

# Analysis on the Sources of Higher Education Information for Senior Three Students in Mainland China and Their Differences: An Empirical Study Based on 5,068 Valid Questionnaires

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**Keywords:** Higher education information; Access to information; Individual differences; Decision-making risk

**Abstract:** A lack of attention to information sources or inadequate access to them are important causes of wrong decisions in higher education. A survey of senior three students found the sources that can be used for senior three students in higher education are undiversified, and senior three students' information consciousness is weak. Additionally, significant differences exist between individuals. Several steps are suggested to enrich information channels, such as constructing the information intermediary that the government leads or controls, establishing long-term effective information transmission between universities and high schools, and setting up student development guidance courses in high school. We should, at the same time, encourage senior three students to pay more attention to higher education information to reduce the decision risk.

## 1. Introduction

The selection of a higher education provider is a special market transaction between senior three students as buyers and colleges as sellers in the higher education market as well as a decision-making process.

Studies at home and abroad on this particular market transaction mainly develop from two branches: neoclassical and educational economics. The former is mainly applied to the decision-making behavior of the family as the group decision maker in which the utility maximization decision model and the game model have been put forward [1-4]. The latter, which examines the impact of educational cost and educational return on education decision-making, is mainly based on the human capital investment theory [5-6]. In recent years, the focus has been on the study of education decision-making with real option theory. Hogan and Walker applied real option theory to education problems to estimate the decision-making risk of education and the optimal education years of individuals [7]. Yang .J estimated the decision-making risk of education in terms of the uncertainty of individual expected returns using the option theory model of finance, then deduced individual optimal educational choice [8]. Yang Yu discussed the model of educational choice with and without risk factors based on the dynamic model and obtained the optimal educational choice strategy by applying the idea of a real option and the method of random analysis, namely, the best time to leave school and the corresponding wage level at this time [9].

However, both the analysis of the willingness and motive to enroll and that of the factors affecting the education selection of individuals have not yet replaced the analytical framework of traditional economics. The fundamental problem with this research paradigm is it establishes senior three students as fully rational and as having full access to complete information, which does not fit with the reality and hardly succeeds in explaining certain questions [10]. For example, studies by Yuping Zhong and Genshu Lu have found only partial support is secured in the Chinese scenario for the basic assumption of human capital theory that students and their families will choose optimal educational levels and types according to the optimal economic benefit level of education [11]. The reason for this finding may be that students and their families more often than not lack

information on the costs and benefits of higher education in making decisions, or even if they do, they may not necessarily process them in an economical and rational way.

According to decision theory, individuals cannot make decisions without relevant information, and the quantity and quality of information at each stage of the decision-making process directly affects its result. In addition, students and their parents have limited knowledge on higher education. No attention to information sources or inadequate and inaccurate information are important causes of wrong decisions on higher education.

Based on this theory, survey data of individual selections of higher education are applied in this paper to analyze empirically the source of higher education-related information. This paper also analyzes the factors causing the differences in the process of admission opportunity decision-making among senior three students in mainland China.

## **2. Research questions and research hypotheses**

### **2.1 The decision-making environment faced by senior three students is an incomplete information environment**

Almost all actual markets contain incomplete information. Producers cannot accurately predict the changes in the supply and demand of various products in the market, while consumers cannot accurately distinguish the quality of all products. In the job market, job seekers cannot have all the information about the position, while employers cannot understand each job seeker's employment purpose and employability.

Same As with all markets, the higher education market has incomplete information. Higher education agencies, policy makers and employers have, over students and parents, obvious information advantages in terms of higher education services, management and student employment. Additionally, individuals rely largely on receiving external information in the selection process such as listening to so-called authoritative sources and public media or self-promotion from colleges and universities for information acquisition, recognition and screening, all of which fail to meet the reasonable person condition and do not have complete information. Therefore, students and their families are at an absolute information disadvantage when faced with the choice of higher education.

Based on this fact, this study proposes the following hypothesis:

*Hypothesis 1: Senior three students do not have adequate information sources in the selection of admission opportunities for higher education.*

### **2.2 Analysis of the factors that may affect senior three students' access to information sources**

Generally, when one person collects more information, the information source is more direct, and the information content in consumption activities is more authoritative, the decisions he or she makes will be more rational. However, individuals differ in the collection and utilization of information, and this process is related to each consumer's educational level, personal preference and professional background.

