



Achievement Motivation and Career Maturity of High School Students: The Mediating Role of Career Self-efficacy

Ziqian Chen and Lu Han(✉)

Beijing University of Technology, No. 5, Zhongguancun South Street, Haidian District, Beijing, China

hanlu311@bit.edu.cn

Abstract. In senior high school, it is also an extremely important educational content to improve one's career development ability and level. This paper explores the relationship between achievement motivation career self-efficacy and career maturity of high school students. This study uses Ye Renmin's achievement motivation scale, Zhou Bin's career self-efficacy scale and Liu Hui's career maturity scale to conduct a questionnaire survey on 593 ordinary high school students randomly selected from Hebei, Shanghai and Harbin. SPSS25 and PROCESSv3.5 are used to analyze the data, and the results show that high school students' achievement motivation positively predicts career maturity, and career self-efficacy positively predicts career maturity. Career self-efficacy plays a part of mediating role between achievement motivation and career self-efficacy.

Keywords: high school students · spss25 · achievement motivation · career self-efficacy · career maturity

1 Introduction

Developing career education in senior high school is not only an urgent requirement brought by the new college entrance examination reform to schools, but also a requirement for individual career development [1]. The new college entrance examination forces high school students to make personal career decisions and career choices in the high school stage. Therefore, we must pay attention to and attach importance to students' Career Education in the high school stage. In addition to according to super' career development theory [2], senior high school students are in the exploration stage of career development. During this period, their most important career tasks are to evaluate themselves, clarify roles and explore careers through school learning, and link personal evaluation with career reality, so as to successfully complete their own subject selection and properly carry out their own career planning. Therefore, improving one's career development ability and career development level is an extremely important educational content in senior high school.

Career maturity is an important indicator to measure students' career development [3]. The factors affecting career maturity include personal factors, environmental factors and social factors. And the individual factor is the decisive factor of the foundation. According to Social cognitive theory (SCCT), self-efficacy is one of the core concepts affecting career development and an important individual factor affecting career maturity [4]. Self-efficacy is the sense of difference of individual ability and the subjective judgment of individual ability level. Nicholls's ability theory [5] holds that achievement motivation originates from different ability concepts, and the perception of difference in ability affects individual achievement motivation. Some studies have shown that the two dimensions of achievement dynamics, pursuing success and avoiding failure, can predict career maturity, which is closely related to career maturity [6].

To sum up, achievement motivation is related to self-efficacy and has an important impact on career maturity. Previous study [7] has confirmed that achievement motivation in college students can have an indirect effect on career maturity through career choice efficacy. High school is the key stage of career maturity education, but there are few studies on the group's formative motivation, self-efficacy and career maturity in this stage. Targeting in senior high school students, this study explores the individual achievement motivation, career self-efficacy and career maturity, the internal relations of born in order to enrich your career development theory, and provides practical path for high school career education.

2 Research Method

2.1 Object

The subjects of this study included ordinary high school students from three districts of Shijiazhuang, Harbin, Shanghai and Xing Tai. The data were collected online and offline. A total of 679 questionnaires were collected and 593 effective questionnaires were collected, with an effective rate of 87.3%.

2.2 Tool

Career Maturity Scale

In this study, the Career Maturity Scale compiled by Liu Hui combined with the development characteristics of career maturity of Chinese middle school students is adopted. The questionnaire has been investigated for three large-scale surveys and verified for many times, and its reliability and validity test results are relatively ideal. The scale includes 30 formal questions and two questions (21 and 30) for identifying invalid questionnaires. The attitude questionnaire included 5 factors, namely: initiative, corresponding to 3, 11, 25, 30; independence, corresponding to 5, 12, 16, 29; self-confidence, corresponding to 6, 13, 19, 26; stability, corresponding to 9, 23, 27; utilitarian, corresponding to 8, 14, 22. The knowledge sub-questionnaire included two factors: career world knowledge, the corresponding questions were 1, 7, 17, 18, 24, 28, 32; The corresponding questions were 2, 4, 10, 15 and 21. The questionnaire was based on a 5-point scale, with responses

ranging from “strongly disagree” to “strongly agree”. In this study, the α coefficient of the scale was 0.849, showing good internal consistency.

