



# Students' KSAO competency-based expectations for graduation from Guizhou City Vocational College

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**Abstract.** This study aims to examine the KSAO (knowledge, skills, abilities, other attributes) profile of students at Guizhou City Vocational College and its relation to graduation expectations, assessing its alignment with modern professional needs. The research included 274 students selected through random sampling. The research tool was a questionnaire with three sections covering basic information, factors influencing expectations, and open-ended suggestions. Descriptive statistics were used to analyze data, revealing differences in KSAO abilities among students. While most excel in knowledge and skills, areas like professional abilities, teamwork, and innovative thinking need improvement. The study also found a correlation between students' graduation expectations and their KSAO abilities, suggesting that enhancing professional abilities and other characteristics can improve competitiveness. The education system should be enhanced to foster students' all-round development and career readiness.

**Keywords:** Vocational education, KSAO theory, graduation expectations, student development, employment competitiveness.

## 1 Introduction

Vocational education is pivotal in shaping skilled professionals for contemporary careers. The success of higher vocational students in securing employment swiftly and effectively is a key measure of their achievement. China's revised Vocational Education Law underscores the cultivation of technical talents equipped with essential skills for specific occupations or career paths. The law emphasizes the development of comprehensive professional qualities and practical skills, reflecting the evolving demands of modern industries.

In 2023, approximately 819,000 higher vocational graduates were recorded with an impressive 98.34% overall employment rate<sup>[1]</sup>, yet challenges persist, including variations in employment quantity, quality, and regional distribution. Guizhou Province, amidst its economic ascent, presents an environment ripe for diverse industries. However, shifting industrial demands heighten expectations for higher vocational student

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employment. Economic dynamics significantly influence students' field preferences and job prospects.

Guizhou City Vocational College, situated in the western underdeveloped region, shoulders the responsibility of nurturing skilled professionals. The employment success of its students not only impacts individual futures but also reflects on the college's educational quality and societal contributions. In this landscape, private higher vocational colleges, like Guizhou City Vocational College, must align strategies with economic trends, maintain competitiveness, attract enrollment, ensure sustainable growth, and pave the way for student success.

## 2 literature review

Student expectations are vital for guiding actions and motivation, closely linked to performance aspirations. Vroom's theory suggests behavior is influenced by expectations of desired outcomes, emphasizing valence, instrumentality, and expectancy. <sup>[2]</sup>Competency modeling identifies Knowledge, Skills, Abilities, and Other Characteristics (KSAOs) as crucial for personnel selection, encompassing learning, practice, aptitudes, and traits. Research on KSAOs among vocational students offers insights into career development, but challenges persist, including limited research. Enterprises prioritize professional mastery, industry understanding, interdisciplinary skills, and traits like communication, innovation, and adaptability. Foreign research highlights essential 21st-century skills, offering insights for Chinese vocational education by emphasizing core competency integration.data analysis

Past research has shown that students' graduation expectations are influenced by a variety of factors. These factors include, but are not limited to, personal traits, family background, quality of schooling, socio-cultural environment, and occupational market demands. For example, one study found that family background and socio-culture have a significant impact on the formation of students' graduation expectations, while the quality of school education is directly related to students' expectations and confidence in their future careers. Studies on the relationship between KSAO competencies and students' career expectations present diverse findings<sup>[3]</sup>. Some studies point out that students' skill levels are closely related to their expectations of future careers. For example, students with higher skills are more likely to choose a career path related to their major. Additionally, research has shown that self-efficacy has a significant impact on students' career choices and aspirations, with students with high self-efficacy more likely to choose more challenging career paths<sup>[4]</sup>. Several studies have focused on the relationship between KSAO competencies in specific fields and students' graduation expectations. For example, research in the field of vocational and technical education (Vocational and Technical Education) has found that students' skill levels and career perceptions have a significant impact on their career expectations after graduation. This relationship may be more pronounced in the student population of Guizhou Urban Vocational College (GUCVC) <sup>[5]</sup>because their educational environment is more focused on skill development in specific career fields. The relationship between students' graduation expectations and KSAO competencies is also influenced by geographical and

cultural factors. In China's vocational education environment, there may be specific cultural factors and job market demands that influence students' career expectations and choices<sup>[6]</sup>. For example, in a place like Guizhou Province, there may be specific industrial structures and employment needs, which can affect students' expectations about their future careers.

