

Article

Factors influencing career adaptation: The positive effects of mastery goal orientation, social support, and vocational decision self-efficacy

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Abstract: In the highly competitive employment environment, most college students have left their jobs for a short time after employment, and attention should be paid to students' career adaptation. However, the further influence of skilled goal orientation, social support and career-determined self-efficacy on college students' career adaptation needs to be confirmed. This study analyzes the effects of these factors on college students' career adaptation. This study aims to analyze the impact of mastery goal orientation, social support, and vocational decision self-efficacy on career adaptation among 224 university students in East China. The results indicated that university students generally exhibit positive levels of mastery goal orientation, social support, vocational decision self-efficacy, and overall career adaptation. Female students demonstrate higher levels of mastery goal orientation, social support, vocational decision self-efficacy, and career adaptation compared to male students. As students progress in their academic years, their levels of mastery goal orientation, social support, vocational decision self-efficacy, and career adaptation tend to increase. Students majoring in humanities and social sciences have higher level than students majoring in science and engineering in all factors. Students majoring in humanities and social sciences exhibit more optimism in all factors compared to students in science and technology fields. The relationships among these factors show positive correlations. Mastery goal orientation, social support, and vocational decision self-efficacy all have positive effects on career adaptation. Among these, family support stands out as the most influential subordinate factor of social support on career adaptation. The most influential subordinate factor of vocational decision self-efficacy on career adaptation is conscious decision-making. Therefore, male, lower grade, science and engineering college students are the groups that need to be paid attention to in improving career adaptation. Skilled goal orientation, family support and conscious decision making have a better effect on the improvement of career adaptation. These results can provide important reference information for universities, counselors and college students in the training of career planning, and theoretically enrich the relevant research on college students' career adaptation, and provide certain enlightenment for future researchers.

Keywords: career adaptation; mastery goal orientation; social support; vocational decision self-efficacy

1. Introduction

With the rapid changes in the employment environment, the issue of employment for college students is becoming a social problem. According to a survey conducted by MyCOS (2022) on college graduates from 2017 to 2021 in China, the turnover rate within six months after graduation has been consistently high. 43% of the respondents left their jobs due to dissatisfaction with salary, benefits, and treatment. 34% of them left because they felt unsatisfied with the

personal development opportunities in their jobs. Additionally, 24% of the respondents left due to high job demands and significant work pressure (MyCOS, 2022). This indicates that many college students are not only facing the question of whether they can successfully find employment, but also the issue of lower job quality even if they do find employment. Furthermore, due to the drastic growth in higher education, there is an imbalance between the number of college graduates and job vacancies, which undermines the guarantee of quality education credentials for graduates (Moreau and Leathwood, 2006). Faced with a challenging job market, college students may also experience negative issues during their academic and career-related development, such as academic fatigue, low motivation, long-term dissatisfaction with life after graduation, and low quality of life (Bang and Gyu, 2018; Kim, 2015; Singla et al., 2022).

Therefore, career development is of fundamental interest to college students. In order to ensure high-quality employment for college students, researchers have proposed that occupational adaptation is a consequential factor for successful career development (O'Connell et al., 2007). Wetstone and Rice (2023) argue that occupational adaptation for college students refers to their ability to cope with career development challenges, career transitions, and unpredictable crises that may arise after employment (Wetstone and Rice, 2023). Yong (2020) suggests that college students' occupational adaptation not only signifies successful employment after graduation but also represents their ability to adapt to current societal demands and the contemporary job market (Yong, 2020).

Together, these studies reveal that successful employment is not only about obtaining a position, but also about continuous development and adaptation in the workplace. However, it is necessary to consider the process factors of college students before work, which involves the orientation of individuals' intrinsic motivation in task processes or challenges (Li and Shi, 2023; Pierard et al., 2022; Tolentino et al., 2014). Goal-oriented individuals are conducive to completing task requirements and efficiency in a short period of time, while skilled goal-oriented individuals will focus on the development process of proficiency, and have an active mindset of challenge in order to achieve and understand goals (Park and Yang, 2020; Soltani et al., 2022). For college students who are in the stage of vocational ability reserve, to improve vocational adaptation requires that college students pay attention to exploring the career process itself during their long career, rather than taking the career as a short-term task and goal (Bae and Kim, 2019; Faadhilah, 2019; Li and Shi, 2023). Moreover, the potential advantages of skilled goal-oriented on college students' occupational environment adaptation are discussed deeply, which is an area neglected in the past research.

Secondly, the resource help that students seek through social relations and the career decision they make during career exploration will be important processes that affect students' career adaptation (Abele and Spurk, 2009; Park et al., 2021). Social relations involve students' family relations, friends' relations, and relationships with important people around them. The emotional value, career information and experience they provide can help students understand the requirements of their target career field, reduce the pressure on students in the career environment, and enable students to establish a positive mentality in the career adjustment process (Cohen and

Hoberman, 1983; Newman et al., 2021; Park et al., 2021; Schoon and Henseke, 2023). In addition, students' efforts in the career process, such as taking the initiative to collect information and solve problems, and consciously making clear decisions, will also help them enhance their confidence, make reasonable evaluation of career decisions, and finally adapt to the role and requirements of the career (Betz et al., 1996; Baek and Lee, 2019). Although the support of these social relationships and the self-efficacy of career decision have been proven to contribute to students' career planning. However, in order to improve the employment quality of students, it is necessary to understand which specific social resources can directly and effectively improve career adaptation (Li and Shi, 2023). In addition, the factors that can better improve students' career adaptation after students have the efficacy of information collection, conscious decision making and problem solving have yet to be confirmed.

The subjects of this study are college students in eastern China. The purpose is to analyze the effects of college students' proficient goal orientation, social support and career-determined self-efficacy on career adjustment. The level of proficiency in goal orientation, social support, career decision self-efficacy and career adaptation was observed. It provides new insights for college students' career adaptation. Previous studies have shown that goal orientation, social support and career-determined self-efficacy have a positive and close relationship with career adjustment, but there is still a lack of relevant research on the impact of these factors on college students' career adjustment. This study can solve the research gap, bring some enlightenment for the employment guidance of colleges and universities, enrich and deepen the existing vocational adaptation theory.