The same is true of the choice of higher education provider. Individual students exhibit different information behaviors due to their different characteristics, family backgrounds, school environments and regions [12-13]. Dr. Zhan Shengli found the accuracy of the information about the private universities owned by senior three students can be affected by family income, paternal educational level, self-assessment of academic level, classification of school, gender and region [14]. Based on survey data from a private college of 120 freshmen and sophomores in Cyprus, 1998-1999 school year, Menon analyzed students' access to information on higher education before admission and possible personal and domestic factors affecting their access [15]. The results showed 2 variables of socioeconomic status (SES) and a recognition of the importance of decision making exerted great influence on the students' access to information, namely, when their socioeconomic status is lower and they attach more importance to decision making, they will search for information more actively.

Based on these findings, this study attempts to answer the question whether senior three students' access to higher education information is influenced by gender, family background and high school, and proposes the following hypothesis:

*Hypothesis 2: Gender, family background and high school significantly affect senior three students' access to higher education information.*

### 3. Research methods

#### 3.1 Data sources

This study adopts the quantitative analysis method and uses questionnaire data. The data used in this study came from 2 sources. First, data from the questionnaire survey and interviews of 34 middle schools in 22 cities, counties and towns in 7 provinces and autonomous regions in the Chinese mainland from October to December 2015. A total of 3605 valid questionnaires were collected from high schools, and individual or group interviews were conducted with 151 senior three students. Second is survey data obtained from the questionnaire distributed to 10 universities in six provinces and autonomous regions between September and October 2015. A total of 1,463 copies of valid college questionnaires were collected.

Freshmen were also listed as investigation objects because senior three students were then busy preparing for the college entrance examination, it was estimated their relevant knowledge could be limited, and freshmen had just experienced the process of filing their intentions for college; thus, they could relatively accurately recall their access to information sources. Therefore, they were chosen as objects, and we focused on their individual differences.

To ensure the general representativeness of senior three students, key high schools (referred to as provincial/municipal/district model high schools, provincial standardized schools, or provincial class one/class two/class three model high schools according to different standards) and non-key high schools (ordinary high schools) were both included when choosing samples. For regional distribution, 31 provinces, cities and autonomous regions in mainland China were divided into east, central, west, and northeast according to the official dividing method established by the National Bureau of Statistics. Moreover, 34 high school schools were selected from the four parts as samples according to the convenience principle.

The sample situation is shown in Figures 1-4.

