Study on the Influencing Factors of Undergraduates' Willingness to Take Postgraduate Entrance Examination in Application-Oriented University

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Abstract

Objective: To understand the undergraduates' willingness to take postgraduate entrance examination in application-oriented university. This paper analyzes the influence of "postgraduate entrance examination craze" on students' willingness to take postgraduate entrance examination, and analyzes its influencing factors, so as to provide reference for formulating the policy of postgraduate entrance examination and the goal of personnel training. **Methods:** The purpose of this study was to investigate undergraduates' willingness to take postgraduate entrance examination by self-designed questionnaire. SPSS was used to test the reliability of the questionnaire, and the value of Cronbach's alpha is 0.838, which meets the reliability requirements to find out the influencing factors of the willingness to take the postgraduate entrance examination, and to build a model of predicting the willingness to take postgraduate entrance examination by using multiple linear regression. **Results:** More than half of the students are willing to take postgraduate entrance examination, and most of the influencing factors have positive correlation and significance with the willingness to take postgraduate entrance examinations. Among them, learning ability, perseverance attitude, teacher encouragement, family support attitude, understanding of postgraduate entrance examination, experience exchange meeting can only explain 33.9% of the total variation of the willingness to take postgraduate entrance examination. **Conclusions:** It has become a trend for students to take the postgraduate entrance examination. The influence of the "craze for postgraduate entrance examination" on students' willingness to take the postgraduate entrance examination cannot be ignored. Students who want to take the postgraduate entrance examination need to pay more attention to the in-

formation about taking the postgraduate entrance examination. Families should increase their support for students, universities and society should actively guide students to establish their own concept of postgraduate entrance examination and treat them rationally.

Subject Areas

Education

Keywords

Willingness to Take Postgraduate Entrance Examination, Influencing Factors, Undergraduates, Application-Oriented Universities

1. Research Background

With the popularization of higher education, the popularity of undergraduate education leads to great employment pressure, Severe Employment Situation, and fierce competition for high-educated and high-quality talents. According to the data (data from the website http://www.chinakaoyan.com/info/article/id/77817.shtml), the number of postgraduate candidates rose from 1.77 million to 3.41 million, an average annual increase of more than 17.85 percent from 2016 to 2020, as shown in Table 1.

On February 28, 2020, China's Ministry of Education said it would expand the enrollment of postgraduate students this year, with an increase of 189,000 people over the same period last year. In 2020, the number of postgraduate candidates will reach 3.41 million, an increase of 510,000 over the previous year. In 2019, about 805,000 people were admitted to the postgraduate entrance examination. According to the enrollment expansion of 189,000 people, the enrollment expansion proportion will be about 23.5%. Similar to the increasing trend of examinees, the number of college graduates in 2020 will increase by 400,000 over the previous year, reaching 8.74 million. Under the dual factors of employment

Table 1. Application for master's degree candidates in recent five years.

Year	Number of applicants	Quantity of growth	Growth Rate
2020	3.41 million	0.51 million	17.6%
2019	2.90 million	0.52 million	21.8%
2018	2.38 million	0.37 million	18.4%
2017	2.01 million	0.24 million	13.6%
2016	1.77 million	-	-

pressure and talent demand, postgraduate entrance examination has become an important way for college students to realize their individual social value. Therefore, it is necessary to grasp the key factors of the postgraduate entrance examination willingness under the new situation and rationally analyze the willingness and influencing factors. This can not only truly understand the students' willingness to take the postgraduate entrance examination, but also help students to establish a correct view of the postgraduate entrance examination, correct their mentality, and find out the comprehensive influence of various factors on the willingness to take postgraduate entrance examination, so as to provide a scientific basis for universities to formulate a reasonable talent training program.

2. Research Problem

1) The correlation analysis between the influencing factors and the willingness of taking the postgraduate entrance examination.

2) Analysis of the influence of various factors on the willingness to take the postgraduate entrance examination.

3. Research Object

This study takes Nanchang normal university students as the research object, collects data in the form of questionnaire which is self-designed on the basis of consulting a large number of literatures and sends out the questionnaire through questionnaire star. A total of 372 questionnaires were filled in, 372 were valid, and the effective rate was 100%. The survey objects are freshmen, sophomores, juniors and seniors of Nanchang Normal University. The ratio of male to female is approximately 4:6, as shown in Table 2.

Table 2. Basic information of respondents.

