

Research on the Relationship between Exam-oriented Education, Anxiety, and Thinking Set

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Abstract: Based on the related topics of Teaching to the test, anxiety and thought solidification, this study constructed 11 dimensions, and tested 510 students who just graduated from seven major regions of China and entered social enterprises and their summer jobs through a questionnaire survey. Using sss as a statistical analysis, the results showed that there was a significant positive relationship between Teaching to the test and anxiety, between Teaching to the test and thought solidification, and between anxiety and thought solidification.

1. Question raising

The biggest reason for choosing the research on the relationship between Teaching to the test and anxiety and thinking solidification as the theme is that I was educated and guided by my tutor in Dhurakij Pundit University. "Mental health issues", as one of the seven themes of the school study, show the the greatest practical significance practical significance of education based on human text. In recent years, the national level has continuously promoted and deepened education and teaching reform to comprehensively promote high-quality development of education. On the other hand, education means the future of society and families. In order to facilitate the study and life of teenagers, as well as the healthy growth of body and mind, it is necessary to explore the influence of Teaching to the test on students' anxiety and thinking solidification in this study, and look forward to providing some help for educational institutions, psychological intervention institutions, and social and family education. At the same time, the evaluation and evaluation of people's thinking in social enterprises also has reference and reference significance.

2. Literature exploration

2.1. Research on Teaching to the test and anxiety

Gu Mingyuan (2020) pointed out that education should aim at the comprehensive development of human personality and the promotion of mutual understanding, tolerance, friendship, and peace^[1]. Chao Hongzheng (2022) pointed out in the article "Reflections on Teaching to the test" that there are some unhealthy tendencies in China's basic education, such as the supremacy of exam scores, one-sided pursuit of the entrance rate, and damage to students' physical and mental health^[2]. The purpose of education should be to help solve the problem of students living a better life (Beckham,

2020)^[3]. Daniel believes that promoting students' spiritual development is a comprehensive goal of school education (2020)^[4]. Zhao Shuyu, a domestic researcher, believes that the relationship between students, parents and teachers should be close and coexisting in life, but in the current Teaching to the test environment, due to some common reasons, it has formed an anxiety circle of mutual suspicion and even mutual harm. This anxiety virus seems to be further spreading (2017)^[5]. Hu Bailiang (2005) pointed out that young students are the biggest victims of traditional Teaching to the test for a long time^[6]. Tan Yafei (2015) also pointed out that due to various factors such as living environment, academic pressure, and work pressure, mental illnesses such as anxiety and depression are gradually increasing, which has a great impact on people's lives^[7]. Seo Eun-soo, from the perspective of Teaching to the test, believes that Test anxiety is a common psychological problem in the current educational environment, which is not conducive to students' physical and mental health and academic progress (2021)^[8]. Sun Zhengfang and Li Xiaohua believed that Test anxiety was positively correlated with sleep quality (2013)^[9]. Chen Jiangyuan and Wu Ran (2021) also believe that sleep quality is related to depression and anxiety. Under the mechanism of Teaching to the test, parents have increased their academic intervention and control of their children in pursuit of achievements due to the family pressure brought by students' entering schools and employment^[10]. Wang Jingqun and Lei Liangxin (2001) found in their study on the relationship between parental education attribution and student anxiety that there is a significant positive correlation between parental responsibility attribution and child anxiety^[11]. Esranur and Ozlem (2021) emphasize that mental health is associated with variables such as stress symptoms and mental anxiety^[12].

2.2 Research on Teaching to the test and thinking solidification

Education should be organized based on the principles of promoting life in the world built by humans and the natural world, and connect and dialogue with the world for young people (Howard, 2018)^[13]. Xia Jinyuan and Hu Xiaoping (2005) believed that the traditional Teaching to the test hindered students' personality development, stifled students' creativity, and was difficult to take on the important task of rejuvenating the country^[14]. From the perspective of educational achievements, Teaching to the test has solidified students' thinking. The teaching mode dominated by Teaching to the test has seriously hindered the development of students' creative thinking ability (Lin Pingxian, 1998)^[15]. Jonathan believes that pursuing academic pursuits requires maintaining a state of open mindedness in order to promote the healthy exchange of students' ideas and the progress of knowledge (2019)^[16]. Minsky (2019) also believes that learners are fully active subjects and creators of their own thinking. If a student's education is narrow and rigid, it will be difficult for them to discover their talents and interests in the future. Only true talents and interests can enrich his current life and light up his future (Robinson&Aronica, 2019)^[18]. Song Yan and Ma Rong et al. (2017) pointed out in their research that Teaching to the test thinking and its environmental variables are directly related to college students' innovation decision-making preferences, and Teaching to the test thinking has an inhibitory effect on college students' innovation decision-making^[19]. Epstein (2020) emphasizes that in an increasingly specialized world, generalists are more likely to win. Therefore, China's Teaching to the test model, which has long been based on the pursuit of scores in several disciplines, has solidified one's thinking and is not conducive to the growth of one's future career^[20]. Ge Chenguang (2002) pointed out in his earlier research that the outstanding feature of the Teaching to the test model is that "exam oriented" has become the center of teaching and learning, and scores have become the only yardstick to measure teaching and learning. Such education has seriously inhibited the development of students' innovative thinking and formed students' thinking stereotype^[21]. Li Fangfang also pointed out that

