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The Impact of Proactive Personality on Career Adaptability: The Mediating Role of Internship Engagement

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Abstract: Against the backdrop of the popularization of higher education and intensifying employment competition, enhancing college students' career adaptability has become an important task in career education and employment guidance. This study explores the link between proactive personality and career adaptability, as well as the internal mechanisms involved. To achieve this, the study introduces internship engagement as a mediating variable, constructing a model of 'proactive personality—internship engagement—career adaptability'. Using convenience sampling, 92 college students with internship experience were experience completed a questionnaire survey. The results found that: (1) College students showed moderate to high levels of proactive personality, internship engagement and career adaptability, and these variables were positively correlated. (2) Proactive personality also significantly predicted career adaptability. (3) Internship engagement played a significant partial mediating role between proactive personality and career adaptability. The research results indicate that a proactive personality can influence career adaptability through internship engagement.

Keywords: Proactive Personality; Career Adaptability; Internship Engagement; College Students.

1. Introduction

1.1. Research Background

As China's higher education enters a stage of popularization, competition in the college student employment market is becoming increasingly fierce. How to help college students find employment has become a social hot topic. The "Notice of the Ministry of Education on Strengthening Employment and Entrepreneurship Support for University Graduates in 2025" [1], issued by China's Ministry of Education, emphasised the necessity to enhance career education and employment assistance. Career adaptability, as a pivotal element in guiding college students to ascertain their career direction and augment their employment competitiveness, constitutes a significant component of career education, and its significance is progressively accentuated. Hirschi et al. (2009) [2] found that an increase in career adaptability can further significantly predict the enhancement of students' sense of personal agency and increase in life satisfaction. Yan Wenhao et al. (2018) [3] found that individuals with high career adaptability can formulate clearer career plans. Shu Xiaoli and Ye Maolin (2018) [4] found that career adapt Competence not only helps individuals gain stronger career competitiveness and satisfaction in their current organization, but also helps them rationally evaluate internal and external career opportunities, thereby making more favorable career decisions. Therefore, exploring ways to improve college students' career adaptability is of significant theoretical and practical importance for promoting their comprehensive development.

1.2. Literature Review

When studying the components of proactivity in organizational behavior, Bateman and Crant (1993) [5], from an interactionist psychology perspective, found that individuals with proactive personalities have a relatively stable tendency or behavioral style to take initiative to influence their surrounding environment. Proactive personality, understood as a core personality trait, is marked by an individual's inclination to initiate action, alter the surrounding environment, and pursue developmental opportunities.

A survey study of 496 employed individuals by Seibert, Crant, and Kraimer (1999) [6] found that highly proactive individuals tend to actively shape their environment (e.g., choosing situations conducive to their development, establishing social networks, actively seeking feedback, etc.), thereby achieving better career outcomes. This indicates that proactive personality, as a unique and irreplaceable individual difference variable, holds a significant position in career development research. Existing domestic research confirms that proactive personality has a significant predictive effect on key cognitive variables in the career development of college students. Shang Jiayin and Gan Yiqun (2009) [7] reported a statistically significant positive association between proactive personality and career decision-making self-efficacy among college graduates. That is, individuals with stronger proactivity have higher confidence in their abilities during the career decision-making process and firmer beliefs in coping with decision-making challenges. Li Yundan's (2026) [8] cross-sectional survey of 951 college students also found that proactive personality is significantly negatively correlated with career decision-making difficulties.

In the extant literature on career adaptability, Savickas (1997) [9] is distinguished by his status as the first scholar to formally articulate the concept in his foundational discussion of career construction theory. The definition of career adaptability that he gives in this discussion is "an individual's readiness to cope with the predictable tasks and unpredicatable adjustments in career development". Nested

within that definition are four dimensions—career confidence, career curiosity, career concern, and career control.

Utilising a time-lagged research design, Tolentino et al. (2014) [10] examined 555 Australian undergraduate students and documented a statistically substantial positive affiliation between proactive personality and each of the four constituent dimensions of career adaptability: career concern, career control, career curiosity, and career confidence. Beyond these direct associations, the authors further proposed that contextual conditions workplace support being one illustrative case may shape, at least in part, the linkage between proactive personality and career adaptability. Using structural equation modelling in a sample of 864 university students, Wu Jieqing et al. (2016) [11] found that those with a proactive personality are better able to adapt to changes in their career. This pattern supports the view that proactive personality is an important antecedent of career adaptability.