2. Literature review

2.1. Career adaptability

Career adaptability is a self-regulatory ability to cope with changes in the environment and circumstances, and it can be enhanced through the interaction between personal and external factors. Initially, career adaptability was proposed by Super and Knasel (1981) to better explain the vocational development process during adulthood. Subsequently, Pratzner and Ashley (1985) defined career adaptability as the ability of individuals to adapt to career demands or change a career to meet personal needs. Currently, the concept of adaptability has been developed to the social significance level, defined as the ability to actively coordinate between individual psychological, intrinsic needs, and external social environments (Wetstone and Rice, 2023). Zhou et al. (2023) argue that career adaptability not only involves changing oneself in a given environment but also includes the ability to change the environment subjectively in order to feel satisfied. Xu et al. (2023) propose that career adaptability involves having a planned attitude towards the future and exploring oneself and the environment.

The career adaptability of college students is mainly reflected in their readiness to flexibly respond to career requirements. Gu et al. (2023) consider career adaptability as a core element in the field of employment for college students, primarily dealing with the degree of preparedness for predictable and unpredictable challenges in employment. Agoes Salim et al. (2023) argue that career adaptability is

a concept that needs to be addressed for college students to maintain a stable life and sustained employment after graduation because it involves students' early exploration of changes in the job market to enhance their flexible coping abilities. In other words, career adaptability is the ability to maintain stability and respond effectively to the external environment even in uncertain circumstances.

According to the concept proposed by Wang et al. (2023), when faced with the need to make career choices, students with high career adaptability have the ability to assess future events and control unexpected situations. Jessie et al. (2012) argue that college students are in a period of transitioning from being students to professionals. Graduates, in particular, are about to leave their previous roles and begin the process of adapting to and performing professional tasks (Koen et al., 2012). Therefore, students with high career adaptability are also likely to predict good job quality. Xu et al. (2023) mention in their research that career adaptability is positively related to job satisfaction, meaning that college students with good career adaptability actively accept challenges and changes, maintaining their stability and achieving desirable outcomes in their careers.

College students' career adaptability not only signifies their employment success after graduation but also represents their ability to adapt well to the current societal changes and the employment environment of their time. It can be seen as a factor that contributes to quality employment, indicating that college students secure job positions that align with their academic qualifications and competencies, and that reflect their personal and societal value.

2.2. Mastery goal orientation

Goal orientation is a motivational concept related to self-achievement and self-regulation in learning, and individuals with goal orientation make tasks or learning activities meaningful by combining them with their own cognition (He et al., 2022). According to the definition by Dweck and Leggett (1988), goal orientation and the resulting responses and interpretations vary based on individual goals. These goals can be categorized into mastery goal orientation and performance goal orientation. Mastery goal orientation refers to individuals' willingness to actively embrace new challenges and improve their abilities during task processes, while performance goal orientation refers to individuals' tendency to avoid negative reactions to their own abilities or to seek external positive reactions by performing tasks. Therefore, performance goals and mastery goals are mutually exclusive concepts, especially when individuals with performance goal orientation face obstacles during task processes, it might lead to decreased performance, avoidance of challenges, and triggering feelings of helplessness. On the other hand, individuals with mastery goal orientation are driven by exploration and curiosity, and they engage in challenging tasks, even in the face of failure, with a problem-solving focus, summarizing experiences and feedback (Elliott and Dweck, 1988). Individuals with mastery goals actively enhance their career-related abilities, achieve personal efficiency growth, and successfully promote self-regulatory strategies necessary for adapting to career paths (Dweck, 1986).

Previous studies suggest that mastery goal orientation has a positive impact on

career adaptability (Mei et al., 2021). Park and Yang (2020) propose that mastery goals drive college students to flexibly seek coping strategies and solutions to potential threats. In other words, in order to maintain continuous stability in employment or career planning, individuals actively adjust their learning plans to adapt to changing market demands and effectively deal with crises caused by external changes (Park and Yang, 2020). Bae and Kim (2019) argue that college students with mastery goal orientation not only focus on achieving good academic performance but also engage in various learning activities to acquire knowledge and skills that are relevant to their future careers. They have a strong desire to develop their competencies and adapt to different career challenges. Furthermore, mastery goal orientation is positively associated with career exploration, career decision-making self-efficacy, and career adaptability (Park and Yang, 2020). Students with a mastery goal orientation tend to have a proactive and adaptive career attitude, actively exploring different career options and developing the necessary skills and knowledge to succeed in their chosen field.

Research has also shown that mastery goal orientation is related to positive career outcomes. For example, individuals with a mastery goal orientation are more likely to experience higher job satisfaction and job performance (Park and Yang, 2020). This is because they are motivated by the intrinsic value of the work itself and the opportunity for personal growth and development. They are more likely to engage in continuous learning and improvement, which contributes to their success in their careers.

In summary, career adaptability and mastery goal orientation are two important constructs in the field of career development. Career adaptability refers to the ability to adapt and thrive in changing career circumstances, while mastery goal orientation reflects individuals' motivation to acquire new knowledge and skills and achieve mastery in their chosen field. These two constructs are closely related, as individuals with a mastery goal orientation are more likely to develop the skills and adaptability needed to navigate their careers successfully.

2.3. Social support

Social support refers to the sum of resources, emotional care, information, and evaluation that individuals can obtain through social relationships. It can be understood that when individuals cope with stress, they believe that external forces will provide corresponding support. Initially, Baqutayan (2011) suggested that external support for individuals can be divided into four aspects: emotional support, informational support, instrumental support, and appraisal support. Emotional support refers to others providing emotional value to help maintain emotional stability. Instrumental support refers to the support of resources such as time, material goods, and labor that individuals need. Informational support resolves personal and environmental conflicts through externally provided information value. Appraisal support involves positive feedback on one's role and behavior (Baqutayan, 2011). Park (2016) further proposed that emotional, informational, instrumental, and appraisal support for college students primarily come from friends, parents, teachers, and other people in their surroundings. This also reflects that social support is a

subjective evaluation of the relationship between students and the people around them (Park, 2016). This subjective evaluation can result in different satisfaction outcomes based on the number or quality of the support provided. For example, some people believe that having someone to support them is sufficient when facing external threats. Others define social support based on the number of individuals who support them (Parmentier et al., 2021; Sarason et al., 1983).