under the influence of Teaching to the test, teachers, influenced by traditional educational ideas, generally focus on teaching materials as the main form of education when explaining relevant knowledge to students, which leads to the solidification of students' thinking, limits students' imagination space, and is not conducive to the improvement and development of students' quality (2022)^[22]. Wu Weixuan (2023) further believes in the research that the solidification and paranoia of thinking under the Teaching to the test mode will result in the failure of educational innovation action to "break the situation", and further cause the solidification of students' thinking at the same time^[23].

2.3 Research on the Relationship between Anxiety and Thinking Solidification

Kumral (2022) pointed out that schools should focus on student learning and ensure a creative learning environment and atmosphere^[24]. Liu Na (2022) believes that high expectations from parents and teachers often lead to psychological anxiety among middle school students in the process of learning, taking exams, and interacting with others. If not guided and released in a timely manner, it will lead to deviation in students' thinking and the occurrence of bad behavior^[25]. Bandura captured the power of positive thinking in his research, and his theory of self-efficacy suggests that optimistic beliefs about one's own abilities and efficiency can lead to healthier lives and higher academic achievement returns. These individuals are more resilient and less anxious (1977)^[26]. Anxiety and fixed thinking or fixed thinking patterns are poor physical and mental health conditions, often exhibiting a lack of innovation and critical thinking consciousness. Zhu Fenfen et al. (2012) believe that mental health has a good predictive effect on students' critical thinking, and a good psychological state is an effective way to improve critical thinking^[27]. When middle school students are in an excessive state of anxiety, they will form thinking stagnation and develop solidified thoughts and behaviors (Zhang Dongmei, 2009)^[28]. Jin Xiuyan (2006) also believes that the psychological factors that cause anxiety in students mainly includes: students' interest in learning, attitude and initiative, thinking patterns, etc. To eliminate students' learning anxiety, it is first necessary to stimulate students' interest in learning, enhance their confidence, and help them correctly understand thinking patterns^[29]. However, Lu Cuiping's (2008) study suggests that thinking patterns have a certain role and impact on mental health^[30]. Thinking solidification, also known as automatic thinking or thinking inertia, Li Feng and Dong Fang et al. (2023) argued in their exploration of the impact of automatic thinking on the quality of life of patients with depression that automatic thinking is one of the factors affecting the quality of life of anxiety disorders, and the degree of anxiety is clearly related to automatic thinking^[31].

3. Research methods

3.1 Research Assumptions

Research hypothesis 1: "Teaching to the test" and "anxiety" has a significant positive relationship; Research hypothesis 2: "Teaching to the test" and "thinking solidification" have a significant positive relationship; Research hypothesis 3: There is a significant positive relationship between "anxiety" and "fixed thinking". These three items are all analyzed using a survey questionnaire scale, with SPSS as the statistical element to analyze the relationship and significance between the three basic variables, in order to verify the differences and values of the corresponding literature of scholars from both domestic and foreign countries.

3.2 Survey subjects

Select a large domestic catering chain enterprise with businesses involving multiple catering brands, logistics trade, food research and development, and other industrial chains. It currently has over 1000 stores, covering more than 400 cities both domestically and internationally. During the period from 2022 to 2023, a total of over 1000 new students was recruited. In order to comprehensively and objectively reflect the feelings and perceptions of students entering society in different regions towards their academic stage, students who have just entered the social enterprise (including summer workers) were selected as the survey and testing subjects. This is because these individuals have more recognition and perception of their past learning experiences and reality, and can obtain more authentic survey data samples. Due to the imbalance in educational resources and quality levels among different regions, as well as different perceptions, the participants selected relevant new recruits from Northeast, North China, East China, Central China, South China, Southwest, and Northwest regions as the data research subjects. A total of 510 questionnaires were distributed and 510 were collected, of which 496 were valid questionnaires, with an effective rate of 97.3%. In the valid questionnaire, there are 188 males and 308 females; The proportion of personnel in the above regions is 9.5%, 12.9%, 22.4%, 14.3%, 18.5%, 10.9%, and 11.5%, respectively.