Achievement Motivation Scale

Renmin Ye and Kunt A. Hagtvet were used in this study according to Norwegian T. Gjesme and R. Nygard’s achievement motivation measurement table is an achievement motivation scale formed after several revisions and improvements. This scale can be divided into chasing success (1–15 questions) and avoid failure (16–30 questions) two subscales, use four-point scoring method, from “very does not conform to the” to “very accord with”, the higher the score, the stronger the individual motive. In this study, the α coefficient is 0.747 and the internal consistency is good.

Career Self-efficacy Scale

This study used the career self-efficacy scale, which was revised by Zhou Bin and suitable for ordinary high school graduates in China. The reliability and validity of the scale reached high standards, with good consistency and validity. The scale includes 25 test questions, divided into 5 factors, respectively: information collection factors, the corresponding questions are 2, 3, 10, 13, 20, 21; self-evaluation factors, corresponding to 4, 5, 11, 16, 17, 24, 25; the target factors were screened, and the corresponding questions were 9, 14, 15, 19; career planning factors, corresponding to 1, 6, 7, 18; solve the problem factors, corresponding to questions 8, 12, 22, 23. Using a 5-point scale, the responses range from “not at all confident” to “completely confident.” In this study, the α coefficient of the scale was 0.937, showing good internal consistency.

2.3 Measurement Method

The study was conducted by combining online and offline methods. Questionnaire star was used in the online test. After the teacher in charge told the students the purpose of the questionnaire and matters needing attention, the students answered voluntarily. According to the background time, most of the students’ answering time was 10–40 points. Offline test measured using class groups, entrust each class the teacher to the students reported the test purpose, significance and matters needing attention, from the teachers to the class student questionnaire, unified answer, answer time stay in 30 min, after testing, the teacher unified questionnaire and send it to the researchers, conducted by researchers to eliminate invalid questionnaire.

2.4 Statistical Analysis

The questionnaire data were entered into Excel for preliminary sorting, and then SPSS25 and PROCESSv3.5 carry out relevant data analysis.

3 Result

3.1 Correlation Analysis of Career Maturity, Career Self-efficacy and Achievement Motivation of High School Students

Pearson correlation analysis was conducted on the three variables of career maturity, career self-efficacy, achievement motivation and internal factors of high school students,

Table 1. The correlation matrix of career maturity, career self-efficacy and achievement motivation [Owner-draw]

	Maturity	Self-efficacy
Maturity	1	.655****
achievement motivation	.388****	.471****

Note: **At the level of 0.01 (two tailed), the correlation was significant.

Table 2. Regression analysis of achievement motivation and career maturity [Owner-draw]

Predictor	dependent variable	R2	F
achievement motivation		0.150	104.579**
Pursue success	Career maturity	0.103	67.587***
Avoid failure		0.150	52.203***

Note: * means $P < 0.05$, ** means $P < 0.01$, *** indicates $P < 0.001$

and the correlation between the three variables and each factor was discussed. The results are shown in Table 1. It can be seen from the table that career maturity is significantly positively correlated with achievement motivation. Career maturity is positively correlated with career self-efficacy. Achievement motivation is positively correlated with career self-efficacy.

3.2 Regression Analysis of Achievement Motivation and Career Maturity

Take achievement motivation and various factors as predictors and career maturity as dependent variables for regression analysis. The results are shown in Table 2. It can be seen from the table that the F value of achievement motivation on career maturity is very significant, indicating that the established regression model is significant, and the regression coefficient R2 is 0.150, indicating that achievement motivation can explain 15% of the variance of career maturity. Achievement motivation significantly positively predicts career maturity, that is, the stronger the achievement motivation of high school students, the higher their career maturity level; At the same time, the two motivational factors of pursuing success and avoiding failure can both enter the regression equation and have significant significance. The former significantly positively predicts career maturity, while the latter significantly negatively predicts career maturity.