Students' skill levels largely determine their expectations and choices for future careers. Students with higher skills tend to be more inclined to choose career paths related to their majors<sup>[9]</sup>. This is because the accumulation and enhancement of skills makes students competitive and advantageous in specific fields, and they are more confident and capable of achieving career success in related fields. For example, a computer science major who has accumulated systematic programming training and practical experience may be more inclined to choose a career related to computer technology, such as software engineer or data analyst. Self-efficacy refers to an individual's confidence and expectation that he or she can accomplish a specific task.<sup>[10]</sup> Research has shown that self-efficacy has a significant impact on students' career choices and expectations<sup>[7]</sup>. Students with higher self-efficacy are more likely to choose more challenging career paths, and they are more willing to accept new challenges and believe they can handle them. In contrast, students with lower self-efficacy may be more likely to choose safe and stable careers or lack determination and persistence in their career planning. For example, a student who is confident in his or her skills and abilities may be more likely to start a business or pursue a risky career, while a self-doubting student may be more inclined to choose a traditional career path. Given the individual differences of each student, there may be some variation in the relationship between their KSAO abilities and career aspirations<sup>[8]</sup>. Some students may be more suited to more technical careers because they possess higher skill levels and specialized knowledge in the relevant fields, while others may be more suited to careers that require stronger communication and interpersonal skills because they possess stronger competencies and strengths in these areas. Therefore, the consideration of individual differences is important in examining the relationship between KSAO competencies and students' career aspirations.

### 3 Factors affecting expected value

#### 3.1 Gender

**Table 1.** Gender difference analysis(T-test) table

	gender	N	$\bar{X}$	SD	t	Sig.
K	Male	143	3.70	0.865	-0.240	0.811
	Female	131	3.72	0.794		
S	Male	143	3.55	0.828	0.505	0.614
	Female	131	3.50	0.862		
A	Male	143	3.63	0.813	0.949	0.343
	Female	131	3.53	0.846		
O	Male	143	3.59	0.792	0.628	0.531
	Female	131	3.53	0.911		

Gender-based differences in Knowledge (K), Skills (S), Abilities (A), and Other characteristics (O) were assessed using one-way analysis of variance (T-test). Results indicated no significant differences in K, S, A, or O between genders, with p-values > 0.05. For example, the mean K for males was 3.70 (SD = 0.865) and for females was 3.72 (SD = 0.794).

**3.2 Year level**

**Table 2.** Yearlevel difference analysis(T-test) table

	yearlevel	N	$\bar{X}$	SD	t	Sig.
K	1st year student	127	3.77	0.775	1.150	0.251
	2nd year student	147	3.65	0.874		
S	1st year student	127	3.54	0.822	0.171	0.864
	2nd year student	147	3.52	0.863		
A	1st year student	127	3.68	0.802	1.765	0.079
	2nd year student	147	3.50	0.845		
O	1st year student	127	3.50	0.849	-1.078	0.282
	2nd year student	147	3.61	0.851		

It can be known from the analysis that there is no significant difference in the expected values of students in the first and second academic years in terms of knowledge (K), skills (S), abilities (A) and other characteristics (O).

**3.3 Income**

**Table 3.** Income difference analysis(ANOVA) table

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.607	3	3.869	5.914	0.001**
K Within Groups	176.636	270	0.654		
Total	188.242	273			
Between Groups	33.391	3	11.130	18.708	0.000***
S Within Groups	160.636	270	0.595		
Total	194.026	273			
Between Groups	21.443	3	7.148	11.620	0.000***
A Within Groups	166.073	270	0.615		
Total	187.516	273			
Between Groups	28.086	3	9.362	14.937	0.000***
O Within Groups	169.229	270	0.627		
Total	197.315	273			

\*:P<0.05;\*\*P<0.01;\*\*\*P<0.001

Through analysis, it can be seen that different income levels have a significant impact on students' K, S, A and O expectations. This may mean that students with higher income levels have different expectations and needs in these areas and require targeted education and guidance.

## 4 Conclusion

Through a questionnaire survey of 274 students from Guizhou Vocational College, the factors affecting their employment success were explored. The study found no significant differences in students' knowledge, skills, abilities and other characteristics across gender and grade levels. However, there are significant differences between different income levels and majors. Income level has a significant positive impact on knowledge, skills and other characteristics, but has an insignificant impact on abilities. In addition, there is a significant positive correlation between the various abilities. In summary, income level and major choice have an important impact on students' employment expectations and needs, and personalized education and guidance should be provided according to different needs.

Based on the above research findings, this article puts forward the following suggestions:

1. Schools must change their educational philosophy, avoid gender discrimination in education, and encourage male and female students to learn professional knowledge together.
2. Schools should strengthen the cultivation of students' knowledge, skills, abilities and other characteristics, actively create a good professional learning environment for students, and enhance their comprehensive quality.
3. The government and enterprises should improve the working conditions for college students, create a better employment atmosphere, and increase the work income of college graduates.

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