An Analysis of the Educational Status of Chinese School Students- Chi-Square Test to Explore the Importance of Planned Learning

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***Abstract*— With the continuous development of education in China, education has become the country's largest basic project. As the pillars of contemporary Chinese social development, students are particularly important to explore their future development of Chinese society. The data in this paper were collected by questionnaire survey method and interview method. And use statistical methods such as chi-square test, factor analysis, and analytic hierarchy process to analyze the data reasonably. Based on the results of data processing, reasonable suggestions are made for the education of students at school**

***Index Terms*— middle school students; learning; education; chi-square test;**

I. INTRODUCTION

In the process of human social development, education is not only a foundation for promoting social development, but also a condition that is always reflected as a condition for social progress throughout human society. Furthermore, it seems that China's education content should have rich and more regular cultural connotations [1]。 Now that China's education is in the development stage, it is especially important to continue to promote the development of China's education in the new era of continuous improvement of national quality. Education is the most basic cause of a country and nation and determines its future. Education involves all walks of life. It is the foundation for enhancing comprehensive national strength.

With the continuous strengthening of the independent consciousness of students in our country, each school has adopted different education methods to allow students more time for autonomous learning [2] , how to better allocate after-school life, has become a lot of students Troubled. How to reasonably control your free time and be able to make good use of your free time in combination with your own problems, improve your grades and open the gap, has become a topic of discussion in all sectors of society[3]。

The purpose of this article is to investigate the study efficiency of students' after-school time, and whether gender and the place of origin will have a certain effect on their performance. Randomly survey 1,000 students, classify the investigators based on gender and place of origin, and use chi-square test to check school attendance. Suggestions and suggestions for rationalization of student learning.

II. DATA STATISTIC

In the survey, we found that in the after-school life, 39% of students had no plans for their studies and 61% of students had plans for their studies . The following uses a fan chart to divide the final final test scores according to whether there is a planned study outside of class time.

The following is the final survey data.

Table 1 Student final grade statistics

SCORE(560)	540-560	500-540	450-500	400-450	300-400	0-300
Total(The number of the people)	29	255	245	178	151	53
Planed learning(Thenumber of the people)	29	220	189	122	49	1
Unplaned learning(The number of the people)	0	35	56	65	102	52

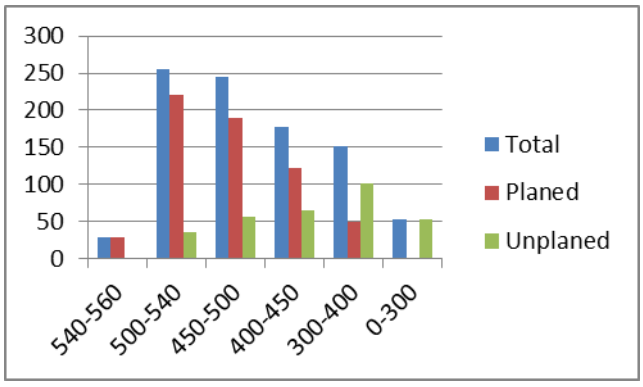

Figure 1 Student final grade summary table

The following is the percentage of students who plan to study in the spare time. The distribution of test results is shown in the following table (out of 570 points).

Table 2 Statistics on the results of the entrance examination for students who plan to study

SCORE(560)	540-560	500-540	450-500	400-450	300-400	0-300

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The number of the people	29	220	189	122	49	1

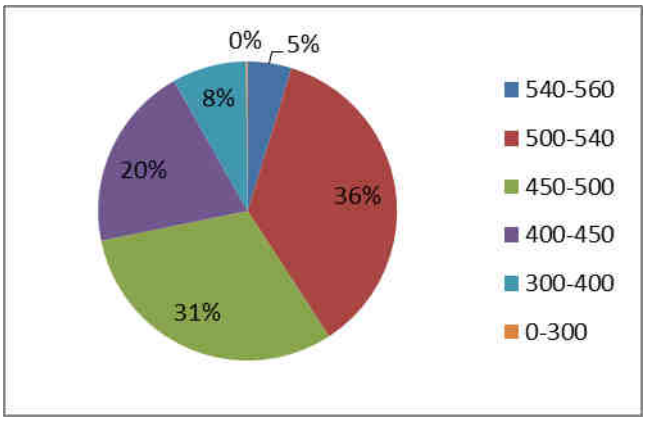

Figure 2 The distribution of students who plan to study

The following is the percentage of students who have no plan to study in the spare time. The distribution of test results is shown in the following table (out of 570 points)

Table 3 Statistics of students who have no plans to study

SCORE(560)	540-560	500-540	450-500	400-450	300-400	0-300
	0人	35人	56人	65人	102人	52人

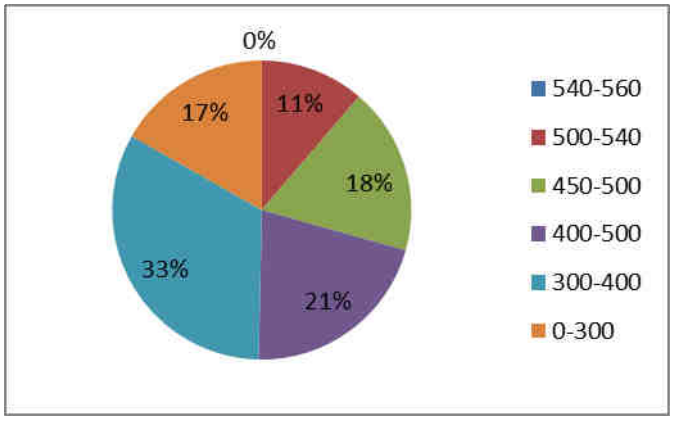

Figure 3 The distribution of students who have no plans to study

From the chart, we can draw the following conclusions.