In empirical studies on social support and college students' career development, many researchers have identified social support as a contextual factor and reported its significant impact on career development. Kang (2015) suggested that social support provides positive actions related to students' career development, generates internal positive motivation to cope with threats and pressures, and has varying degrees of influence on career adaptation under different levels of support from family, friends, teachers, and schools. Fawehinmi and Yahya (2018) studied 188 college students to examine the causal relationship between social support and career adaptability. Han (2019) confirmed the positive impact of social support on career adaptation and suggested that universities need to provide diverse career development experiences and help students gather diverse career development information to enhance their abilities. Lee (2019) validated that social support is a predictive factor for career adaptation, indicating that college students with higher social support also have higher career adaptation. The sub-factor of social support, family support, significantly influences career adaptability.

Based on the aforementioned studies, it can be concluded that social support is a perceived evaluation of college students' social relationships with the people around them. It can generate internal positive factors to address external threats and has a positive impact on career adaptation.

2.4. Career decision-making self-efficacy

Career decision-making self-efficacy originates from Bandura (1977) concept of self-efficacy. Self-efficacy refers to an individual's confidence in their ability to accomplish specific tasks or work to achieve goals and can predict an individual's cognition, motivation, and behavior (Locke and Bandura, 1987). Subsequently, Betz and Hackett (1981) applied the concept of self-efficacy to the career domain. They believed that the judgment of one's ability to perform actions significantly influences human behavior. In other words, when individuals evaluate their own abilities to achieve specific career goals, it can influence their behavioral outcomes (Betz and Hackett, 1981). Taylor and Betz (1983) combined career decision-making with self-efficacy and proposed a belief that individuals have about the tasks necessary to make career decisions. Researchers gradually expanded this concept to study the relationships among career identity, career interests, career decision-making, and other factors. Therefore, career decision-making self-efficacy plays an important role in individuals' career development and can explain various psychological factors related to career development, such as motivation, behavior, and attitudes.

Jiang et al. (2022) stated that the career decision-making process during college involves compromise, decision-making, setting specific career goals, and preparing detailed future plans to achieve those goals. However, challenges in employment,

such as rapid economic development and job shortages, have become the main obstacles for college graduates (Jiang et al., 2022). Therefore, career decision-making self-efficacy needs to be emphasized. Taylor and Betz (1983) conducted a study on 346 college students, and the results showed that students with higher confidence in their career decision-making made more instances of career decisions compared to those with lower levels of self-efficacy. Hou et al. (2019) believed that career decision-making is a task for college students before employment, which is related to establishing their own identity and achieving psychological and economic independence. Therefore, having a strong sense of self-efficacy is an assessing and driving factor before engaging in career-related behaviors.

The study by Storme et al. (2019) demonstrated that when students have high career decision-making self-efficacy, they approach career-related tasks with a more positive attitude. Park (2016) confirmed the significance of career decision-making self-efficacy in college students' career development by stating that self-efficacy beliefs can influence career exploration, goal setting, and decision-making processes. Students with higher levels of career decision-making self-efficacy are more likely to engage in proactive career behaviors, have clearer career goals, and make more informed career decisions (Park, 2016).

In summary, career decision-making self-efficacy refers to individuals' confidence in their ability to make effective and informed career decisions. It plays a crucial role in shaping individuals' career development, influencing their motivation, behavior, and attitudes towards their career goals. College students with higher levels of career decision-making self-efficacy are more likely to engage in proactive career exploration, have clearer career goals, and make informed decisions about their future careers.

2.5. The present study

Research model and hypotheses

Based on the previous theoretical basis, proficiency goal orientation, social support and career decision self-efficacy all have an impact on career adjustment. Therefore, this study sets proficiency goal orientation, social support and career decision self-efficacy as independent variables, and occupational adjustment as dependent variables. **Figure 1** shows the model for this study. And put forward the following three research hypotheses:

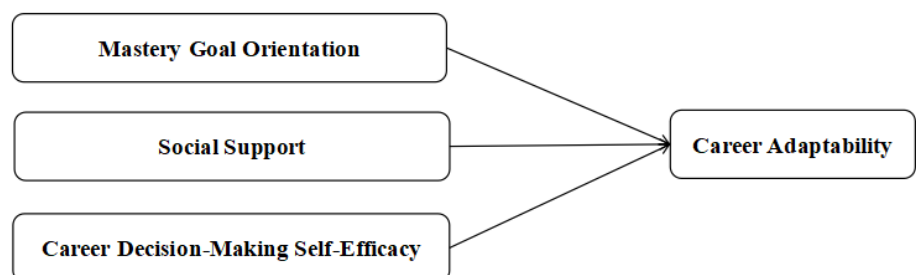


Figure 1. Research model.

Research question 1: How do college students perceive social support,

proficient goal orientation, career-determined self-efficacy, and career adaptation?

Research question 2: How do proficiency goal orientation, social support and career-determined self-efficacy affect college students' career adaptation?

H1: Skilled goal orientation has a positive (+) effect on career adaptation.

H2: Social support has a positive (+) effect on occupational adaptation.

H3: Career-determined self-efficacy has a positive (+) effect on career adaptation.

3. Methodology

3.1. Research subjects

According to the research results of Liu and Cui, the input and output efficiency of universities in eastern China is higher than that of universities in other regions, and the college students cultivated by them also have better career planning ability than those in other regions (Cui, 2022; Liu, 2013). For this reason, purposive sampling is adopted in this study to select samples, which means that researchers can consciously select groups that can represent occupational abilities (Tongco, 2007). Therefore, this study focuses on collecting data from college students in East China by means of online questionnaire collection. After obtaining the help of questionnaire collection from some college teachers in eastern China, 229 questionnaires were collected. Excluding non-responsive and invalid questionnaires, 224 questionnaires were finally available for analysis in this study. The final population statistics are shown in **Table 1**.

Table 1. Presents the demographic characteristics of the research participants.

