

# Empirical Analysis of Influences on Dissertation Quality of Postgraduates from Perspective of Psychodynamics

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**Keywords:** Postgraduates, Achievement Goal Orientation, Achievement Motivation, Self-efficacy, Quality of Dissertation, Psychodynamic.

**Abstract:** This paper employs multivariate statistical analysis methods to empirically analyze the relationship of dissertation quality with the factors of student's achievement goal orientation, achievement motivation, and self-efficacy; and to examine the influences of the factors on the dissertation quality. Through the analysis of the investigation, the research draws following conclusions: First, there are differences of graduates' achievement goal orientation, achievement motivation, and self-efficacy due to their gender and specialty. Second, the dissertation quality has close relations with student's achievement goal orientation, achievement motivation, and self-efficacy. Third, social responsibility goal that belongs to the achievement goal orientation directly has a positive influence on the dissertation quality; and avoiding failure goal exerts a negative influence on the dissertation quality.

## 1 INTRODUCTION

Dissertation is an important symbol to measure the quality of postgraduate education. The dissertation work is a comprehensive training of professional and research skills for graduate students. It is an important part of cultivating for students' creative ability, knowledge application and problem solving skills. It has long been considered that students' intelligence level has an important influence on their academic achievement. But there are still some questions such as why the students with the same IQ and ability level have significant differences in academic achievement. Psychologists found that not only the intelligence factors affect the level of academic achievement, but also include the same important influence of non-intellectual factors. As a kind of training activity, dissertation work is significantly different from the general sense of learning activities; it is more creative and exploratory. As the quality of postgraduate education is much more concerned today, we need to know more about the impact of the on-intellectual factors of achievement goal orientation, achievement motivation, and self-efficacy produce on the dissertation work. We also need to understand that whether the factors have an important role in the prediction of the quality of dissertation. The

clearance of these questions can help us to understand the psychological dynamic characteristics of graduate students in their dissertation work process, so as to guide students to establish the correct achievement goal orientation, improve the achievement motivation level, and help the students to establish the correct ability view.

In the research field of educational psychology, psychologists (Nicholls, 1984; Dweck and Leggett, 1988; Butler, 1993) are mainly divided achievement goal in the field of learning into two types: learning goal orientation and achievement goal orientation. They think that learning goal orientation and achievement goal orientation have a decisive effect on individual achievement. Learning goal orientation is also named the grasp goal orientation, or task goal orientation. Students with the learning goal orientation will regard learning itself as a goal, and pay attention to the understanding and mastery of learning task. And they concern the development of their own ability. Performance goal orientation is also called ability goal orientation. The students with the performance goal orientation think learning as a means, and show their ability through achievements, but they try to avoid failure or situations showing their lower ability. Achievement motivation is an important part of individual psychological motivation, and it is refers to an internal impetus for

an individual to pursue achievements. At present, the more common view on the achievement motivation is that it is an inner driving force for individual to seriously perform the work that one think important or valuable. It is a stable personality characteristic of a person's sense of professionalism, responsibility sense, enterprising spirit and self-realization. It is the psychological mechanism of encouraging self-achievement and self-motivated. Psychology has always believed that everyone has the achievement motivation, but the intensity has obvious individually differences. Self-efficacy defined by Bandura is used to assess people's ability to perform specific tasks. It refers to the belief, judgment, or self-feeling of an individual to complete the action before execution of behavior (Bandura, 1997).

The domestic and foreign research on the quality of dissertation mainly focus on the two aspects of quality management and quality evaluation, but the study of students' learning motivation on the quality of dissertation is very little. Psychological dynamics is the power of driving behavior, which is a kind of theory system of emphasizing the important role of psychological activity in the behaviour (Yanfei Wang, 2011). Psychodynamic thinks that person's psychology and behavior is interaction results of positive and active mental energy. It emphasizes that people's spiritual life is constantly developing and changing, and its basic kinetic energy comes from people's various needs and inner drive. This paper tries to study the relationship of dissertation quality and learning motivation characteristics, and the study is focus on the relationship between dissertation quality and achievement goal orientation, achievement motivation, and self-efficacy.