1. From the perspective of students who have a plan for learning, we can find that the number of 500-540 points in the final exam is the largest, accounting for 36% . 0-300 points have the lowest number, accounting for 0% . So we can roughly look at the numbers. Students who have planned their studies in their spare time are also very satisfied with their exam results. Students with grades in the range of 300-400 and who plan their studies should consider other factors, such as gender and regional factors, and change their learning methods based on their actual situation.
2. From the perspective of students who have no plan to study, we can find that the final exams are distributed among 300-400 points with the largest number, accounting for 33% . Exam scores were the lowest among 540-560 points, accounting for 0% . Therefore, such students should give sufficient consideration to the reasonable planning of their spare time learning, and they will be able to achieve better results than before. For example: complete homework on time, preview in advance, review, etc.
3. From the comparison chart, we can clearly see. In the high-level segment, students who plan for their own learning in the spare time show obvious advantages in performance. In other words, since the students are studying the same content in the same classroom, the advantages presented by each student are not obvious. Students who can plan their studies reasonably in their spare time are more likely to achieve better results. Similarly, we can see that among the student population, most people choose to plan their studies in the spare time, which shows that most students are using their time reasonably, and for those who do not have a comparative For those students who make good use of their time and lead to poor academic performance, they can spend time in planning their schedules and use their time in a self-disciplined and effective way to improve their scores easily.

III. Chi-Square Test for Planned Learning Surveys

(1) The impact of birthplace on performance

It was found in the survey that students believed that the most influential factor was their bithplace, so we divide the data, the 450 points as the dividing line, higher than 450 points called outstanding results, those with a score lower than 450 are called average scores. Chi-square tests are performed using cities and towns as the classification criteria.

Table 4 Chi-square test analysis of the impact of birthplace on performance

	Value	df	Progressive Sig. (Both sides)	Exact Sig.(Bothsides)	Exact Sig.(One side)
Pearson chi-square	19.110[a]	1	.000		
Continuous correction	17.794	1	.000		
Likelihood ratio	19.046	1	.000		
Fisher				.009	.008
N in valid cases	200				

a. Expected count of 0 cells (0.0%) is less than 5 . The minimum expected count is 26.73 .

b. Calculated only for 2x2 tables

We use spss to perform chi-square test on the data. It is concluded that the value of progressive Sig. Is 0.000 . If the value of Sig, is greater than 0.05 , it means that the difference is not significant [4]。 In other words, birthplace has no major impact on students' learning.。

(2) The impact of gender on learning planning

In order to explore whether there is a difference between contemporary students, if students are divided into genders, and boys and girls plan to study in the spare time, we will perform data analysis by spss chi-square analysis.

	value	df	Progressive Sig.(Both sides)	Exact Sig.(Both sides)	Exact Sig.(One side)
Pearson chi-square	17.014[a]	1	.000		
Continuous correction	15.820	1	.000		
Likelihood ratio	17.676	1	.000		
Fisher				.000	.000
N in valid cases	200				

Table 5 Chi-square test analysis of the influence of gender on planned consumption

a. Expected count of 0 cells (0.0%) is less than 5 . The minimum expected count is 32.00 .

b. Calculated only for 2x2 tables

It was found that the value of progressive Sig. Was 0.000 and its value was less than 0.05 , indicating that the difference was significant. In other words, gender has significant differences in the planned nature of learning. Boys are more likely to have unplanned learning in their spare time, while girls are more likely to study planned in their spare time. According to the data from the questionnaire, we can also find that boys have more unplanned learning than girls in their spare time. Therefore, when boys in school want to improve their grades, they should first consider whether they plan to study.

CONCLUSION

(1) In China, for most students at school. In the spare time, it is important to plan your own learning. Planned learning can reduce the blindness and randomness of our learning, and strengthen the purpose and controllability of learning. If we are often in a dazed, blind state, lack of clear and specific learning goals, so that our specific learning is in a blind, disordered, and chaotic state because there is no clear action orientation, which results in time and A lot of wasted energy. Planned learning can reduce the tension and busyness of students in learning, and bring a more harmonious mentality. Similarly, planned learning has a significant effect on improving performance.

(2) In the same class of students, the actual knowledge gained by students in towns and townships in the classroom is almost the same. Some people believe that there are differences in education between towns and townships, which make township schools lagging behind. According to the analysis of this article, the township students are obviously weaker in planning than the urban students. Township students lack more time and ability to plan their own studies.

(3) The most essential feature of the plan is its clear purpose [5]。 That is, the clarification and reification of goals. But for boys of the same age, learning is more boring than for girls. Because boys prefer outdoor sports and computer games. Therefore, giving male students more planning consciousness can facilitate the mobilization of subjective initiative and the stimulation of initiative. It can help male students improve their scores more.

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