A review of literature on the influencing factors of college students' adaptability found that Jiang Li and Liu Quzhi (2026) [12] used cross-lagged analysis and discovered that college students' career exploration behavior can positively predict their career adaptability over time. development, and there is a mutually promoting relationship between the two where exploration promotes adaptation and adaptation drives exploration. Internship, as the primary means for college students to gather information related to themselves and the professional world during their career development, is a clear form of career exploration behavior.

Taken together, the conclusions reported by Tolentino et al. (2014) and Wu Jieqing et al. (2016)—both indicating that proactive personality positively predicts career adaptability—and the findings of Jiang Li et al. (2026) concerning the association between vocational exploration (internship) and career adaptability point in the same analytic direction. Within the logic of the JD-R model advanced by Bakker and Demerouti (2007) [13], personal resources (for example, proactive personality) may activate positive motivational processes through increased individual engagement (here, internship engagement), which in turn strengthens adaptive outcomes, including career adaptability. On this basis, internship engagement can reasonably be expected to function as a mediator in the relationship between proactive personality and career adaptability.

This study reviewed relevant literature and found that early research on college student internships primarily focused on quantifiable objective indicators for operational definitions. These core indicators include explicit variables such as internship duration, number of internships, and the degree of alignment between internship content and major. For example, Ding Xiaohao and Song Zhe (2017) [14] deconstructed the core concept of "internship" into two dimensions: "relative internship duration" (the ratio to the average duration of their peers) and "absolute internship duration" (the total actual time spent participating in internships).

However, such objective indicators can only capture the external behavioral manifestations of college students during their internships, making it difficult to address the differences in internal states such as emotional resonance, cognitive immersion, and psychological engagement among interns. This leads to a partial interpretation of the connotation of internship engagement, failing to fully reflect the complexity of the internship experience. Addressing this research gap, the study by Yao Limin and Zhang Yi (2021)[15] achieved a key breakthrough. They understood internship engagement as the level of vigor, dedication, and absorption displayed by students during their internships. They further deconstructed college student internship engagement into four dimensions: emotional engagement, effort quality, psychological adjustment, and peer interaction, systematically covering the three core levels of behavior, emotion, and cognition. This not only enriched the theoretical connotation of internship engagement but also, based on this four-dimensional structure, developed a standardized internship engagement scale, providing a scientific and comprehensive measurement tool for subsequent research. In view of this, the present study will adopt the internship engagement scale developed by Yao Limin and Zhang Yi (2021)[15] to measure the core variable "internship engagement."

Synthesizing existing research, there are still three limitations in the current field:

1) In terms of mechanism research on variable relationships, although existing studies have clarified the positive association between proactive personality and career adaptability, they have largely focused on the direct relationship between the two. Empirical tests of their internal mechanisms (i.e., "how proactive personality affects career adaptability") are relatively scarce, and the role of mediating variables has not been deeply explored, making it difficult to reveal the core pathways of their association.

2) In terms of correlational research on core variables, existing findings have not included proactive personality, internship engagement, and career adaptability within the same research framework, lacking a systematic exploration of their relationships, particularly failing to examine the internship The mediating role attributed to engagement in the association between proactive personality and career adaptability does not, on closer inspection, resolve the central issue: whether proactive personality shapes internship engagement and, through that pathway, bears on career adaptability. A research gap closely related to the theme of this study is evident.

3) In the measurement of internship engagement, existing studies have mostly focused on objective external indicators such as internship duration, number of internships, and job fit. Less attention has been paid to the internal engagement status of college students during the internship process from psychological and behavioral perspectives, leading to insufficient exploration of the connotation of internship engagement.

1.3. Research Objectives

To this end, this study plans to use a mature internship engagement scale to measure internship engagement from multi-dimensional perspectives of psychology, cognition, and behavior. It is hypothesized that college students' proactive personality can positively predict their career adaptability, with internship engagement playing a mediating role. On this basis, the present study identifies three research objectives and, in parallel, specifies the mediation model shown inFigure **1**.

1) Explain how a proactive personality directly impacts career adaptability.