## 2 DATA AND VARIABLES DESCRIPTION

### 2.1 Experiment Object

The data of this study comes from a questionnaire survey of 618 postgraduates in a university in Wuhan area. In order to obtain the effective sample, 800 questionnaires were distributed. 618 valid questionnaires were returned from 392 boys accounted for 63.4% and 226 female students accounted for 36.6% of the total number. In the involved students, 483 science and engineering students accounted for 78.2%, and 135 arts students accounted for 21.8%.

## 2.2 Tools

### 2.2.1 Achievement Goal Orientation Scale

We use the achievement goal orientation scale made by Yanfei Wang (Yanfei Wang, 2011). Through the data analysis of the questionnaire survey, a three factors and five dimensions structure models with good reliability and validity are obtained. The three factors include: learning goal orientation, achievement goal orientation and social goal orientation; and the dimensions include dimensions of escape results and performance target which compose the achievement goal orientation, and social support and social responsibility which compose the social goal orientation.

### 2.2.2 Achievement Motivation Scale

We use the achievement motivation scale original made by Nygard T, and revised by Renmin Ye (Renmin Ye, 1992). The scale consists of two different components: one is to measure the motivation to succeed, and the other is the motivation to avoid failure.

### 2.2.3 Self-efficacy Scale

We adopt the self-efficacy scale proposed by Lei Wang from the psychology department of Peking University (Lei Wang, 2005). The scale includes two parts, general self-efficacy and social efficiency.

## 2.3 Data Collection and Processing

### 2.3.1 Questionnaire Data Collection

The questionnaire test is performed according to subject and specialty groups. Every respondent is required to give real answer. At the same time, the graduate management department offers postgraduate dissertation grades as basic data for analysing.

### 2.3.2 Definition of Evaluation Criteria

The quality of dissertation is the main research object of this paper, but it can be difficult to exactly define the quality of dissertation. Therefore, it is necessary to give a proper definition to the quality of dissertation, which can reflect the objective writing level in a certain way. This paper mainly based on the University Dissertation Evaluation Index System as dissertation quality measurement.

### 2.3.3 Data Processing

The dissertation grades obtained from departments were standardized to maintain consistency. Then each questionnaire data is processed and the original score of questionnaire is calculated, using the software SPSS 19.0 for Windows to remove the abnormal data, and then carry out statistical analysis.

## 3 EMPIRICAL ANALYSIS

### 3.1 Test Results and Differences of Achievement Goal Orientation, Achievement Motivation and Self-efficacy of Students

We carry out the 2 (gender) × 2 (subject) × 2 (work experience) multivariate variance analysis based on the achievement goal orientation as the dependent variable. The result shows: the main effect of gender on the learning goal orientation ( $F(1,562) = 7.262$ ,  $P = 0.007 < 0.05$ ) was very significant, the male students' learning goal orientation score are higher than that of female graduate students (mean  $M \pm$  standard deviation SD:  $13.43 \pm 1.743$  for boys and

$12.94 \pm 1.640$  for girls).

The achievement motivation of each dimension is used as the dependent variable, the results of multivariate analysis of variance of 2 (gender) × 2 (discipline) × 2 (work experience) show: the main effect of the gender tendency of success ( $F(1,562) = 5.003$ ,  $P = 0.026 < 0.05$ ) is very significant. Male graduate students are more likely to be successful (mean  $M \pm$  standard deviation SD:  $45.16 \pm 4.889$  for boys and  $43.97 \pm 5.151$  for girls). The main effect of subject in avoiding failure dimension ( $F(1,562) = 8.963$ ,  $P = 0.003 < 0.05$ ) was significant, graduates in liberal arts and management are tend to avoid the failure much more than graduate of science and engineering (Mean  $M \pm$  standard deviation SD: liberal arts and management graduate students  $37.29 \pm 6.234$  science and engineering graduate students  $35.05 \pm 7.084$ ).