3.3 Regression Analysis of Achievement Motivation and Career Self-efficacy

Taking achievement motivation as the predictor and career self-efficacy as the dependent variable, regression analysis was carried out. The results are shown in Table 3. It can be seen from the table that the F value of achievement motivation on career self-efficacy is significant, indicating that the established regression equation is significant, and the regression coefficient R2 is 0.222, indicating that achievement motivation of high school

Table 3. Regression analysis of achievement motivation and career self-efficacy [Owner-draw]

Predictor	dependent variable	R2	F
achievement motivation	Self-efficacy	0.222	168.933***

Note: * means $P < 0.05$, ** means $P < 0.01$ *** means $P < 0.001$

Table 4. Regression analysis of career self-efficacy and career maturity [Owner-draw]

Predictor	dependent variable	R2	F
Career self-efficacy		0.429	443.387***
Collect information	Career maturity	0.399	392.984***
Self-evaluation		0.446	237.038***

Note: * means $P < 0.05$, ** means $P < 0.01$, *** indicates $P < 0.001$

students can explain 22.2% of the variance of career self-efficacy. Achievement motivation significantly positively predicted career self-efficacy, indicating that the higher the level of achievement motivation, the stronger the career self-efficacy.

3.4 Regression Analysis of Career Self-efficacy and Career Maturity

Career self-efficacy and various factors are taken as predictors, and career maturity is taken as dependent variable for regression analysis. The results are shown in Table 4. It can be seen from the table that the F value of career self-efficacy on career maturity is significant, and the established regression equation is significant. The regression coefficient R2 is 0.429, indicating that career self-efficacy of high school students can explain 42.9% of the variance of career maturity. Career self-efficacy significantly positively predicted career maturity, indicating that the higher the level of career self, the higher the level of career maturity; At the same time, the collected information and self-evaluation factors in the career maturity entered the regression equation, and both have significant significance. The collected information and self-evaluation can significantly predict the career maturity.

3.5 Mediating Effect of Career Self-efficacy Between Achievement Motivation and Career Maturity of High School Students

This study adopted the non-parametric Bootstrap method, selected the mediation model of Model4, set the sample size as 5000, checked the deviation correction, and selected 95% confidence interval to conduct the mediation effect test. The results are shown in Table 5. At the 95% confidence interval, the upper and lower limits of the mediating effect of career self-efficacy $A * B$ (LLCI = 0.011, ULCI = 0.016) did not include 0, indicating a significant mediating effect, and the effect value was 0.0099. In addition,

Table 5. Standardized results of total effect and intermediate effect of each path [Owner-draw]

route	Effect	t	Bootstrap		Proportion of intermediation
			lower limit	upper limit	
Achievement motivation → career self-efficacy → career maturity	Total effect (c)	9.40***	0.011	0.016	
	Indirect effect (ab)	16.78***	0.008	0.012	74.4%
	Direct effect (C')	2.57*	0.000	0.006	25.6%

Note: * means $P < 0.05$, ** means $P < 0.01$, *** means $P < 0.001$

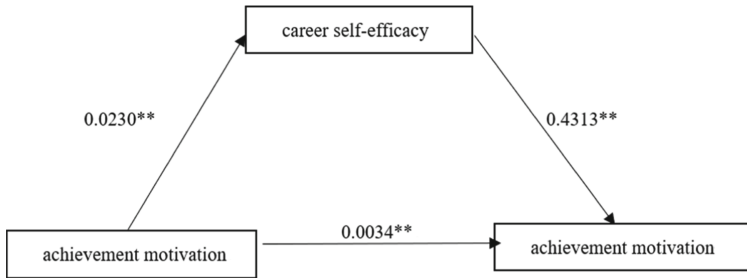


Fig. 1. Mediating model of career self-efficacy between achievement motivation and career maturity [Owner-draw]

after the addition of self-efficacy, the upper and lower limits of the direct effect C' (LLCI = 0.0008, ULCI = 0.006) also do not include 0, which has a significant impact. Therefore, self-efficacy plays a partial mediating role between achievement motivation and career maturity, accounting for 74.4% (Fig. 1).

4 Discussion

4.1 The Relationship Between Achievement Motivation and Career Maturity

The results of this study show that high school students' achievement motivation and their motivation factors to pursue success are positively related to career maturity, and the motivation factors to avoid failure are negatively related to career maturity. High school students' achievement motivation significantly predicts career maturity. This is consistent with Guo Jing's research results [8], namely, the stronger the desire for success and the weaker the motivation to avoid failure, the higher the synthetic achievement motivation and career maturity level of high school students. According to McClellan's theory of Social Achievement Motivation [9] achievement motivation is the internal motivation for individuals to independently pursue a higher level for the realization of

tasks, and it is also the internal motivation that directly affects individuals. When individuals have higher expectations for future career or future life, their internal motivation for pursuing success will be enhanced. In this process, they will constantly adjust their goals and themselves. And try to solve the problem, thereby promoting the individual to a higher level of career maturity.