2) Investigate the relationship between proactive personality and career adaptability, and the role of internship engagement in this relationship.

3) Based on empirical results, provide theoretical basis and practical strategies for universities to optimize internship management, carry out career education, and guide students

with different personality traits to enhance their career development capabilities.

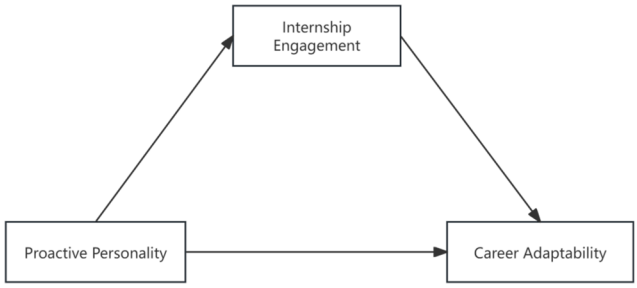


Figure 1. Mediation Model

2. Research Methods

2.1. Research Subjects

Questionnaires were distributed to university students of all grades from major universities in China, using a convenience sampling method.

2.2. Research Instruments

1) University Student Career Adaptability Scale

For the assessment of university students' career adaptability,the present measure adopted the University Student Career Adaptability Scale developed by the Taiwanese scholar Wu Shu-wan (2008) [16], a scale constructed on the basis of Savickas's (2005) theoretical framework [9]. Comprised of four dimensions—career confidence, career curiosity, career concern, and career control—the instrument contains 21 items in total. A 5-point Likert response format was used, with 5 denoting strongly agree and 1 denoting strongly disagree; some negatively phrased items were reverse-score (as specified in the original scale design). By interpretation, higher total scores correspond to a higher level of individual career adaptability. As reported in the verification study by Wu Jie-ching et al. (2016) [11], the scale's Cronbach's alpha coefficient reached 0.89.

2) Proactive Personality Scale

The Chinese version of the Proactive Personality Scale, revised by Shang Jia-yin and Gan Yi-qun (2009), was used to measure proactive personality [7]. The instrument was adapted from the original 17-item scale developed by Bateman and Crant (1993) [5]. Following exploratory and confirmatory factor analyses, the scale was reduced to 11 items and demonstrated a unidimensional structure that is suitable for Chinese university students. Items were rated on a seven-point Likert scale, from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating stronger proactive personality tendencies. The scale showed good internal consistency (Cronbach's $\alpha = 0.86$).

3) Internship Engagement Scale

The measurement of university students' internship engagement uses the 'Internship Engagement Scale' compiled by Yao Li-min and Zhang Yi (2021)[15] based on Fredricks' (2004)[17] learning engagement meta-structure model and Kahu's (2013) [18] division of cognitive, emotional, and behavioral dimensions. The scale includes four dimensions: emotional engagement, effort quality, peer interaction, and psychological regulation, with a total of 21 items. It uses a 5-point Likert scale (5 for strongly agree, 1 for strongly disagree). Higher scores indicate greater internship engagement. Its Cronbach's alpha coefficient is 0.965.

2.3. Research Procedure

This study utilized the Wenjuanxing platform to design and distribute questionnaires, employing a snowball sampling method to expand the sample coverage. Before distributing the questionnaires, participants were clearly informed about the research objectives, questionnaire completion requirements, and confidentiality principles, ensuring that participants voluntarily and truthfully completed the questionnaires. A total of 117 questionnaires were distributed, and 25 questionnaires from individuals who had not participated in internships were excluded, resulting in 92 valid questionnaires. Among these, 35 were from males and 57 were from females. Considering that freshmen and sophomores have fewer internship opportunities due to their lack of work experience, they were combined into a lower-grade group, while juniors and seniors were combined into an upper-grade group. Among the final sample of 92 participants, 15 were lower-grade students and 77 were upper-grade students. The sample consisted predominantly of students majoring in education (n = 62), with the remaining 30 students coming from other disciplines such as law, business administration, and physics.

2.4. Data Processing and Analysis

1) Descriptive Statistics: SPSS 27.0 was used to statistically analyze demographic information and the mean scores of each variable, standard deviation.

2) Difference Analysis: SPSS 27.0 was used to conduct independent sample T-tests and ANOVA to examine differences in major variables based on demographic variables (gender).