Self-efficacy test results and analysis of variance showed that scores of self-efficacy ( $F(1,562) = 6.446$ ,  $P = 0.011 < 0.05$ ) were significantly different with gender, male students in self-efficacy score significantly higher than female students (mean  $M \pm$  standard deviation SD:  $56.61 \pm 6.091$  for boys and  $54.93 \pm 5.784$  for girls).

Table 1: Results of interaction analysis (gender).

Variable name	Gender	Frequency (N)	Mean	Standard deviation (Std.)	t	Degree of freedom (df)	Sig.
Achievement motivation	Male	354	9.99	9.247	3.079	562	0.002*
	Female	210	7.53	9.059			
Self-efficacy	Male	354	56.61	6.091	3.225	562	0.001**
	Female	210	54.93	5.784			

Note: \*significant at 0.05 level; \*\* significant at 0.01 level.

Table 2: Interactive analysis results (different subjects).

Variable name	Subject	Frequency (N)	Mean	Standard deviation (Std.)	t	Degree of freedom (df)	Sig.
Achievement goal orientation	Science and Technology	417	41.13	5.334	-2.234	562	0.026*
	Cultural industry management	147	42.29	5.481			
Achievement motivation	Science and Technology	417	9.80	9.421	3.324	283.591	0.001**
	Cultural industry management	147	7.03	8.429			
Self-efficacy	Science and Technology	417	56.30	5.973	2.077	562	0.038*
	Cultural industry management	147	55.10	6.117			
	Cultural industry management	147	0.00000	0.98273			

Note: \*significant at 0.05 level; \*\* significant at 0.01 level.

Table 3: Correlation between achievement goal orientation, achievement motivation, self-efficacy and dissertation quality.

	Achievement goal orientation	Achievement motivation	Self-efficacy
Achievement motivation	0.527** (p=0.000)	-	-
Self-efficacy	0.633** (p=0.000)	0.655** (p=0.000)	-
Dissertation quality	0.119** (p=0.005)	0.104* (p=0.014)	0.125** (p=0.003)

Note: \*\*significant at 0.05 level; \* \* significant at 0.01 level.

### 3.2 Analysis of the Interaction of Different Gender, Discipline, Work Experience Student Achievement Goal Orientation, Achievement Motivation, Self-efficacy, Quality of Dissertation

The statistical analysis results indicate that the achievement motivation and self-efficacy sense scores are significantly different according to different gender; and the achievement goal orientation and dissertation quality grades are not significant difference. From the results of Table 1, we can see that male graduate students scored significantly higher than female graduate students, male graduate students in self-efficacy score is significantly higher than female students.

The results of statistical analysis of different disciplines show that there are significant differences in achievement goal orientation, achievement motivation and self-efficacy score between the two disciplines of engineering discipline and liberal arts and management. The quality of dissertation (grades) has no significant difference. The table 2 shows the differences between tow disciplines.

A statistical analysis of the influence of industrial working experience shows that the work experience has no significant effect on the scores of

achievement goal orientation, achievement motivation, self-efficacy and dissertation quality (grades).

### 3.3 Correlation Analysis of Achievement Goal Orientation, Achievement Motivation, Self-efficacy and Quality of Dissertation

The correlation analysis in Table 3 shows that achievement goal orientation, achievement motivation and self-efficacy are significantly positively correlated with the quality of dissertation ( $p < 0.05$ ,  $p < 0.01$ ,  $p < 0.01$ ); achievement motivation, self-efficacy and are significantly positively correlated with achievement goal orientation ( $p < 0.01$ ); achievement motivation and self-efficacy were significantly positively correlated ( $p < 0.01$ ).

Further correlation analysis between the dimension in Table 4 shows learning goal orientation, performance target and social support are positively correlated with the quality of dissertation; social responsibility goal and self-efficacy have significantly positive correlation with dissertation quality ( $p < 0.01$ ), and the performance avoidance is significantly negative correlated with dissertation quality ( $p < 0.05$ ); and the avoid the failure of has a significant negative correlation with the quality of dissertation ( $p < 0.01$ ).