3.3 Questionnaire design dimensions

The self-designed Teaching to the test, anxiety and thinking solidification questionnaire consists of 48 items and 13 dimensions, as shown in Table 1 below:

Table 1: The dimensions of exam-oriented education, anxiety and thinking

name	Dimension composition	dimension	Number of questions
examination-oriented education system	Vitality, vitality, growth ability, attitude	Four	15 Questions
anxious	Learning anxiety, interpersonal anxiety, health anxiety, denial anxiety, employment anxiety	Five	15 Questions
Cure thinking	Ideas, principles, habits, and efficiency	Four	18 Questions

3.4 Measurement tools

3.4.1 Teaching to the test questionnaire.

Referring to Gronono's (1971) Health Measurement Index (IMH) ^[32] and the Chinese version of the World Health Organization's Quality of Life Measurement Scale ^[33] by Hao Yuantao and Fang Jiqian (2000), and based on their own research and investigation, a 4-level scoring method is adopted. The higher the score, the more prominent the problem.

3.4.2 Anxiety questionnaire.

Based on the trait anxiety questionnaire developed by Spielberger in 1972 ^[34], and referring to Wang Xiangdong's (1999) mental health assessment scale manual ^[35] and the conceptual dimensions of Xiao Lingyan and Zou Hong's (2000) college student trait anxiety questionnaire ^[36], this study questionnaire was developed. Using a 4-point scoring system, the higher the score, the higher the level of anxiety.

3.4.3 Thinking solidification questionnaire.

In the study, reference was made to Dweck's (1999) Thinking Mode Scale ^[37], as well as the

impact of Jia Xiaoyu and Zhang Yuchi's (2022) thinking mode on emotional health of college students and the actual situation of this study. Using a 5-level scoring system, the higher the total score, the more rigid the thinking is.

3.5 Trial testing

Firstly, a total of 70 individuals (including 38 males and 62 females) who has just graduated from school and entered a catering related store in China was selected for prediction using this research questionnaire. A total of 70 questionnaires were distributed, with a recovery rate of 100%. Secondly, reliability analysis was conducted on the predicted questionnaire, and the reliability coefficients were obtained as shown in Table 2:

Table 2: Reliability prediction analysis

Questionnaire question type	Question item	Crobach's α
examination-oriented education system	15	.830
anxious	15	.866
Cure thinking	18	.820

The analysis of prediction results shows that the reliability of "Teaching to the test", "anxiety" and "thinking solidification" is 0.830, 0.866 and 0.820 respectively, which indicates that the reliability of question design has reached a certain level. After discussing with the testees, store managers, especially the researchers' supervisors and other people about whether there is repetition in the meaning of each item, the analysis shows that three items in the "attitude" dimension of Teaching to the test do not match the respondents' cognitive and sensory abilities, and people in higher professional fields need to think about it. Therefore, three items of "attitude" in the Teaching to the test questionnaire are deleted, and the rest are reserved.

3.6 Main trial and implementation

3.6.1 Main test.

In order to ensure the rigor and clarity of the survey, the store managers of each relevant store provided strong support and assistance, and established an interactive group for the survey questionnaire through a certain instant messaging medium. The researchers provided special explanations on the purpose and methods of this survey research, and provided explanations and explanations on certain items before implementation, in order to obtain more objective and truthful information data.

3.6.2 Implementation.

The store managers of each store will make unified arrangements based on their actual situation from June 12th to 22nd, 2023, and require that the questionnaire is distributed and completed within 3 minutes.

4. Research results and analysis

4.1 Data collection

On June 12, 2023, 510 survey questionnaires were distributed. On June 22, a total of 510 original scanned copies (PDF) was collected through email. Among them, 14 were invalid questionnaires,

accounting for 2.8% of the distributed questionnaires. A total of 496 was valid questionnaires, accounting for 97.2% of the questionnaires. After removing invalid questionnaires, the data will be organized and input immediately. This study used the Chinese version of SPSSV26.0 as a data entry and statistical analysis tool.

4.2 Validity analysis

This study used structural validity analysis, Bartlett sphericity test, and exploratory factor analysis test to demonstrate the structural validity of the scale, as shown in Table 3:

Table 3: Analysis of the construct validity

Number of KMO sampling suitability.		.919
Bartlett Sphelicity test	Approximate chi square	3490.239
	free degree df	66
	<i>P price</i>	.000

From the above table, it can be seen that KMO=0.919, P<0.01, with good validity, making it very suitable for factor analysis.