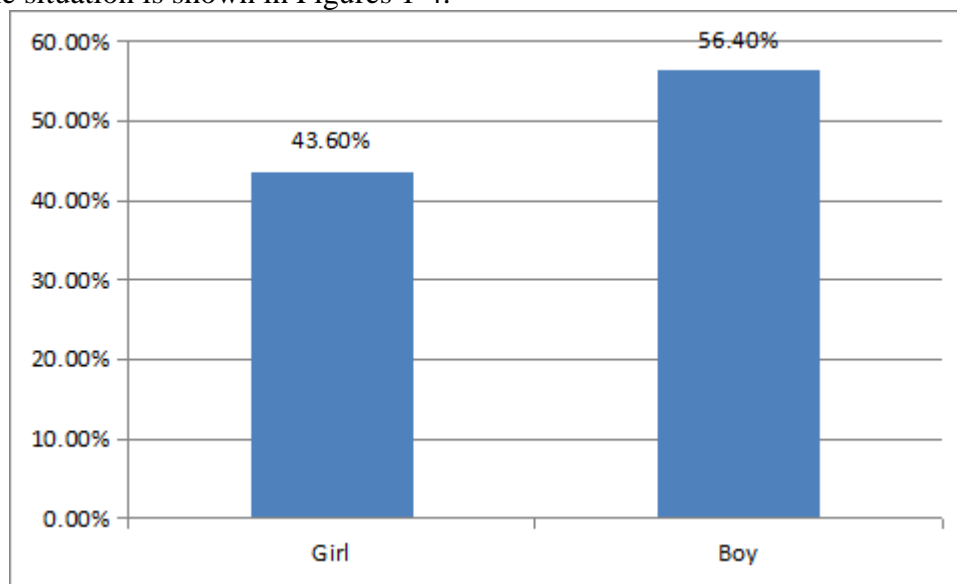


Figure 1 Sex ratio of the senior three students

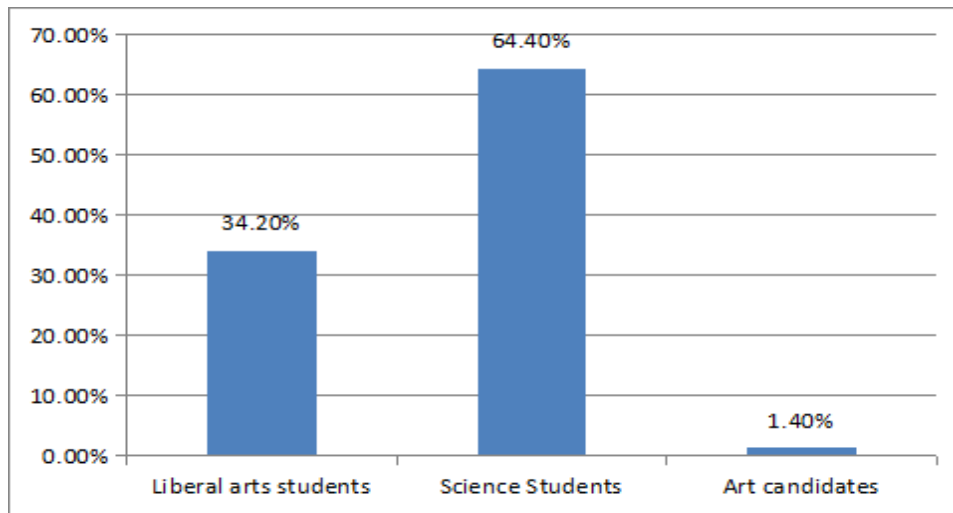


Figure 2 Senior three students' subject distribution

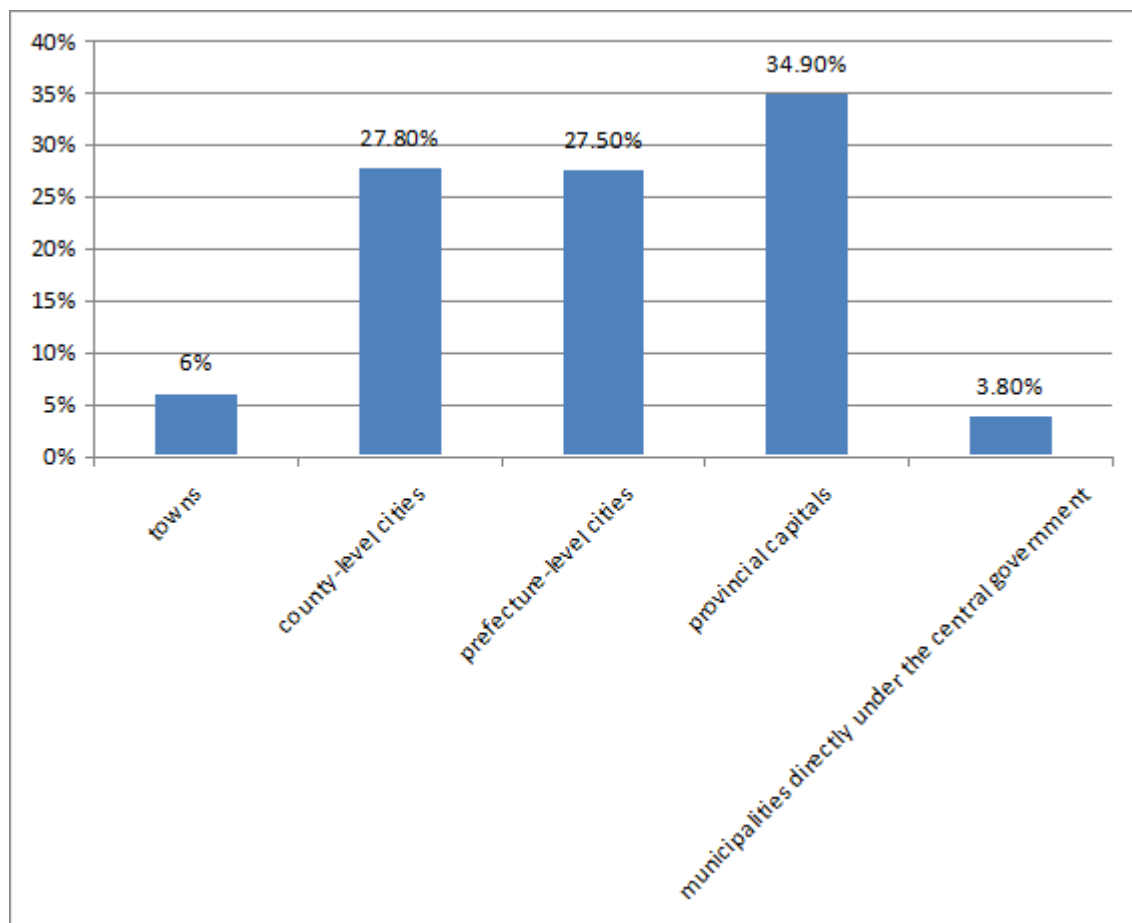


Figure 3. Location of the high schools the students attended

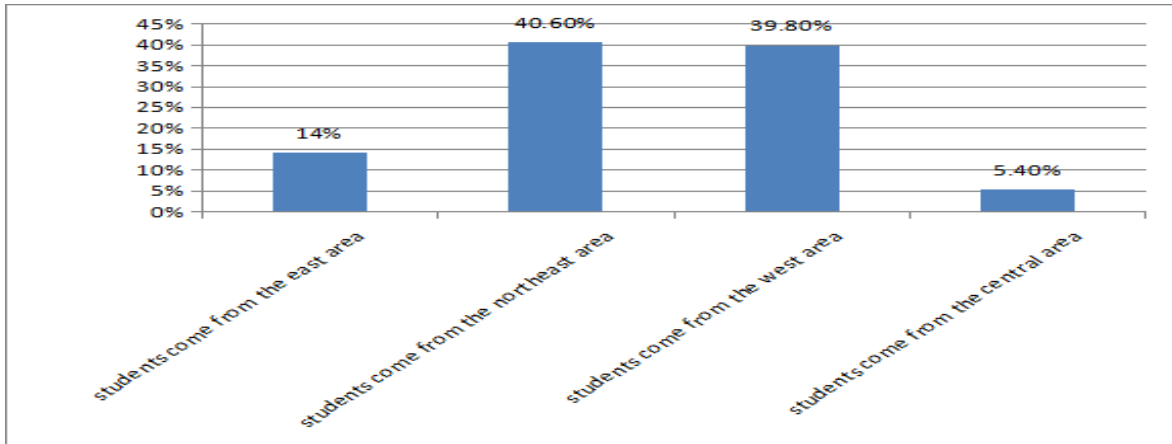


Figure 4 Regions in which the students lived

To ensure the freshmen participating in the questionnaire survey were generally representative, the selected samples covered five categories, namely, 985 Project universities and 211 Project universities, provincial key universities, provincial ordinary universities and independent colleges. Comprehensive, single-subject and multisubject colleges and universities were all included and a 10 of them were selected as samples, also according to the principle of convenience and the official dividing method. Then, according to the classification of the 13 major disciplines, 1-2 majors under each first-level discipline were randomly selected from these 10 universities, covering the 11 major disciplines as well as two art and military science institutions. The sample situation is as shown in Figures 5-7.