Component		Number of people	Ratio
Gender	Male	110	49.1%
	Female	114	50.9%
Grade	1	35	15.6%
	2	57	25.4%
	3	64	28.6%
	4	68	30.4%
Professional Category	Humanities and Social Sciences	102	45.5%
	Science and Engineering	122	54.5%
Total		224	100%

3.2. Research instruments

In the relevant studies on occupational adjustment, the influences of different factors on occupational adjustment have been revealed (Wetstone and Rice, 2023; Yong, 2020; Zhou et al., 2023). It can be seen that occupational adaptation has always been considered as a structural relation of the dependent variable, and this study also takes occupational adaptation as the dependent variable on the basis of previous theories. The scale developed by Super and Knasel (1981) was used as the tool of this study. There were 11 questions, all of which were Likert 5-degree scale, and the Cronbach α of occupational adaptation measured in this study was 0.849.

In the study observing the influence on the dependent variable of career adjustment, some leading researchers took proficiency goal orientation as the predictor (Baek and Lee, 2019; Mei et al., 2021; Park and Yang, 2020). This study will continue to use this relational structure to analyze the effect of skilled goal orientation on occupational adjustment. The measurement tools of Button et al. (1996) were used for a total of 10 questions. In this study, the proficient goal-oriented Cronbach α was 0.808.

In the studies of Fawehinmi and Yahya (2018), Han (2019), Kang (2015) and Lee (2019), the influence structure of social support on occupational adjustment was proposed. Based on this, the study takes social support as an independent variable and occupational adjustment as a dependent variable. The tools of Zimet et al. (1988) were used to measure individuals perceived social support. It is composed of three sub-factors: family, friends and significant others, with 4 questions each for a total of 12 questions. The Cronbach α of social support confirmed in this study is 0.888, the Cronbach α of family support is 0.784, the Cronbach α of friend's support is 0.791, and the Cronbach α of significant others support is 0.760.

Chang (2017), Park (2016) and Storme et al. (2017) took career decision self-efficacy as a major factor in predicting career adaptation. Therefore, this study takes career decision-making self-efficacy as the independent variable and career adaptation as the dependent variable. The questionnaire of Nunnally and Bernstein (1994) has 13 questions and 3 sub-factors, including 6 questions of conscious decision making, 4 questions of information collection, and 3 questions of problem solving. In this study, the Cronbach α of career decision self-efficacy was 0.838, the Cronbach α of conscious decision making was 0.791, the Cronbach α of information collection was 0.782, and the Cronbach α of problem solving was 0.796. In **Table 2**, the reliability and composition of skilled goal orientation, social support, career decision self-efficacy, career adaptation are summarized.

Table 2. Instrument composition for mastery goal orientation, social support, career decision self-efficacy, and occupational adaptation.

Variable		Number of items		Cronbach α	
Mastery goal orientation		10		0.808	
Social support	Family support	4		0.784	
	Friend support	4	12	0.791	0.888
	Important person support	4		0.760	
Career decision-making self-efficacy	Awareness decision-making	6		0.791	
	Information collection	4	13	0.782	0.838
	Problem solving	3		0.796	
Career adaptability		11		0.849	

3.3. Research programming

In this study, the collected data was analyzed by SPSS 25.0 program. First, descriptive statistical analysis was conducted to understand the demographic characteristics of the research participants. Second, the reliability of the measurement tools was assessed through a validation of the confidence interval.

Third, descriptive statistical analysis was performed to calculate the mean, standard deviation, kurtosis, and skewness of the research variables, investigating whether they followed a normal distribution. Fourth, analysis of variance (ANOVA) was conducted to examine the differences in mastery goal orientation, social support, career decision self-efficacy, and occupational adaptation based on the demographic characteristics of college students. Fifth, correlation analysis was used to explore the relationships among mastery goal orientation, social support, career decision self-efficacy, and occupational adaptation. Finally, regression analysis was employed to further investigate the influence of mastery goal orientation, social support, and career decision self-efficacy on occupational adaptation.

4. Research findings

4.1. Descriptive statistical analysis

To determine whether the variables in this study met the assumptions of normal distribution, descriptive statistical analysis was conducted, which included calculating the mean, standard deviation, kurtosis, and skewness. The results are presented in **Table 3** and **Figure 2**. The mean score for mastery goal orientation was 3.91, for social support was 3.93, for career decision self-efficacy was 4.04, and for occupational adaptation was 3.86. The skewness and kurtosis values of the variables fell between -0.9 and 1.4 , indicating a normal distribution. When the kurtosis and skewness are less than -2 and 2 , the distribution pattern can be considered normal (George and Mallery, 2019).

Table 3. Presents the descriptive statistics of the research participants for each variable.

Variable	Average value	Standard deviation	Kurtosis coefficient	Coefficient of skewness
Mastery goal orientation	3.91	0.57	-1.054	1.417
Social support	3.93	0.60	-0.917	0.350
Career decision-making self-efficacy	4.04	0.45	-0.755	0.269
Career adaptability	3.86	0.58	-0.917	0.379

N = 224

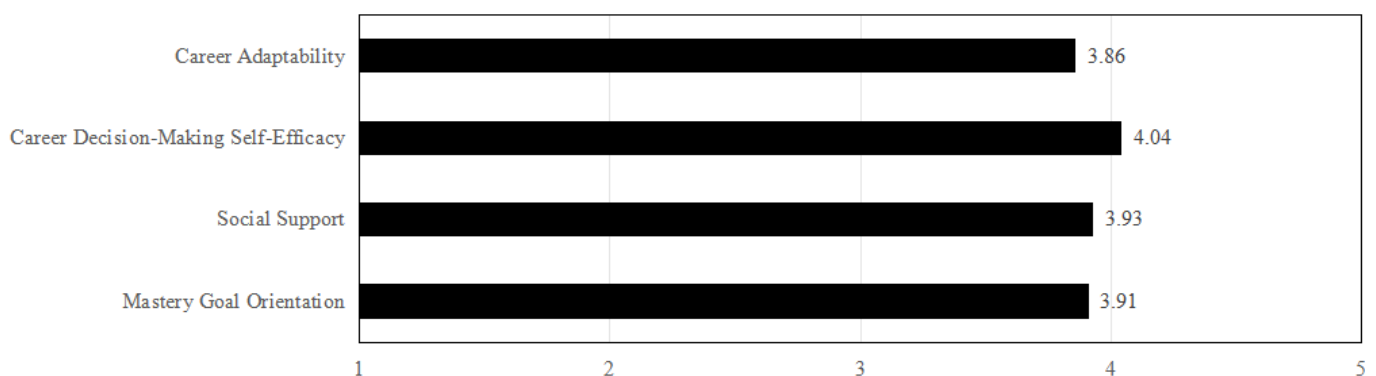


Figure 2. Trends in mastery goal orientation, social support, career decision, self-efficacy, and occupational adaptation among college students.