### 3.4 Graduate Student Achievement Goal Orientation, Achievement Motivation and Self-efficacy Regression of Dissertation Quality Multiple Regression Analysis

The achievement goal orientation, achievement motivation and self-efficacy are used as variables to predict the quality of dissertation. From the Table 5, achievement goal orientation and self-efficacy are

Table 4: Correlation analysis between achievement goal orientation, achievement motivation, self-efficacy and quality of dissertation.

	Learning goal orientation	Performance avoidance goal	Performance target	Social support objective	Social responsibility target	Self-efficacy	Paper grades
Tend to succeed	0.482** (p=0.000)	-0.021 (p=0.626)	0.239** (p=0.000)	0.297** (p=0.000)	0.350** (p=0.000)	0.390** (p=0.000)	0.025 (p=0.561)
Avoid failure	-0.335** (p=0.000)	0.425** (p=0.000)	-0.014 (p=0.738)	-0.100* (p=0.017)	-0.283** (p=0.000)	-0.591** (p=0.000)	-0.121** (p=0.004)
Self-efficacy	0.551** (p=0.000)	-0.328** (p=0.000)	0.244** (p=0.000)	0.333** (p=0.000)	0.506** (p=0.000)	-	0.125** (p=0.003)
Dissertation quality	0.057 (p=0.177)	-0.090* (p=0.033)	0.023 (p=0.590)	0.064 (p=0.131)	0.130** (p=0.002)	-	-

Note: \*significant at 0.05 level; \* \* significant at 0.01 level.

introduced into regression equation as significant variables.

Table 5: Multiple regression analysis of achievement goal orientation, achievement motivation and self- efficacy of dissertation quality.

	Standard coefficient (Beta)	T	Sig.
Achievement motivation	-	-	0.376
Self-efficacy	0.102	2.486	0.018*
Achievement goal orientation	0.396	2.202	0.033*

Note: Dependent variable is quality of dissertation

Table 6: Multiple regression analysis of the degree of achievement goal orientation, achievement motivation and self-efficacy.

	Standard coefficient (Beta)	T	Sig.
Self-efficacy.	0.122	2.235	0.026*
Social responsibility target	0.104	2.402	0.017*
Avoid failure	-0.091	-2.098	0.036*

Note: Dependent variable is quality of dissertation

When the achievement goal orientation, achievement motivation and self-efficacy are used as variables to predict the quality of dissertation, there are three significant variables which enter the regression equation, namely: social responsibility goal, self-efficacy and avoiding failure, shown in the Table 6.

The standard regression equation is:

$$\text{Dissertation quality} = (0.104 \times \text{Social responsibility target}) + (0.122 \times \text{Self-efficacy} - 0.091 \times \text{Avoid failure})$$

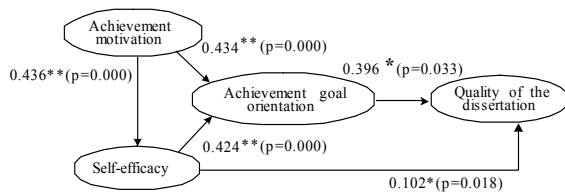


Figure 1: Correlative path model of achievement goal orientation, achievement motivation and self-efficacy on the quality of dissertation.

### 3.5 Correlative Path Analysis of Influencing Dissertation Quality

According to the results of the multiple regression analysis, this paper discusses the path analysis

model of achievement goal orientation, achievement motivation and self-efficacy.

The correlative path model shown in Figure 1 informs that the achievement goal orientation directly affect dissertation quality. Self-efficacy can directly affect the quality of dissertation, also can indirectly affect the quality of degree thesis through achievement goal orientation; and Achievement motivation indirectly influences the quality of dissertation by achievement goal orientation and self-efficacy.