3) Correlation Analysis: SPSS 27.0 was used to perform Pearson correlation analysis to examine the correlation between each dimension of proactive personality and each dimension of career adaptability, and internship engagement.

4) Following regression principles, a mediation analysis was conducted using Model 4 of the PROCESS macro in SPSS. The analysis evaluated (1) the direct prediction of career adaptability by proactive personality, and (2) the indirect effect of proactive personality on career adaptability via internship engagement.

3. Research Results

3.1. Descriptive Statistics and Independent Sample T Test Results of Relevant Variables

The descriptive statistical results for each variable areshown in Table 1. The sample's mean score on proactive personality was 5.20 ±0.84, the score on career adaptability was 3.62±0.44, and the score on internship engagement was 3.71±0.54. From the independent sample T-test results (see Table 1), it was found that female participants had slightly higher scores in internship engagement than male participants, while male participants had slightly higher scores in proactive personality and career adaptability than female participants. However, none of the above differences reached statistical significance, as all p-values exceeded 0.05.

Table 1. Variables and Difference Tests Regarding Gender

Variable	I		Male (35)		Female (57)		T Value	P
	M	SD	M	SD	M	SD		
Proactive Personality	5.20	0.84	5.22	0.93	5.18	0.80	-1.64	0.14
Career Adaptability	3.62	0.44	3.62	0.51	3.61	0.39	0.11	0.90
Internship Engagement	3.71	0.54	3.60	0.64	3.78	0.45	0.16	0.87

3.2. Correlation Analysis Results

The correlation analysis results for each variable are presented in Table2. The scores of college students on the Proactive Personality Scale were positively correlated with their scores on the Career Adaptability Scale ($r = 0.709$, $p < 0.01$). Meanwhile, the scores on the Internship Engagement Scale were also positively correlated with both the Career Adaptability Scale scores ($r = 0.644$, $p < 0.01$) and the Proactive Personality Scale scores ($r = 0.546$, $p < 0.01$).

Table 2. Correlation Analysis of Variables

Variable	1	2	3
1.Proactive Personality	1		
2.Career adaptability	0.709**	1	
3.Internship engagement	0.546**	0.644**	1

3.3. Testing the Relationship Between Proactive Personality and Career Adaptability

The results of the relationship between proactive personality and career adaptability are shown in Table. Proactive personality predicted career adaptability and showed a positive association with it. It explained 41.5% of the variance in career adaptability. Taken together, these findings support the hypothesis that college students with higher proactive personality scores showed stronger career adaptability.

Table 3. Model Test of Proactive Personality on Career Adaptability

Predictor	Career Adaptability	
	β	t
Proactive Personality	0.644	7.995
F value	63.917***	
R Square	0.415	

3.4. Regression Analysis Results

Using PROCESS Model 4 in SPSS, we tested whether internship engagement mediated the association. The results are summarized in Table 4.

Proactive personality significantly predicted career adaptability in the total effect model ($t = 7.471$, $p < 0.001$). After internship engagement was included as a mediator, the direct effect of proactive personality on career adaptability remained significant ($t = 6.339$, $p < 0.001$), although this coefficient was smaller than that in the total effect model. Proactive personality also positively predicted internship engagement ($t = 6.180$, $p < 0.001$), and internship engagement, in turn, positively predicted career adaptability ($t = 4.565$, $p < 0.001$). Together, these findings suggest that internship engagement partially mediated the association between proactive personality and career adaptability.

Table 4. Mediating Effect of Internship Engagement in Proactive Personality and Career Adaptability

Predictor	**Career Adaptability**		**Career Adaptability**		**Internship Engagement**	
	t	**p**	**t**	**p**	**t**	**p**
Proactivity Personality	6.339	0.000	7.471	<0.001	6.180	0.00
Internship Engagement	4.565	0.000				
RI	0.5972		0.415		0.2979	
FI	65.9688**		63.917**		38.1948**	

Neither the upper nor lower bounds of the bootstrap 95% confidence intervals excluded zero for either the direct effect of proactive personality on career adaptability or the indirect effect via internship engagement (see Table 5). These results suggest that proactive personality was associated with career adaptability both directly and indirectly through internship engagement. The direct effect (0.266) and mediating effect (0.105) accounted for 71.8% and 28.2% of the total effect (0.371), respectively.