4.2. Differential analysis

Significant gender differences were observed in mastery goal orientation ($t = -6.836$), social support ($t = -3.347$), career decision self-efficacy ($t = -3.967$), and occupational adaptation ($t = -3.432$), all with statistical significance ($p \leq 0.001$). As shown in **Table 4** and **Figure 3**, female students exhibited higher levels of mastery goal orientation ($M = 4.41$), social support ($M = 4.05$), career decision self-efficacy ($M = 4.16$), and occupational adaptation ($M = 3.98$) compared to male students, who had lower levels of mastery goal orientation ($M = 3.67$), social support ($M =$ [insert male mean value]), career decision self-efficacy ($M =$ [insert male mean value]), and occupational adaptation ($M =$ [insert male mean value]).

Table 4. Summary of differences among research participants.

Demographic variable	Species t/F value	Mastery goal orientation	Social support	Career decision-making self-efficacy	Career adaptability
Gender	Male ($M \pm SD$)	3.67 ± 0.62	3.79 ± 0.63	3.93 ± 0.48	3.73 ± 0.64
	Female ($M \pm SD$)	4.14 ± 0.39	4.05 ± 0.54	4.16 ± 0.39	3.98 ± 0.50
	t	-6.836^{***}	-3.347^{***}	-3.967^{***}	-3.242^{***}
Grade	1 ($M \pm SD$)	3.13 ± 0.35	3.19 ± 0.48	3.42 ± 0.37	3.18 ± 0.65
	2 ($M \pm SD$)	3.77 ± 0.56	3.71 ± 0.57	3.74 ± 0.28	3.62 ± 0.43
	3 ($M \pm SD$)	3.88 ± 0.31	4.00 ± 0.43	4.26 ± 0.21	3.98 ± 0.39
	4 ($M \pm SD$)	4.45 ± 0.14	4.42 ± 0.23	4.42 ± 0.19	4.29 ± 0.36
	F	105.797^{***}	68.342^{***}	161.050^{***}	55.946^{***}
Professional category	Humanities and social sciences ($M \pm SD$)	4.29 ± 0.28	4.36 ± 0.23	4.37 ± 0.20	4.22 ± 0.35
	Science and engineering ($M \pm SD$)	3.59 ± 0.55	3.56 ± 0.5	3.77 ± 0.43	3.55 ± 0.57
	t	12.227^{***}	14.096^{***}	13.541^{***}	10.795^{***}

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$, $N = 224$.

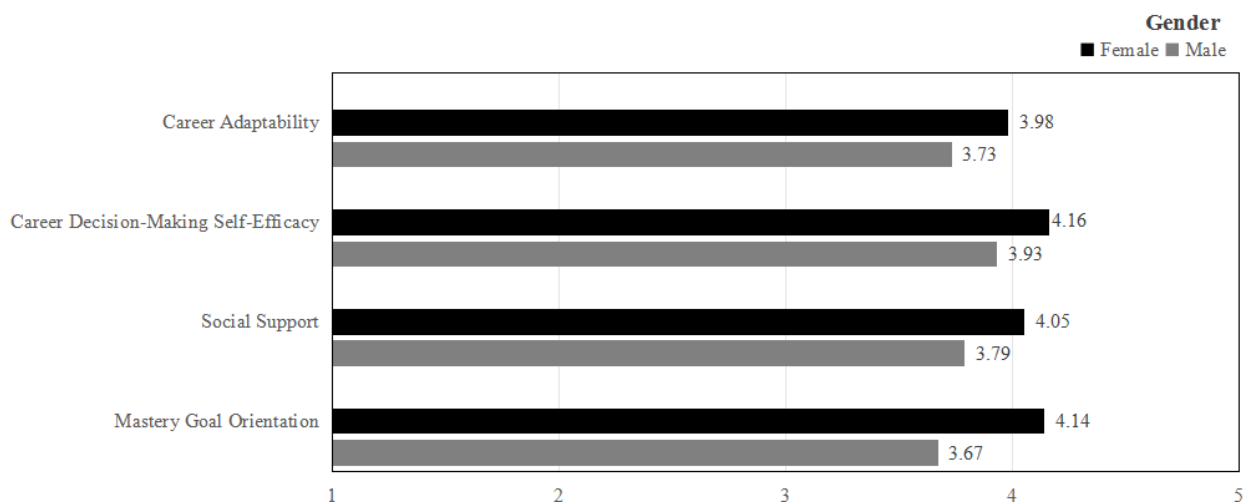


Figure 3. Gender differences in variables among research participants.

Significant grade differences were observed in mastery goal orientation ($F = 105.979$), social support ($F = 68.342$), career decision self-efficacy ($F = 161.050$), and occupational adaptation ($F = 55.946$), all with statistical significance ($p \leq 0.001$). As shown in **Table 4** and **Figure 4**, fourth-year students had the highest levels of

mastery goal orientation ($M = 4.45$), social support ($M = 3.88$), career decision self-efficacy ($M = 3.77$), and occupational adaptation ($M = 3.13$). They were followed by third-year students with higher levels of mastery goal orientation ($M = 4.42$), social support ($M = 4.00$), career decision self-efficacy ($M = 3.71$), and occupational adaptation ($M = 3.19$). Second-year students exhibited intermediate levels of mastery goal orientation ($M = 4.42$), social support ($M = 4.26$), career decision self-efficacy ($M = 3.74$), and occupational adaptation ($M = 3.42$). First-year students had the lowest levels of mastery goal orientation ($M = 4.29$), social support ($M = 3.98$), career decision self-efficacy ($M = 3.62$), and occupational adaptation ($M = 3.18$). These data indicate an increasing trend in mastery goal orientation, social support, career decision self-efficacy, and occupational adaptation with advancing grade levels.

