.10, S.D. = 0.99), followed by opportunities for social activities ($\bar{x}$ = 4.05, S.D. = 0.98). Active engagement in community and civic activities ($\bar{x}$ = 4.05, S.D. = 1.05) and analyzing organizational social duties ($\bar{x}$ = 4.02, S.D. = 0.97) are highly recognized. Understanding the social impact of occupational activities ($\bar{x}$ = 4.02, S.D. = 0.99) and advocating for socially responsible practices ($\bar{x}$ = 4.01, S.D. = 0.95) are equally important. Awareness of sustainable practices ($\bar{x}$ = 4.01, S.D. = 0.97) and volunteering for vocational skills ($\bar{x}$ = 4.00, S.D. = 1.01) are significant. Understanding the ethical and societal ramifications of one's vocational field ranks lowest ($\bar{x}$ = 3.98, S.D. = 1.01) but is nonetheless significant.

Table 7. Mean ($\bar{x}$) and Standard Deviation (S.D.) of Social Responsibility

Social Responsibility	x̄	S.D.	Level	Rank
My college provides opportunities to engage in social activities.	4.05	0.98	high	2
My college provides opportunities to engage in internships.	4.10	0.99	high	1
I actively participate in community and civic activities related to my vocational area.	4.05	1.05	high	3
I actively participate in community and civic activities in other fields.	4.01	1.01	high	8
I understand and actively address my vocational field's ethical and social implications.	3.98	1.01	high	10
I understand the social impact of my vocational practices on the community.	4.02	0.99	high	5
I regularly participate in volunteering activities related to my vocational skills.	4.00	1.01	high	9
I am conscious of the sustainability practices within my vocational field.	4.01	0.97	high	7
I can critically evaluate the social responsibilities of organizations in my vocational area.	4.02	0.97	high	4
I advocate for socially responsible practices within my vocational community.	4.01	0.95	high	6

Table 8 shows the mean and standard deviation of moral awareness among 155 respondents, with an average of 4.05 (SD = 0.93). The most important feature is implementing ethical concepts in real-world settings (x̄ = 4.09, S.D. = 0.91), followed by recognizing the repercussions of unethical behaviour (x̄ = 4.08, S.D. = 0.94). Promoting ethical behaviour among peers and updating information on ethical practices was ranked third (x̄ = 4.07, S.D. = 0.92). Moral and ethical education at college (x̄ = 4.06, S.D. = 0.97), reflecting on personal values relative to ethical norms (x̄ = 4.05, S.D. = 0.90), and identifying and addressing ethical difficulties (x̄ = 4.05, S.D. = 0.94) are also significant. It is vital to be aware of ethical standards in the vocational sector (x̄ = 4.04, S.D. = 0.92) and participate in moral and ethical conversations (x̄ = 4.02, S.D. = 0.93). The lowest element is knowing legal and ethical regulations in the vocational sector (x̄ = 3.99, S.D. = 0.92), but it remains significant.

Table 8. Mean (x̄)and Standard Deviation (S.D.) of Moral Awareness

Moral Awareness	x̄	S.D.	Level	Rank
I have received a moral and ethical education during my time at college.	4.06	0.97	high	5
I actively promote ethical behaviour among my peers.	4.07	0.92	high	3
I am aware of the ethical standards and expectations in my vocational field.	4.04	0.92	High	8
I understand the consequences of unethical behaviour in my professional activities.	4.08	0.94	High	2

Moral Awareness	x̄	S.D.	Level	Rank
I can apply ethical principles to the real world.	4.09	0.91	High	1
I regularly reflect on how my values align with the ethical standards of my vocational field.	4.05	0.90	High	6
I can identify and address ethical dilemmas in vocational situations.	4.05	0.94	High	7
I participate in forums or discussions on moral and ethical issues in my profession.	4.02	0.93	High	9
I clearly understand the legal and ethical regulations in my vocational sector.	3.99	0.92	High	10
I actively seek to update my knowledge about ethical practices and standards in my profession.	4.07	0.92	High	3