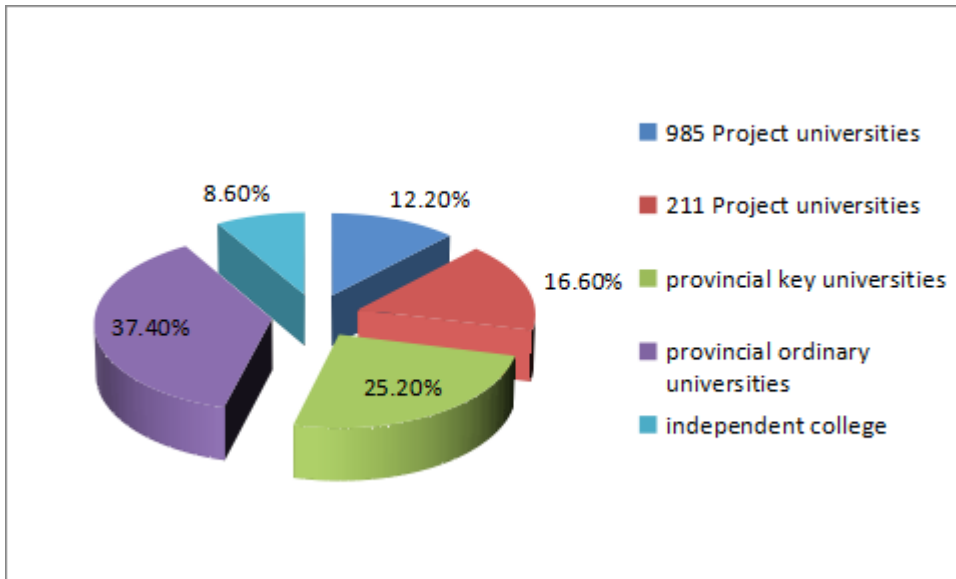


Figure 5 Different types of universities attended by the students

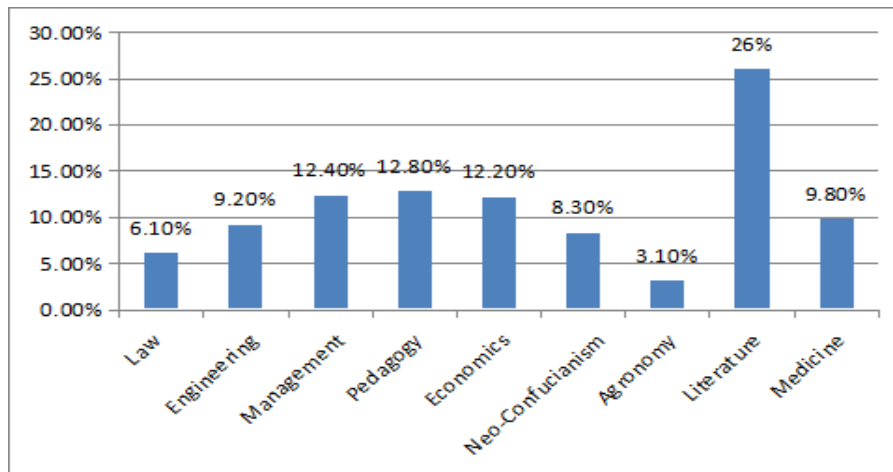


Figure 6 Subject distribution of the freshmen

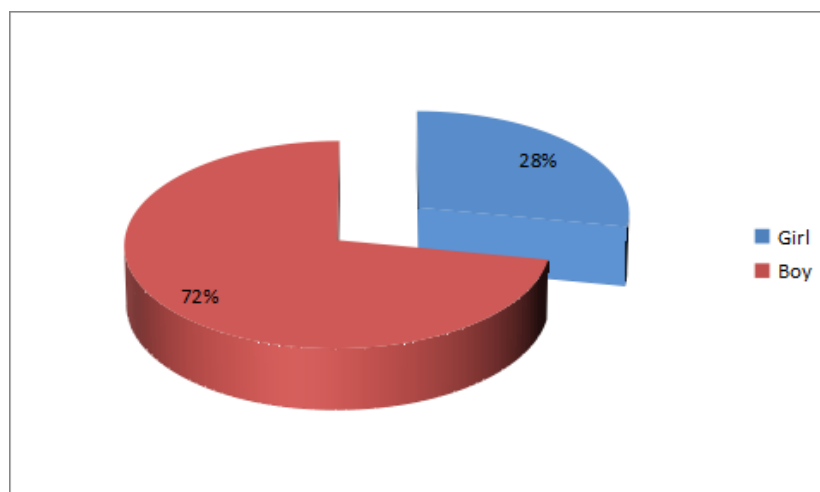


Figure 7 Sex ratio of the freshmen

### 3.2 Statistical methods

Two research questions are discussed in this study. In addition to the study of senior 8 three students' sources of higher education information, we also investigate whether the students' family backgrounds, genders and schools have impacts on their information channels.

(1) For the first question, the SPSS19.0 statistical software package is used for general descriptive statistics.

(2) For the second question, the method of variance analysis is used to investigate whether each variable significantly affects individual's information sources.

### 3.3 Definition of variables and the analytical method

(1) Senior three students' sources of higher education information

The investigation of this question was conducted in the form of a questionnaire for high school and college/university by multiple choice:

For senior three students the question posed was as follows:

(i) What is your main source for learning about colleges and majors? What source do you trust most?