4.2 The Relationship Between Achievement Motivation and Career Self-efficacy

The results of this study show that the achievement motivation and pursuit of success factors of high school students are positively correlated with career self-efficacy, the failure avoidance factor is negatively correlated with career maturity, and the achievement motivation positively predicts career self-efficacy, that is, the stronger the achievement motivation of high school students, the higher their confidence in completing career tasks. This is consistent with the Ability Theory [5]. The stronger the individual's sense of difference in his own ability, the stronger his motivation to pursue success. Career self-efficacy as a derivative of self-efficacy, for himself in the career path of individuals a perception judgment, self-confidence is a kind of individual role of internal factors, affected by many aspects of the external environment and the individual internal, deep motivation and achievement motivation as an individual factor [10], can adjust action on self-efficacy.

4.3 The Relationship Between Career Self-efficacy and Career Maturity

This study results show that high school students' career self-efficacy dimensions and career maturity is related, career self-efficacy can positively predict career maturity. The result was consistent with the research conclusions of other scholars [11, 12], and also verified the research hypothesis of career decision-making self-efficacy: The stronger the self-efficacy of individual career decision-making, the higher the career maturity, and vice versa. Meanwhile, among the dimensions of career self-efficacy, only information collection and self-evaluation entered the regression equation, while career planning, goal screening and problem solving had no significant effect on career maturity. It also suggests that we can provide a variety of information channels to strengthen students' agility and ability to obtain information; Guide students to start with positive self-evaluation and improve their career maturity.

4.4 The Mediating Role of Career Self-efficacy Between Achievement Motivation and Career Maturity

This study results show that high school students' career self-efficacy in achievement motivation and partial intermediary effect between career maturity, high school students achievement motivation can directly affect the career maturity, can also affect the career self-efficacy through indirect influence career maturity, it has to do with Yaoyang Wei [13] will be college students as the research object, the career self-efficacy of intermediary role is relatively similar. Achievement motivation represents an individual's internal driving force for progress. When an individual's eagerness to pursue success is

higher than his psychology to avoid failure, his synthetic achievement motivation will be enhanced and his goal of career tasks will be higher. In this process, an individual needs to evaluate various abilities required to complete tasks, obtain self-efficacy, and through self-evaluation, conduct self-adjustment to improve the readiness of various abilities to complete tasks (obtain higher career maturity).

5 Conclusion

Attribution style is an important factor that affects students' achievement motivation and career self-efficacy [14]. Teachers should guide students to carry out positive attribution training. Such as teachers can help students attribute the causes of failure to internal controllable factors, while experiencing setbacks, so as to help students overcome the sense of helplessness and form a positive evaluation of themselves. However, in the process of students experiencing success, teachers can give them affirmation and praise for their efforts or attitude, which can positively motivate them, thereby helping them build self-confidence and acquire the desire for higher success. Students themselves should have a basic and clear cognition of their own habits, character, ability and other aspects through self-reflection. When encountering setbacks, we should have the courage to reflect on our shortcomings, so as to find the starting point for improvement.

The factors of self-evaluation and information collection of high school students are significantly correlated with career maturity and can positively predict career maturity. Teachers can help students to carry out positive and objective self-evaluation, avoid self-improvement bias, and carry out self-evaluation in accordance with the steps of setting goals, establishing standards, reflecting on results, feedback and self-correction [15]. In this process, teachers should play a guiding role, and cooperate with the surrounding students to carry out a full range of auxiliary evaluation, improve students' self-cognition. At the same time, schools and parents can provide students with a variety of information collection channels through network platforms, books, electronic libraries, etc. Students should also take the initiative to improve their information sensitivity and information capture ability, combine external information with their own knowledge and ability, and improve their career maturity level.

To sum up, achievement motivation and career self-efficacy of high school students are closely related to career maturity, and achievement motivation and career self-efficacy can directly or indirectly affect career maturity of high school students. Therefore, in school career education, we can start from stimulating students' achievement motivation, improving career self-efficacy, correct self-evaluation and enhancing information collection ability, so as to achieve the purpose of improving students' career maturity level and promote the development of career education.

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