Table 5. Proportion of Mediating Effect on Internship Engagement on Proactive Personality and Career Adaptability

Effect Type	Effect	BootSE	BootLLCI	BootULCI	Proportion of Effect
Direct Effect	0.266	0.042	0.183	0.350	71.8%
Indirect Effect	0 .105	0 .043	0.034	0.200	28.2%
Total Effect	0.371	0.063*	0.247	0.495	

4. Discussion

4.1. Current Status of College Students' Proactive Personality, Internship Engagement, and Career Adaptability

College students' proactive personality scored at a medium to upper level on average, indicating that contemporary college students generally possess a personality tendency to proactively seek development and change their environment. At the same time, college students with internship experience also showed medium to upper level engagement during their internships, indicating that contemporary college students possess a certain degree of emotional investment, effort quality, colleague interaction, and psychological adjustment during the internship process.

This study also found that college students showed moderate to relatively high career adaptability, consistent with earlier work (Wu Jieqing and Dong Yongyan,2016). This pattern suggests that they were generally able to adjust to career-related tasks, including career choice. An independent-samples t-test showed small gender differences. Male students' scores slightly higher than female students in proactive personality and career adaptability, whereas female students' scores slightly higher in internship engagement. However, none of these differences reached a significant level. This may be related to the popularization of career education in universities and improvements in gender equality in the job market.

4.2. Exploring the Relationship Among Proactive Personality, Internship Engagement, and Career Adaptability

This study showed that individuals with stronger proactive traits had greater career adaptability. This finding is consistent with earlier studies in China and elsewhere (Tolentino, 2014; Wu Jieqing, 2016). It can be seen that individuals with a high proactive personality are more inclined to proactively focus on the future, control developmental behaviors, maintain career curiosity, and build career confidence, thereby exhibiting stronger adaptability when facing career tasks. Therefore, in the current context of a saturated job market and employment difficulties for college students, it is crucial for universities to enhance students' proactivity through education to improve their career adaptability.

Simultaneously, this study also found that internship engagement plays a significant partial mediating role between proactive personality and career adaptability. This result aligns with the theoretical assumptions of the JD-R model: proactive personality, as an important personal resource, can promote individuals' positive engagement in internship scenarios, thereby enhancing career adaptability.College students with high proactive personalities are more willing to proactively take on responsibilities, actively interact with colleagues, and maintain higher levels of emotional, cognitive, and behavioral engagement during internships. At the same time, internships are a typical form of career exploration. Students with high engagement can gain a more realistic understanding of the work environment, test their own abilities, and accumulate practical experience, thereby strengthening their overall career adaptability. This aligns with the view proposed by Jiang Li and Liu Qizhi (2026).

4.3. Value and Future Prospects of the Research

This study suggests that there is an association between proactive personality and career adaptability in university students. It also suggests that this association is mediated by internship engagement. This finding offers a more specific account of how proactive personality may shape career adaptability during the transition from higher education to work. Future work should use longitudinal designs, recruit larger samples, and examine more directly how proactive personality influences career adaptability.

4.4. Limitation

Several limitations of this study should be acknowledged. First, the sample size (N = 92) was relatively modest, which may have compromised statistical power for detecting smaller effects. Although the bootstrap confidence interval for the indirect effect of internship engagement ([0.034, 0.200]) did not include zero, the lower bound was very close to zero, indicating that the mediating effect was not estimated with high precision. Moreover, due to the relatively small sample size, the statistical power of the independent-samples t-tests examining gender differences in the three core variables was low. Regarding effect sizes (Cohen's d), only internship engagement showed a small effect (d = 0.32), while the effect sizes for proactive personality and career adaptability were both below 0.10, indicating negligible practical significance. Future research should replicate the present findings using larger, more diverse samples to increase statistical power and obtain more stable estimates of the mediation effect.

5. Conclusion

Amid intensifying competition in the labour market and growing uncertainty in career development, career adaptability has become a core employability resource for university students. This study confirms that proactive personality is a key internal resource for promoting career adaptability, while internship engagement is an important practical pathway connecting personality traits with adaptation outcomes. In the future, universities can more precisely and effectively enhance college students' career adaptability by cultivating proactive personality and improving the quality of internship engagement, thereby assisting them in achieving high-quality employment and sustainable career development.

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