4.3 Discussion

Core competencies of moral awareness, social responsibility, cultural understanding, critical thinking, aesthetic appreciation, and language proficiency are required in vocational education to prepare students for specific careers. Soft skills such as ethical decision-making are required to acquire a well-rounded character for modern-world needs. In China, the "Core Competencies for Student Development" framework (Lin, 2017) emphasizes holistic development but confronts issues such as misalignment with industry needs and insufficient practical training. Some nationwide changes were also made, such as the "Quality Improvement and Excellence Action Plan for Vocational Education" (Ministry of Education of China, 2020). Yet Guangxi Police College, critical for training law enforcement officers, has outmoded teaching techniques and prevalent skill gaps. This study assesses core competencies among senior students at Guangxi Police College and recommends ways to improve vocational education and prepare students for modern problems (Smith & Lee, 2020; Zhang et al., 2019).

This study employs a quantitative approach to evaluate essential talents among senior students in vocational programs at Guangxi Police College. A Likert 5-Point Scale questionnaire in Chinese was created to assess competencies in six areas: linguistic skills, critical thinking, cultural comprehension, artistic appreciation, social responsibility, and moral and ethical awareness. The questionnaire, based on Lin Congde's 2017 research and the "Guideline for Developing Core Competencies at Guangxi Police College," featured ten questions for each dimension. The study used simple random sampling to select 155 of 254 students from the Traffic Management Engineering College. Data were obtained via WeChat and evaluated by Wen Juan Wang, who estimated frequencies, percentages, means, and standard deviations. The study has provided vital insights into the current proficiency levels and identified strategic measures for enhancement. Given the dynamic nature of vocational fields, this research supports the need for targeted interventions to refine and advance these competencies. These guidelines aim to elevate the existing core competencies and prepare students to meet the evolving demands of their professional fields, ensuring they are well-equipped for future challenges.

The results of the data tables and the literature review are consistent. The study's high overall core competencies (M = 3.87, S.D. = 0.96) are compatible with Lin's (2017) concept of core competencies in Chinese vocational education. Moral awareness ratings were notably high (mean = 4.05, S.D. = 0.93),

particularly in applying ethical principles in real-world circumstances (mean = 4.09), which is corroborated by Spekkink and Jacobs (2020) and Nita et al. (2022), both of which underline the importance of moral education and ethical decision-making. Social responsibility also received a good score (mean = 4.03, SD = 0.99), with high ratings for internships and community participation, the finding consistent with Lu et al. (2019) and Wevers and Voinea (2021), who emphasize the importance of social responsibility in career development and organizational performance.

Cultural understanding was considerable (mean = 3.99, S.D. = 0.97), with the highest ranking for understanding cultural implications on practices (mean = 4.06), supporting findings by Kong and Sung (2020) and Hui and Cheung (2015) in emphasizing the importance of cultural literacy in vocational education. Critical thinking abilities were also highly regarded (mean = 3.89, S.D. = 1.02), notably in terms of challenging assumptions and solving real-world situations, which is consistent with the findings of Rodzalan et al. (2020) and Lv et al. (2022), who highlight critical thinking and involvement. Aesthetic appreciation (mean = 3.78, SD = 0.78) was strong, particularly in understanding aesthetics in vocational goods (mean = 4.10), which is consistent with the results put forth by Wang et al. (2022) and Yuan et al. (2023), who examined the impact of aesthetic education on creativity and innovation. Language abilities were graded as medium (mean = 3.49), focusing on successful teamwork and complicated text reading. This signifies the results proposed by Wilson and Bishop (2021) and Park (2022), where both studies emphasized the importance of language skills in occupational contexts. Overall, the study's findings focus on the importance of the core competency framework and opportunities for future growth in vocational education.