Question	Option	Frequency	Percentage (%)	Question	Option	Frequency	Percentage (%)
Sex	Male	143	38.4	Only child	Yes	61	16.4
	Female	229	61.6		No	311	83.6
Hometown	countryside	246	66.1	Province	Jiangxi	280	75.3
	town	126	33.9		other	92	24.7
Grade	Freshman	176	47.3	Discipline	literature	73	19.6
	sophomore	103	27.7		science	149	40.1
	junior	89	23.9		engineering	101	27.2
	senior	4	1.1		other	49	13.2
Total		372	100.0	Total		372	100.0

4. Reliability Analysis

As can be seen from Table 3, the value of Cronbach alpha is 0.838 > 0.8, the reliability of the whole scale is good, that is to say, the reliability of the questionnaire is good. The CRONBACH's Alpha values for each item in Table 4 are greater than 0.8, indicating that each item has good reliability.

Table 3. Reliability statistics.

Cronbach's Alpha	Number of questions
0.838	26

Table 4. Reliability statistics of items.

Question	Cronbach's Alpha value	Question	Cronbach's Alpha value
Family economy	0.843	Family's emphasis on study	0.831
Grades ranked in the class	0.833	Family support	0.829
Mathematics score ranking	0.833	English score ranking	0.834
Frequency of communication with parents	0.832	Understanding of postgraduate entrance examination	0.832
learning ability	0.827	Professional knowledge learning	0.830
Employment situation of Undergraduates	0.836	The influence of educational background on Employment	0.836
Love attitude	0.839	Perseverance attitude	0.832
Employment prospect of graduate students	0.833	Understanding of graduate employment	0.830
Class learning atmosphere	0.830	Satisfaction with University	0.833
Satisfaction with current major	0.830	Exchange of experience in postgraduate entrance examination	0.831
The number of students who want to take the postgraduate entrance examination	0.838	The influence of your classmates' willingness to take the postgraduate entrance examination	0.832
Teacher's encouragement	0.827	The importance of attending college	0.832
Attitude towards the situation of postgraduate entrance examination	0.833	Willingness to take the postgraduate entrance examination	0.827

5. Validity Analysis

Factor analysis was used to test the structural validity of the questionnaire for 26 questions. The test results of kmo and Bartlett are shown in Table 5. Kmo = 0.807 > 0.8 is very good; P = 0.000 < 0.05, which conforms to the sphericity test, and is suitable for factor analysis.

6. Exploring Factor Analysis (EFA)

From Table 6, it can be found that eight principal components can be extracted according to the eigenvalue greater than 1. The cumulative explained variation of the eight extracted factors is 61.448%, and the ninth characteristic root decreases relatively quickly. Therefore, it can be considered that it is reasonable to retain eight factors. The questionnaire has good reliability and validity through the above analysis, and the test data can be used in this study.

7. Regression Analysis

Before making linear regression, the regression variables were analyzed for correlation among variables. Table 7 shows that there is correlation between variables at 0.01 level (bilateral), and there is significant correlation between variables.

Table 8 is the summary of the model, R is the multiple correlation coefficient, and R = 0.582; R^2 is the determination coefficient, which is used to reflect the explanatory degree of the model, R^2 = 0.339, which means that the six factors can only explain 33.9% of the variation of the intention to take the postgraduate entrance examination, or 33.9% variance of Y can be captured by these independent variables, In other words, the accuracy of model is only 33.9%. Table 9 shows the statistical test results of the model, using the analysis of variance, F = 31.226, P = 0.000 < 0.05, so the regression model is statistically significant [1] [2] [3] [4].

Table 10 is the coefficient of the constructed model, and the model equation can be obtained as follows:

$$\hat{Y} = -0.864 + 0.216 \times X_1 + 0.163 \times X_2 + 0.282 \times X_3 + 0.279 \times X_4 + 0.212 \times X_5$$

Among them, X_1 is learning ability, X_2 is perseverance, X_3 is Teacher's encouragement, X_4 is Family support, X_5 is Understanding of postgraduate entrance examination and $\hat{Y}$ is the predicted willingness of the postgraduate entrance examination.

Table 5. The test of kmo and Bartlett.

Kaiser Meyer Olkin measure of sampling adequacy		0.807
Bartlett's sphericity test	Approximate chi-square	2710.761
	df	325
	Sig.	0.000

Table 6. Total variance explained.