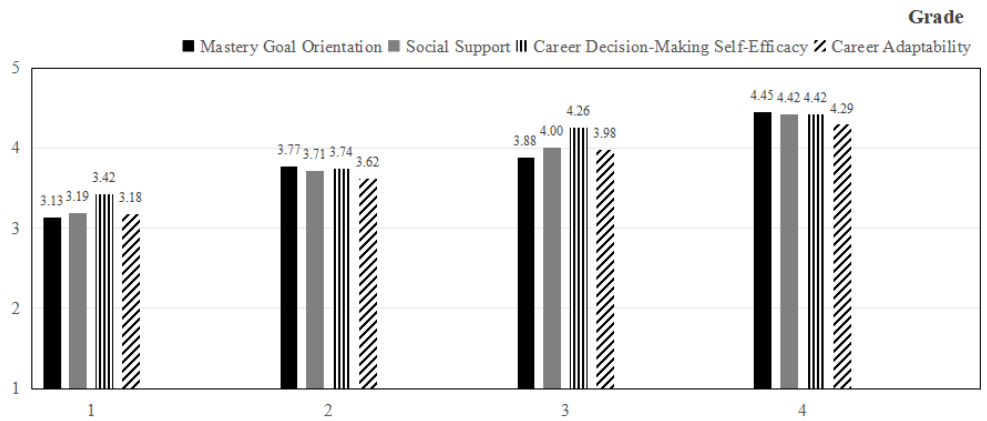


Figure 4. Grade differences in variables among research participants.

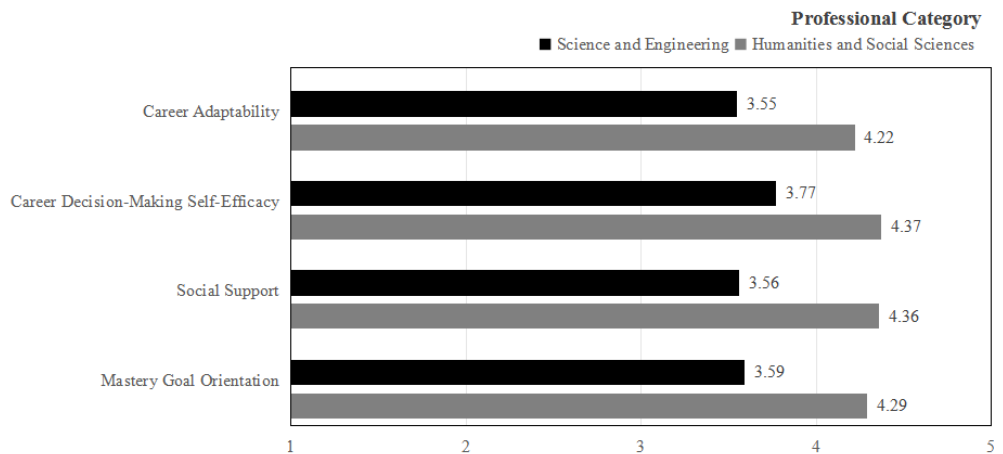


Figure 5. Major category differences in variables among research participants.

Significant differences were observed in mastery goal orientation ($t = 12.227$), social support ($t = 14.096$), career decision self-efficacy ($t = 13.541$), and occupational adaptation ($t = 10.795$) based on major category, all with statistical significance ($p \leq 0.001$). As shown in Table 4 and Figure 5, students majoring in humanities and social sciences displayed higher levels of mastery goal orientation ($M = 4.29$), social support ($M = 4.36$), career decision self-efficacy ($M = 4.37$), and occupational adaptation ($M = 4.22$), compared to students majoring in science and

engineering fields, who exhibited lower levels of mastery goal orientation ($M = 3.59$), social support ($M = 3.56$), career decision self-efficacy ($M = 3.77$), and occupational adaptation ($M = 3.55$).

4.3. Analysis of correlations among variables

Before examining the influence of mastery goal orientation, social support, and career decision self-efficacy on occupational adaptation, Pearson correlation coefficients were calculated to explore the relationships between the research variables. The results are presented in **Table 5**.

Table 5. Results of correlation analysis.

Variable	MGO	SS	FAS	FRS	IPS	CDMSE	ADM	IC	PS	CA
1: MGO	-									
2: SS	0.668***	-								
3: FAS	0.638***	0.890***	-							
4: FRS	0.556***	0.889***	0.701***	-						
5: IPS	0.564***	0.841***	0.647***	0.589***	-					
6: CDMSE	0.554***	0.538***	0.467***	0.465***	0.480***	-				
7: ADM	0.538***	0.511***	0.443***	0.436***	0.465***	0.940***	-			
8: IC	0.478***	0.464***	0.410***	0.375***	0.438***	0.854***	0.759***	-		
9: PS	0.449***	0.450***	0.386***	0.417***	0.372***	0.858***	0.691***	0.581***	-	
10: CA	0.621***	0.679***	0.665***	0.564***	0.559***	0.610***	0.584***	0.530***	0.502***	-

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

Notes: MGO: Mastery Goal Orientation; SS: Social Support; FAS: Family Support; FRS: Friend Support; IPS: Important Person Support; CDMSE: Career Decision-Making Self-Efficacy; ADM: Awareness Decision-Making; IC: Information Collection; PS: Problem Solving; CA: Career Adaptability.

In terms of the relationships between the main variables, mastery goal orientation showed significant positive correlations with social support ($r = 0.668$), as well as its sub-factors such as family support ($r = 0.638$), friend support ($r = 0.556$), significant other support ($r = 0.564$), and occupational adaptation ($r = 0.621$), all at the $p \leq 0.001$ level. Social support demonstrated significant positive correlations with career decision self-efficacy ($r = 0.538$) and its sub-factors, including decision-making awareness ($r = 0.511$), information gathering ($r = 0.464$), problem feedback ($r = 0.450$), and occupational adaptation ($r = 0.679$), all at the $p \leq 0.001$ level. Furthermore, career decision self-efficacy showed a significant positive correlation with occupational adaptation ($r = 0.610$) at the $p \leq 0.001$ level. Hence, all variables exhibited positive correlations with each other.