4.4 Implications of the Study

The study's consequences are broad, affecting numerous facets of vocational education. The study emphasizes the need for a comprehensive approach to vocational education and recommends changing curriculum design, teaching techniques, and policymaking to improve student results. The findings imply that curriculum makers at Guangxi Police College and similar institutions should improve programs by focusing on core abilities, including language skills and cultural knowledge. A balanced educational approach should include linguistic abilities, critical thinking, cultural proficiency, aesthetic appreciation, social responsibility, and moral awareness to prepare students for professional challenges. The report also emphasizes the need for practical skills with real-world applications in vocational programs and a closer alignment between academic training and industrial requirements. Furthermore, the findings have policy implications, prompting policymakers to examine and change present competency frameworks and make relevant improvements. Moreover, the findings suggest rethinking and changing present competency frameworks to support vocational education objectives. Future research should focus on developing and accessing core skills in occupational contexts to close competency gaps and evaluate the long-term impact of these reforms.

5 CONCLUSION AND RECOMMENDATIONS

This study surveyed the basic abilities of senior students at Guangxi Police College, concentrating on six significant areas: moral awareness, social responsibility, cultural knowledge, critical thinking, aesthetic appreciation, and linguistic ability. Using a quantitative approach and a Likert 5-Point Scale questionnaire, the study provides significant insights into students' competencies and identifies areas for development. The findings show that students have a good foundation in essential skills, as seen by their

average rating of 3.38 (SD = 0.96). Moral awareness was significantly high, with a mean of 4.05 (S.D. = .93), particularly in applying ethical concepts in real-world circumstances (mean = 4.09), emphasizing moral and ethical instruction. Social responsibility earned high scores, with a mean of 4.03 (SD = 0.99), particularly for internships and community involvement (mean = 4.10). It validates the role of social responsibility in career advancement and organizational success. Cultural understanding received a mean score of 3.99 (SD = 0.97), with the highest ranking for understanding cultural implications on behaviours (mean = 4.06). It demonstrates the significance of cultural literacy in vocational education. The study discovered that Guangxi Police College students excel in moral awareness, social responsibility, cultural knowledge, critical thinking, and artistic appreciation but must enhance their language skills. Reforms suggest modifying the curriculum to improve language proficiency, practical training, and vocational program alignment with industry needs. These adjustments will better prepare students to face professional challenges and ensure they have a diverse skill set for future success.

Various recommendations are proposed to enhance fundamental competencies at Guangxi Police Colleges. For moral awareness, continue to weave ethical ideas throughout the curriculum and give regular workshops on ethical quandaries while assisting faculty with ongoing professional development. Regarding social responsibility, various community engagement pursuits through structured volunteer projects should be initiated. It is suggested that social responsibility be endorsed more extensively in academic curricula to encourage active citizenship. To enhance cultural awareness, provide exposure to global viewpoints through international case studies, and offer international internships and partnerships. To foster critical thinking, expand the curriculum with more case studies, problem-solving activities, and collaborative projects. Increase the number of arts-related subjects and interdisciplinary courses that combine art, technology, and vocational training to foster aesthetic appreciation. Finally, the medium level of language abilities can be managed by inculcating interactive and industry-specific language training programs in the curriculum to improve communication and employability.

5.1 Limitations and Further Studies

The study focuses exclusively on senior students at Guangxi Police College, thus limiting its ability to accurately represent the broader diversity of vocational student experiences across institutions and regions. The research is limited to a single cohort, which may ignore differences in skill levels across other vocational programs or educational contexts. Furthermore, the self-reported data to assess competencies such as moral awareness and critical thinking introduces possible biases, which may impair the accuracy and generalizability of the results. The study's environment is limited to a single school, which may not account for the different educational procedures and problems encountered by vocational students elsewhere and restrict the results' application to other contexts.

intended usage in the researchers' master's thesis and journal publication. An online questionnaire was implemented to acquire informed consent.

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