4.3. Analysis of the relevant factors of various variables in the research plane

4.3.1 Correlation analysis.

After reasonable factor analysis, Pearson product difference correlation analysis was used to verify the degree of the close relationship between between them. Therefore, the critical values were set between 0.05 and 0.01, as shown in Table 4:

Table 4: Related analysis table of each structural surface dimension

	vitality	viability	growing power	learning anxiety	Interpersonal anxiety	Health anxiety	Be denied anxiety	Employment anxiety	Ideas	Principle of thinking	thinking habit	thought potency
vitality	1											
viability	.706**	1										
growing power	.545**	.533**	1									
learning anxiety	.573**	.578**	.422**	1								
Interpersonal anxiety	.509**	.583**	.440**	.610**	1							
Health anxiety	.552**	.566**	.464**	.598**	.613**	1						
Be denied anxiety	.498**	.604**	.417**	.543**	.645**	.600**	1					
Employment anxiety	.552**	.598**	.417**	.593**	.606**	.609**	.651**	1				
Ideas	.401**	.510**	.311**	.333**	.446**	.417**	.463**	.411**	1			
Principle of thinking	.415**	.467**	.393**	.320**	.410**	.392**	.439**	.387**	.599*	1		
thinking habit	.394**	.510**	.525**	.361**	.423**	.447**	.415**	.374**	.550*	.702**	1	
Thinking efficiency	.376**	.506**	.363**	.368**	.355**	.379**	.400**	.332**	.429*	.590**	.683**	1

Note: r 0.80 extremely strong correlation; 0.60 r <0.80 highly intense correlation; 0.40 r <0.60 moderate correlation; 0.20 r <0.40 weak correlation, r <0 irrelevant.

After studying the relationship between the Dependent and independent variables and the dependent variable of the facet dimension, it can be seen from Table 4 that:

All dimensions of Teaching to the test (vitality, vitality, growth) and anxiety (learning anxiety,

interpersonal anxiety, health anxiety, negative anxiety, employment anxiety), all dimensions of Teaching to the test and thinking solidification (thinking concepts, thinking principles, thinking habits, thinking efficacy), and all dimensions of anxiety and thinking solidification have significant positive correlation coefficients.

4.3.2 Linear regression analysis.

The linear regression analysis is used to explore the linear correlation between multiple independent variables and dependent variables, so as to verify whether the hypothesis that Teaching to the test is significantly positively correlated with anxiety, Teaching to the test with thinking solidification, and anxiety with thinking solidification is tenable.

Regression analysis of Teaching to the test and anxiety, as shown in Table 5:

Table 5: Progressive regression coefficient of test-oriented education on anxiety

	β	t	P	F	adjust R^2
examination-oriented education system	0.738	24.293	0.000	590.132	0.543

The results showed that the regression equation was significant. $F=590.132$, R square =0.543, $p=0.000 < 0.05$, indicating that the linear fit was good, meaning that exam-oriented education has a significant positive correlation on students' anxiety.

Multiple regression analysis of exam-oriented education and solidified thinking, as shown in Table 6:

Table 6: The gradual regression coefficient of exam-oriented education on thinking solidification

	β	t	P	F	adjust R^2
examination-oriented education system	0.618	11.933	0.000	304.598	0.380

The results showed that the regression equation was significant. $F=103.134$, R square =0.618, $p=0.000 < 0.05$, meaning that exam-oriented education has a significant positive correlation on the solidification of students' thinking.

Multiple regression analysis of anxiety and thinking solidification, as shown in Table 7:

Table 7: The progressive regression coefficient of anxiety to thinking solidification

	β	t	P	F	adjust R^2
anxious	0.570	15.410	0.000	237.477	0.323

The results showed that $F=237.477$, R square =0.323, $p=0.000 < 0.05$, which indicates a dominant positive correlation between anxiety and thought solidification.

5. Conclusion

This paper studies the relationship between exam-oriented education and anxiety and thinking solidification, including the three dimensions of vitality, life ability and growth power, the four dimensions of academic anxiety, interpersonal anxiety, health anxiety and employment anxiety, and the four dimensions of solidified concept, principle, habit and efficiency.

The questionnaire has a relatively good reliability and validity. There is a significant positive correlation between exam-oriented education and anxiety, exam-oriented education and thinking solidification, and anxiety and thinking solidification.

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