① Publicity materials for college enrollment; ② Traditional media (such as newspapers, magazines, television, radio, etc.); ③ Online media; ④ College entry guide distributed by high school; ⑤ Parents and relatives; ⑥ Undergraduates; ⑦ Teachers; ⑧ Information released by education administration; ⑨ Personally collecting information from colleges; ⑩ Friends and classmates; and ⑪ College websites.

For college/university students the question posed was as follows:

(i) What was your first main source for learning about colleges and majors? What was your second main source?

① Publicity materials for college enrollment; ② Traditional media (such as newspapers, magazines, television, radio, etc.); ③ Online media; ④ College entry high school; ⑤ Parents and relatives; ⑥ Undergraduates; ⑦ Teachers; ⑧ Information released by education administration; ⑨ get information yourself Personally collecting information from colleges; ⑩ Friends and classmates; and ⑪ College websites.

(ii) Do you think senior three students have sufficient sources of higher education information during college entrance examination?

These 11 sources are ranked 1-11 by frequency according to the results, 1 being the most valued source and 11 being the least. Then, the 11 sources are assigned values in descending order. The most valued one, namely, No. 1 is assigned "11" points, and No. 2 is assigned "10" points, and so on.

According to the research of Dr. Zhan Shengli, the 11 kinds of information sources can be divided into two categories: the first includes parents, friends, relatives, classmates, publicity materials, high school teachers, undergraduates, and personally collecting information from colleges. All these sources are individualized, direct contacts and relationships; therefore, these sources can be called a "personal information network". The second kind of source includes all kinds of media (such as network, magazine, television and broadcast), the administrative department of education, publicity materials for college enrollment and college websites. These information sources are relatively far away from the daily study and personal communication of senior three students. Moreover, these sources are basically open to the society and are characterized by their certain institutionalization, so they are called an "institutionalized information network" (Zhan, 2004).

When classification was completed, further calculation of senior three students' degree of attention to the personal information network and the institutionalized information network was carried out. Senior three students' degree of attention to the personal information network came from the average score of these six sources: ④ College entry guide distributed by high school; ⑤ Parents and relatives; ⑥ Undergraduates; ⑦ Teachers; ⑨ Personally collecting information from colleges; and ⑩ Friends and classmates. Therefore, senior three students' degrees of attention to the personal information network = (score of "college entry guide distributed by high school" + score of "parents and relatives" + score of "undergraduates" + score of "teachers" + score of "personally collecting information from colleges" + score of "friends and classmates")/6.

Senior three students' degrees of attention to the personal information network came from the average score of these five sources: ① Publicity materials for college enrollment; ② Traditional media (such as newspapers, magazines, television, radio, etc.); ③ Online media; ⑧ Information released by education administration; and ⑪ College websites. Therefore,

Senior three students' degrees of attention to the personal information network came from the average score of these five sources: ① Publicity materials for college enrollment; ② Traditional media (such as newspapers, magazines, television, radio, etc.); ③ Online media; ⑧ Information released by education administration; and ⑪ College websites. Therefore, senior three students' degree of attention to the institutionalized information network = (scores of "publicity materials for college enrollment" + score of "traditional media (such as newspapers, magazines, TV broadcasting, etc.)" + scores of "online media" + score of "information released by education administration" + scores of "college websites")/5.

In this way we can obtain the rank of importance all respondents attach to various sources in terms of information sources, and senior three students' degree of attention to the personal and the institutional information network in the evaluation with the highest score of 11 and the lowest score of 1.

- (2) Students' gender includes both male and female
- (3) Family background

Family background includes parental occupation (national and social administrators, managers, private business owners, technical personnel, individual business, business/service personnel, industrial workers, agricultural laborers, or rural and urban unemployed/unemployment/underemployed people), parents' educational level (postgraduate, undergraduate, junior college/adult education/correspondence course, technical secondary school/senior high school/vocational high school, or high school or below) and hometown (villages, towns, county-level cities, prefecture-level cities, provincial capitals, or municipalities directly under the central government).

#### (4) School factors

School factors refer to not only school location (villages, towns, county-level cities, prefecture-level cities, provincial capitals, or municipalities directly under the central government) but also school type (national model high schools, provincial model high schools, municipal model high schools, district model high schools, or ordinary middle schools).

## 4. Research results

### 4.1 Willingness of high school students in Mainland China to collect information

Of the freshmen, 89.5% agreed "you have to collect as much information as possible to make rational choices". Only 44.8% of them said they "paid regular attention to information about universities and majors before the college entrance examination"; 39.8% said they "frequently take the initiative to collect information about universities and majors" before the exam. Therefore, more than half of the students did not have an information consciousness or information needs during high school.