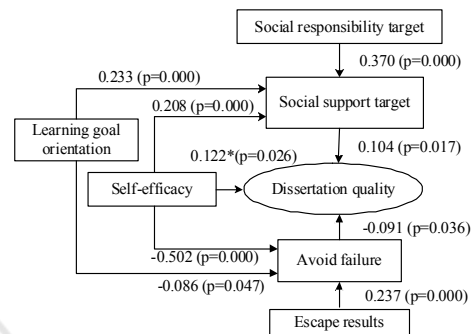


Figure 2: Correlative path model of the quality of dissertation is influenced by the achievement goal orientation, achievement motivation and self-efficacy.

The path model in Figure 2 indicates that the achievement goal orientation of social responsibility goal directly to the dissertation quality have a positive impact, and the avoid failure has a negative effect on dissertation quality, in which the study goal orientation, social support goal have a positive impact to dissertation quality through the social responsibility target indirectly. Through the avoiding failure, the escape results have a negative indirect impact on dissertation quality. Self-efficacy can directly affect the quality of dissertation, and can also indirectly affect the quality of dissertation through the goal of social responsibility.

## 4 RESULTS AND DISCUSSION

### 4.1 The General Characteristics of Achievement Goal Orientation, Achievement Motivation, Self-efficacy of Graduate Students

#### 4.1.1 Gender Differences

The research shows that there are gender differences in achievement goal orientation, achievement motivation and self-efficacy. The main effect of

gender on learning goal orientation is very significant. The main effect of male graduate students is higher than that of female graduate students. The main effect of gender on the trend of success is remarkable. The male graduates tend to be more successful than the female graduates. There are also significant differences in gender differences in self-efficacy scores; male students' scores on self-efficacy are significantly higher than that of female students.

Because the society has different expectation on male and female graduates, this caused both boys and girls have different self-requirements. For a long time, boys have been given more social expectations, they are asked to take more social responsibilities, and in the process of growing up they have more successful influence than girls. So they naturally wish to be more successful than girls. The learning goal orientation of male graduate students is significantly higher than that of female students, which shows that boys are more confident than girls in their own ability. Male graduates concern about the process of learning, focus on their ability to improve and grasp the understanding of the task, and they are less influenced by other factors, such as the evaluation of others. We think this is mainly related to the following factors: firstly, with the traditional role positioning, and secondly the deferent concern points of male and female students. Male students tend to pay more attention to their career development, and they more strongly need achievement. Male students directly point the achievement motivation to study task and study target. But female students are more concerned with their own image in the eyes of others, so their achievement motivation is mainly directed to the field of interpersonal relationships.

#### 4.1.2 Discipline Difference

Research shows that achievement goal orientation, achievement motivation, self-efficacy has disciplinary differences among the students from liberal arts and management and the students from science and engineering. It is reflected as follows: liberal arts and management graduates have significant higher score in the achievement goal orientation than science and engineering graduates; The students in science and engineering have significant higher achievement motivation scores than those of liberal arts and management, the students in science and engineering have significantly higher scores on self-efficacy scores than those in liberal arts and management. When

using the various dimensions of achievement goal orientation as dependent variables, subjects were significantly effect on the performance target. The performance target of liberal arts and management graduates are higher than that of science and engineering. When the achievement motivation is considered as a variable, results show that the discipline significantly affects the avoidance of failure. Liberal arts and management graduates tend to avoid failure than science and engineering graduate.

In today's demand of talents, students of science and engineering get more social recognition, and have more chances to realize self-value. This is likely to enhance their motivation to succeed. Liberal arts and management graduates now have no advantages over the science and engineering graduate in the market competition. However, liberal arts and management graduates have higher score than students of science and engineering in the performance confirmation and the avoiding failure.

Both the performance confirmation and avoid failure of these two orientations are concerned about the results of their own performance, which shows that the liberal arts and management graduates are concerned to display their own ability and get a positive evaluation from others. In addition, this discipline differences may also be related to the nature of the discipline, thinking and learning methods. The students of science and engineering require logical thinking ability to creatively solve problems, and this can naturally stimulate students' achievement motivation. Liberal arts and management students pay more attention to introspection due to the influence of subject knowledge, and they likely to depend more on the mechanical memory and image thinking.