Ingredients	Initial eigenvalue			Extract square and load			Rotation square and load		
	total	Variance %	accumulate %	total	Variance %	accumulate %	total	Variance %	accumulate %
1	5.534	21.284	21.284	5.534	21.284	21.284	2.454	9.440	9.440
2	2.503	9.628	30.912	2.503	9.628	30.912	2.180	8.383	17.823
3	1.930	7.422	38.334	1.930	7.422	38.334	2.031	7.813	25.636
4	1.403	5.395	43.730	1.403	5.395	43.730	2.022	7.777	33.414
5	1.252	4.816	48.546	1.252	4.816	48.546	1.972	7.586	41.000
6	1.176	4.522	53.068	1.176	4.522	53.068	1.906	7.331	48.331
7	1.112	4.278	57.346	1.112	4.278	57.346	1.774	6.822	55.153
8	1.067	4.102	61.448	1.067	4.102	61.448	1.637	6.295	61.448
9	0.898	3.453	64.900						
10	0.834	3.207	68.107						
11	0.806	3.099	71.206						
12	0.763	2.933	74.139						
13	0.716	2.754	76.894						
14	0.692	2.661	79.555						
15	0.645	2.481	82.036						
16	0.577	2.220	84.257						
17	0.567	2.181	86.437						
18	0.530	2.037	88.474						
19	0.483	1.858	90.332						
20	0.454	1.745	92.076						
21	0.410	1.578	93.655						
22	0.392	1.506	95.161						
23	0.371	1.428	96.589						
24	0.339	1.305	97.894						
25	0.286	1.100	98.994						
26	0.262	1.006	100.000						

Extraction method: principal component analysis.

Table 7. Correlation among regression variables.

	Learning ability	Perseverance	Teacher's encouragement	Understanding of postgraduate entrance examination	Exchange of experience in postgraduate entrance examination	Willingness to take the postgraduate entrance examination
Learning ability	1					
Perseverance	0.528**	1				
Teacher's encouragement	0.263**	0.229**	1			
Understanding of postgraduate entrance examination	0.277**	0.286**	0.164**	1		
Exchange of experience in postgraduate entrance examination	0.182**	0.137**	0.341**	0.162**	1	
Willingness to take the postgraduate entrance examination	0.362**	0.312**	0.409**	0.330**	0.262**	1

**There was significant correlation at the level of 0.01 (bilateral), *i.e.*, ** $p < 0.01$.

Table 8. Model summary.

Model	R	R^2	Adjust R^2	Error of standard estimation
1	0.582[a]	0.339	0.328	0.827

[a]Predictive variables: (constant), Exchange of experience in postgraduate entrance examination, perseverance, Family support, Understanding of postgraduate entrance examination, Teacher's encouragement and learning ability.

Table 9. Anova[b].

Model		Square Sum	df	mean square	F	Sig.
1	Regression	128.116	6	21.353	31.226	0.000[a]
	residual	249.591	365	0.684		
	Total	377.707	371			

[a]Predictive variables: (constant), Exchange of experience in postgraduate entrance examination, perseverance, Family support, Understanding of postgraduate entrance examination, Teacher's encouragement and learning ability; [b]Dependent variable: Willingness to take the postgraduate entrance examination.

Table 10. Coefficients[a].

Model	Non Standard coefficient		Standard coefficient	t	Sig.
	B	Standard error	Beta		
(constant)	−0.864	0.256		−3.374	0.001
learning ability	0.216	0.081	0.138	2.658	0.008
perseverance	0.163	0.073	0.114	2.221	0.027
Teacher's encouragement	0.282	0.065	0.212	4.350	0.000
Family support	0.279	0.055	0.238	5.056	0.000
Understanding of postgraduate entrance examination	0.212	0.063	0.155	3.374	0.001
Exchange of experience in postgraduate entrance examination	0.100	0.064	0.071	1.556	0.121

[a]Dependent variable: Willingness to take the postgraduate entrance examination.

8. Conclusion

There are differences in students' willingness to take the postgraduate entrance examination when they are encouraged by teachers, and there are differences in students' learning ability. At the level of students, we should strengthen their own perseverance and persistence; at the family level, we should strengthen the support for students; at the school level, we should provide more information about postgraduate entrance examination for students' reference. In this way, students' willingness to take the postgraduate entrance examination can be strengthened, and the success rate of postgraduate entrance examination can be improved. Application oriented universities focus on training students to become engineers and cultivate their craftsmanship spirit; after this survey, in fact, application-oriented university students also have a very strong demand for postgraduate entrance examination. This article urges the application-oriented universities to improve the corresponding policies and formulate corresponding incentive measures for postgraduate entrance examination.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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