The vast majority of freshmen became aware of the importance of information after they completed the application form. This may be too late, because most students were too pressed by their studies to pay attention to college and professional information as seen in interviews, and they did not realize the need to prepare for future choices. In the application-filling stage, they counted on parents or teachers, blindly followed the trend, or focused only on external or utilitarian aspects and made hasty decisions.

*Students are still not motivated to proactively obtain information because their own goals are unclear. In the second year of high school, teachers would ask students to write about their ideal college and most students write casually. They don't know about themselves and have no plan for the future, which leads to lack of motivation for later study. Some feel regretful and restudy for a year for the exam after entering the university, which costs a lot. (SY No. 3 High School senior 3 teacher)*

*This is a kind of crowd psychology, for example, "my cousin said this school is a good one", which is often heard, or "my brother or my sister recommended this major to me". (QS High School senior 3 teacher)*

*They would ask the teacher when filling in the form and would pick a college if its name sounds good or it's located in a major city. To a large extent, they don't have a life plan, what majors they want to develop, which universities these majors are distributed in, which cities these universities are located in, and what they want to do...these are basically not considered. (LPS No. 1 High School senior 3 teacher)*

Based on the many interviews with students and teachers, this study suggests that among the students who said they "paid regular attention to information" and "took the initiative to collect information" before the college entrance examination, a significant percentage focused only on the enrollment number and admission scores, while related concepts such as professional studying, requirements, and development were rarely a concern.

The teacher would ask students to look up some relevant information on the network, but they would only look up how many students this major enrolls and what the admission scores are. The teacher wouldn't tell the student to look up the history of the school and so on, so the students



wouldn't know to do so. They don't care about the majors in the university and what they can learn with them. (LPS No. 1 High School senior 3 teacher)

#### 4.2 Main sources for senior three students in mainland China to obtain information

As shown in Table 1, according to the survey, 49.8% of students' information came from online media, and 18.8% came from the college entry guide distributed by the high school. Other sources were publicity materials for college enrollment (11.1%), traditional media (6%), college websites (5%), parents and relatives (3.3%), information released by education administration (2.2%), friends and classmates (1.4%), teachers (1.1%), undergraduates (1%), and personally collecting information from colleges (0.3%); 0.1% did not learn about colleges and majors.

Table 1 Statistics of the questionnaire for college students

What is your first main source for learning about colleges and majors?	Proportion (%)	What is your second main source for learning about colleges and majors?	Proportion (%)
Publicity materials for college enrollment	11.1	Publicity materials for college enrollment	9.6
Traditional media	6	Traditional media	6.5
Online media	49.8	Online media	20.6
College entry guide distributed by high school	18.8	College entry guide distributed by high school	18.5
Parents and relatives	3.3	Parents and relatives	10.7
Undergraduates	1	Undergraduates	5.4
Teachers	1.1	Teachers	5.9
Information released by education administration	2.2	Information released by education administration	2.4
Personally collecting information from colleges	0.1	Personally collecting information from colleges	1
Friends and classmates	1.4	Friends and classmates	5.7
College websites	5	College websites	12.2
Did not learn about colleges and majors	0.3	Did not learn about colleges and majors	1.5

According to the variables definition section, each source can be further assigned values: online media = 11 points, college entry guide distributed by the school = 10 points, publicity materials for college enrollment = 9 points, traditional media = 8 points, college websites = 7 points, parents and relatives = 6 points, information released by education administration = 5 points, friends and classmates = 4 points, teachers = 3 points, undergraduates = 2 points, and personally collecting information from colleges = 1 point. Thus, we obtain:

Senior three students' degrees of attention to the personal information network = ("college entry guide distributed by high school" 10 + "parents or relatives" 6 + "undergraduates" 2 + "teachers" 3 + "personally collecting information from colleges" 1 + "friends and classmates" 4) / 6 = 4.3.

Senior three students' degrees of attention to the institutionalized information network = ("publicity materials for college enrollment" 9 + "traditional media" 8 + "online media" 11 + "information released by education administration" 5 + "college websites" 7) / 5 = 8.

Obviously, the senior three students were more likely to obtain information from external, nonhuman, institutionalized information network media and tended to obtain information from public and official media platforms in the process of filing the intention for college.