4.4. Analysis of the influence of relevant factors on occupational adaptation

The regression analysis of the impact of mastery goal orientation (MGO), social support (SS), and career decision-making self-efficacy (CDMSE) on occupational adaptation (CA) is summarized in **Table 6** and **Figure 6**. The analysis of the impact of the independent variable, mastery goal orientation, on the dependent variable,

occupational adaptation, yielded an R^2 value of 0.385, with a β coefficient of 0.621, and $p \leq 0.001$. The variance inflation factor is 1.000. Variance inflation factor below 10 indicates that there is no multicollinearity between variables (O'Brien, 2007). These results indicate that college students' proficiency in goal orientation has a positive (+) effect on career adaptation. This indicates a positive influence of mastery goal orientation on occupational adaptation among university students.

Table 6. Regression analysis of proficiency goal orientation, social support and career decision self-efficacy on career adaptation ($N = 224$).

The dependent variable	The independent variable	B	S.E	β	R^2	F	VIF
Career adaptability	Mastery goal orientation	0.638	0.054	0.621***	0.385	139.105	1.000
	Social support	0.665	0.048	0.679***	0.461	190.175	1.000
	Family support	0.404	0.068	0.444***			2.358
	Friend support	0.108	0.054	0.141***	0.480	67.761	2.098
	Important person support	0.172	0.060	0.188***			1.834
	Career decision-making self-efficacy	0.786	0.069	0.610***	0.372	131.494	1.000
	Awareness decision-making	0.414	0.117	0.329***			3.041
	Information collection	0.256	0.116	0.182***	0.374	43.751	2.395
	Problem solving	0.137	0.060	0.169***			1.943

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

The impact of social support on occupational adaptation yielded an R^2 value of 0.461, with a β coefficient of 0.679, and $p \leq 0.001$. The sub-factors of social support explained 48.0% of the variance in occupational adaptation. Specifically, family support ($\beta = 0.444$), friend support ($\beta = 0.141$), and important person support ($\beta = 0.188$) all had significant positive effects on occupational adaptation. Social support, especially family support, had a significant positive impact on occupational adaptation.

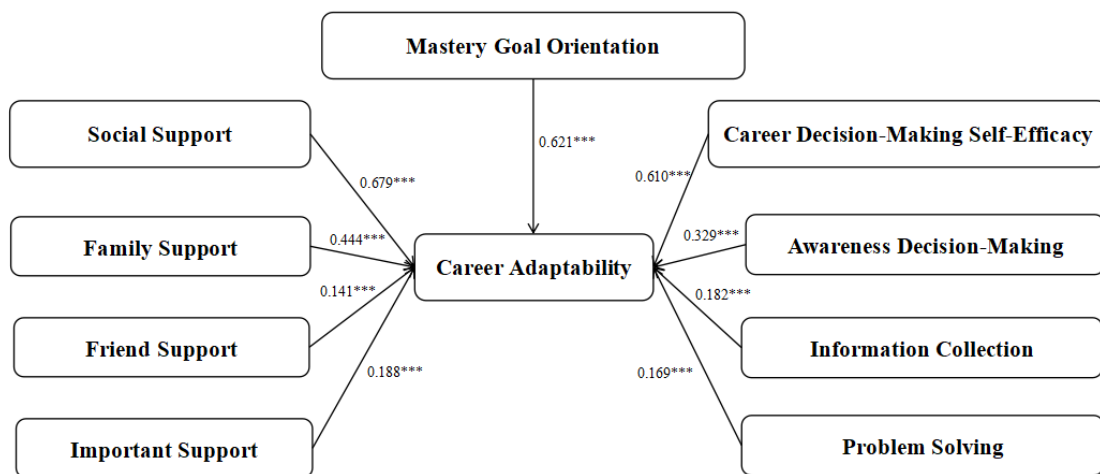


Figure 6. Influence of relevant variables on occupational adjustment.

Career decision-making self-efficacy had a positive influence on occupational adaptation, with a β coefficient of 0.610 and an R^2 value of 0.372, indicating that it

explained 37.2% of the variance in occupational adaptation. Among the sub-factors of career decision-making self-efficacy, decision-making awareness ($\beta = 0.329$), information collection ($\beta = 0.182$), and problem feedback ($\beta = 0.169$) all had significant positive effects on occupational adaptation ($p \leq 0.001$). Decision-making awareness had the strongest impact, followed by information collection and problem feedback.

5. Discussion and conclusion

This study aimed to analyze the impact of mastery goal orientation, social support, and career decision self-efficacy on vocational adaptation among college students. Two research questions were formulated, and a comprehensive statistical analysis, analysis of variance, correlation analysis, and regression analysis were conducted on a sample of 224 college students from the East China region. The discussion of the results is as follows:

Firstly, to address research question 1, “How do college students perceive social support, proficient goal orientation, career-determined self-efficacy, and career adaptation?” The descriptive statistics of this study indicate that college students generally have positive levels of mastery goal orientation, social support, career decision self-efficacy, and vocational adaptation. This result is partially consistent with some previous studies (Lee, 2019). In the analysis of gender differences, females showed higher levels of mastery goal orientation, social support, career decision self-efficacy, and vocational adaptation compared to males. Females may receive more positive encouragement regarding self-improvement and goal attainment in the learning environment. With the support from family, school, and society, there is an increasing emphasis on enhancing female self-esteem, self-efficacy, and career decision-making, encouraging them to have higher expectations for their education and career development, thus striving for higher goals and achievements (Roh and Moon, 20220).