#### 4.2 Achievement Goal Orientation, Achievement Motivation and Self-efficacy of the Influence on the Quality of Dissertation

In our study, we find that the role of social goal orientation in achievement goal orientation is important, because the individual is in a complex social system, and it is influenced by social factors at any moment. This study found that the social responsibility target in social goal orientation is positively correlated with the quality of dissertation, which also reflects the special characteristics of the graduate group. Dissertation work is an important activity for graduates and it needs a strong creative and explorative efforts. The dissertation work is

more and more closely to contact society and is combined with important theoretical and practical problems in urgent need of social development, which also inspire students with social responsibility.

We found that the self efficacy is significantly positively correlated with the quality of dissertation. Self efficacy is the internal reason of the individual behavior and result, and there must be relationship with dissertation quality. Individual actions are dominated by the predictive results of future behavior. The goal setting is affected by self-efficacy. The students with lower level of self efficacy tend to have an error estimate in their ability, and lack of enthusiasm to deal with problems in their dissertation work. And on the contrary, the students with higher level of self-efficacy will have strong interests and desire in learning knowledge, and also have confidence in their study ability. They are more active and more confident to overcome difficulties in their dissertation work.

## 5 EDUCATIONAL ENLIGHTENMENT AND SUGGESTIONS

Postgraduates' choices of the achievement goal orientation are influenced by the factors such as capability view, learning tasks, learning activities design, evaluation methods, sense of responsibility and previous experience. And supervisory intervention could be introduces to enhance the positive factors in postgraduate training process.

- (1) Graduate students need encouragement to select correct learning goal orientation and social orientation, and to explore their potential and social responsibility as purpose in the choice of task, rather than just in order to get a good appraisal of personal ability. This orientation is conducive to the growth of graduate students better.
- (2) Students need guidance to attach importance to learning tasks, and carry out innovative study around the establishment of learning tasks. When they recognize their own ability, they can give full play to their potential. Especially those learning task with clear requirements, variability, and challenging can stimulate more lasting motivation for learning, and constantly improve their study ability.
- (3) We can help graduate students to improve

achievement motivation level and to set up correct capability view, improve self-confidence and self-efficacy. This will help in the establishment of appropriate achievement goal and inspire deep motivation. We know that personal capacity is developed, variable, and can be cultivated. We should help students to set up scientific view of ability, form correct understanding of ability. Creating conditions to enrich their own practice and experience can make them to recognize that personal ability can be changed through their own efforts, and this will constantly improve graduates' self-confidence and self efficacy sense.

- (4) Dissertation work is more dependent on the sense of responsibility and obligation. Therefore, the sense of responsibility, that is, their self-discipline, and social responsibility, will help them to carry on independent thinking and the use of effective learning strategies, which in turn helps to obtain positive self perception, experience and evaluation ability. And there is conducive to the self-efficacy enhancement. In the course of dissertation work, the students' self discipline consciousness and behavior are closely related to the attitude of the teacher to the students' self discipline and the degree of their participation in decision-making. The learning environment and learning conditions created by teachers can affect students' responsibility, and then influence the formation of their mastery goals.
- (5) Diversification of academic activities can inspire graduate student's innovative thinking. Those academic activities include students' and teacher's academic forum, participating in domestic and international academic conferences, academic reports and lectures, academic salon, establishment of academic organizations, and publishing academic journal and so on. Academic activities help graduates to enrich the professional knowledge. The knowledge by course study is not enough, so students should expand the scope of knowledge, broaden their horizons, inspire thinking, and stimulate creative ideas, through a variety of academic exchange activities. Therefore, the academic activities in some way play the role of improvement of dissertation quality.
- (6) Graduate students should actively obtain and use a variety of social support. The so-called social support comes from school, family, friends, students, supervisors and other tangible and

intangible assistances. They have confidence when facing difficulties and problems if they can immediately obtained resources and opportunities from outside, such as emotional support, information support and specific help and so on. All these help can certainly support dissertation work and improve dissertation quality.

On all accounts, graduate dissertation work process is a psychological process with rich social significance, the effects of student's learning motivation and learning behavior on dissertation quality can not be ignored.

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