Regarding grade differences, higher-grade college students demonstrated more optimistic levels of mastery goal orientation, social support, career decision self-efficacy, and vocational adaptation compared to lower-grade students. This may be attributed to the accumulation of experience. As students grow, the learning experiences accumulated during their campus years indirectly enhance their social networks and adaptive abilities. With deeper learning and growth, students further improve their interests, abilities, and values in their careers (Chang, 2017). Especially in some universities, higher-grade students are required to participate in internships and practical activities, which contribute to enhancing their self-efficacy and purposefully understanding career-related skills and knowledge (Do, 2019; Yun and Kang, 2019). In contrast, lower-grade students may have less clarity about their future career direction. Additionally, higher-grade students may face employment pressure and career development anxiety as they approach graduation, which prompts them to take more proactive measures to enhance their competitiveness (Yin, 2022; Zhou, 2022).

In terms of major categories, college students majoring in humanities and social sciences showed higher levels of mastery goal orientation, social support, career

decision self-efficacy, and vocational adaptation compared to those majoring in STEM fields. This may be related to the diversity of communication and interpersonal skills, teaching methods, and the flexibility and diversity of careers. Humanities and social science majors emphasize critical thinking, communication skills, and insight into social phenomena. The cultivation of these skills helps students gain more social support in building and maintaining social relationships (Hyechong, 2014; Van der Westhuizen and De Wet, 2002). In terms of the cultivation approach, humanities and social science majors focus on the relationship between humans and culture, as well as humans and society. They also tend to engage in discussions and debates, which facilitate the formation of reasonable viewpoints and constructive exchanges of ideas with others, promoting the development of social skills (Holms et al., 2017).

Secondly, to address research question 2, “How do proficiency goal orientation, social support and career-determined self-efficacy affect college students’ career adaptation?” The correlation analysis revealed positive relationships among the factors. The regression results showed a positive (+) influence of mastery goal orientation on vocational adaptation. This finding is explained in Park and Yang (2020) study, which suggests that individuals with mastery goal orientation exhibit resilience when facing career challenges. They view challenges as opportunities for growth and learning, derive satisfaction from the activities themselves, and maintain long-term engagement in tasks (Park and Yang, 2020). From the analysis of the verification of the research hypothesis, the hypothesis H1 of this study is: “skilled goal orientation has a positive (+) influence on career adaptation.” Gained support.

Social support also showed a positive (+) influence on vocational adaptation, with family support having the highest impact, followed by significant others’ support and friend support. According to Han’s (2019) perspective, college students usually obtain social support from their social relationships, and the level of support is associated with the perceived closeness of individuals to others (Han, 2019). Therefore, the provision of more support in social relationships may stem from the help of students’ family members. Hypothesis H2 of this study: “Social support has a positive (+) effect on occupational adaptation” is verified in this result.

Career decision self-efficacy had a significant positive (+) effect on vocational adaptation, with decision awareness having the highest impact, followed by information gathering and problem feedback. Decision awareness refers to a conscious and deliberate thinking process when making decisions, using conscious thinking to evaluate choices and make rational judgments (Kim, 2015). Decision awareness focuses on integrating and evaluating information about goals, overcoming obstacles in the career path, and adjusting plans flexibly (Germar et al., 2023; Pignault et al., 2023). At the same time, hypothesis H3: “Career-determined self-efficacy has a positive (+) effect on career adaptation” is supported by this result.

In conclusion, this study provides valuable insights into the relationship between mastery goal orientation, social support, career decision self-efficacy, and vocational adaptation among college students. The findings suggest that mastery goal orientation, social support, and career decision self-efficacy are important factors in enhancing vocational adaptation. College students with a strong mastery goal orientation, higher levels of social support, and greater career decision self-

efficacy are more likely to adapt well to their chosen careers.

6. Implications

The results of this research will be useful to schools, counselors and students. By promoting the outcome of career adaptability with skilled goal orientation, social support and self-efficacy in career decision making, school curriculum design and employment activity design can be more considered for students' grasp of career goals, and enable students to constantly evaluate the current employment situation and conditions on a regular basis. Establish employment-related services that work with students' family members. The results of this paper can be used by counselors to extract important information when helping students explore career paths. It is emphasized that skilled goal orientation, family support and conscious decision making have better effects on college students' career adaptation. Counselors can use these research results to guide students' career planning, suggest giving students confidence in career decision at the early stage of counseling, help students understand their good field and establish career goals as early as possible, so that students can be more easily found in the career that suits them and is interested in. At the same time, establish contact with students' families, and meet students' needs in career planning through family support. The study also provides students with key factors to take into account in their career exploration path. Students can choose their own career goals as early as possible during the school period, and set up academic efforts for the goal. In order to ensure the rationality of their career decisions, they can constantly follow up the changes in the job market and make timely evaluation and optimization adjustments to their goals, and actively seek for family members to provide them with information, emotional and evaluation support, so as to ultimately achieve the purpose of improving their employment quality. In addition, this study also screened out the groups that need to be paid attention to vocational adaptation. Since college students with the characteristics of male, junior, and science and engineering majors are at a lower level in the comparison of differences in various factors, it is necessary for schools, counselors and students to improve their proficiency, goal orientation, family support, and conscious decision-making to improve vocational adaptation more effectively.

7. Limitations

In the analysis of the survey results of this study, although it is proved that college students have relatively optimistic social support, skilled goal orientation, career-determined self-efficacy, and career adaptation, it is still possible to cause employment quality problems due to other extroverted or internal factors. For example, the lack of effective test-taking skills, job-hunting skills, or family pressure, gender roles, employment policies and other factors may also lead to restrictions on students' career development. Secondly, in the analysis of gender factors, this study proves that women have a higher level than men in various factors, but women are still an important group facing employment difficulties. For the specific factors that hinder women's employment, this study fails to capture and verify and does not reflect the actual situation of each individual. Finally, the sample size of this study is

small. It may not represent the actual situation of the whole college students, and it is not possible to confirm whether there is a degree of beautification in the questionnaire filled out by the research objects, which may have a certain impact on the analysis results. Therefore, subsequent studies can analyze the reasons affecting college students' career adaptation through other factors, or examine the factors affecting women's career adaptation difficulties and employment difficulties from the perspective of employment equity, increase the sample size, and conduct research through individual interviews, so as to provide more inspiration for college students' employment guidance. It also brings more reference for enhancing college students' vocational adaptability.

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