As shown in Table 2, the senior three students obtained college and professional information mainly through these sources: 33.7% from network media and 16.2% from a college entry guide

distributed by high school. The others were traditional media (11.3%), publicity materials for college enrollment (8.9%), college websites (7.8%), parents and relatives (4%), teachers (3.9%), undergraduates (2.7%), information released by education administration (1.8%), friends and classmates (1.7%), and personally collecting information from colleges (1%); 7% did not learn about colleges and majors.

Table 2 Statistics of the questionnaire for senior three students

What is your main source for learning about colleges and majors?	Proportion (%)	What source do you trust most?	Proportion (%)
Publicity materials for college enrollment	8.9	Publicity materials for college enrollment	7
Traditional media	11.3	Traditional media	4.6
Online media	33.7	Online media	4.8
College entry guide distributed by high school	16.2	College entry guide distributed by high school	17.2
Parents and relatives	4	Parents and relatives	3.1
Undergraduates	2.7	Undergraduates	11.5
Teachers	3.9	Teachers	7
Information released by education administration	1.8	Information released by education administration	16.5
Personally collecting information from colleges	1.0	Personally collecting information from colleges	13.8
Friends and classmates	1.7	Friends and classmates	1.8
College websites	7.8	College websites	9.7
Did not learn about colleges and majors	7	Did not learn about colleges and majors	3

Another conclusion can be drawn: the senior three students were more inclined to obtain information from the institutionalized information network and from the public official media platform according to the calculation method above.

Statistical results also indicate the senior three student's most trusted information sources, in order, were the college entry guide distributed by the high school (17.2%), information released by education administration (16.5%), personally collecting information from colleges (13.8%), undergraduates (11.5%), college websites (9.7%), publicity materials for college enrollment (7%), teachers (7%), online media (4.8%), traditional media (4.6%), parents or relatives (3.8%), and friends or classmates (1.8%).

After comparing the most important information sources with the most trusted ones, the Internet, as a modern information source with strong timeliness, abundant information and convenient access, was widely used by the senior three students, but due to lack of effective regulation of

online information and a complex cocktail of both true and false information, it was not trusted by students. Therefore, students trust more the information issued by the school and the education administrative department.

### **4.3 Individual differences in the possession of information sources among senior three students in mainland China**

Interviews with students indicated they rarely had time to spend on the search for higher education information and that their access to information sources showed contingency and randomness. Therefore, when conducting a difference analysis, this study focused on the difference in the possession of information sources of freshmen with different genders, from different high schools, and from different families in the intention-filing stage.

Chi-squares tests indicated no significant difference between males and females, and different family backgrounds and high schools led to significant differences between individual. Details are as follows:

(1) Families with different long-term residences showed significant differences in individual possession of information sources.

(i)The senior three students whose long-term residences were located in “prefecture-level cities, provincial capitals or municipalities directly under the central government” had more access to information through “publicity materials for college enrollment” in addition to using the Internet in the intention-filing stage.

(ii)The senior three students whose families were located in “county-level cities, towns and villages” mainly obtained information through “online media” and second, by using “college entry guide distributed by high school”.

(2) Students differed significantly in the individual possession of information sources as a result of different paternal and maternal educational levels.

(i)The senior three students whose fathers’ degrees are “high school degree or below” were more likely to obtain information through “online media” than those whose fathers’ degrees were “college degree or above”.

(ii)The senior three students whose fathers’ had postgraduate degrees were more likely to obtain information through “parents or relatives” than the students whose fathers’ degrees were “below postgraduate”.

(iii)The senior three students whose mothers’ degrees were “below high school” were more likely to obtain information through “online media” than the students whose mothers’ degrees were “high school or above”.

(iv)The senior three students whose mothers’ degrees were “college degree or above” were more likely to obtain information through “parents or relatives” than the students whose mothers’ degrees were “high school or below”.

(2) Students had significant differences in the individual possession of information sources among different paternal and maternal occupations.

(i)The senior three students whose fathers’ occupations were “industrial worker, agricultural laborer, urban and rural unemployed personnel” were more inclined to obtain information through “online media” than students whose fathers had other occupations.

(ii)The senior three students whose fathers’ occupations were “technical personnel, administrative personnel, state and social administrator” were more inclined to obtain information through “parents or relatives” than students whose fathers had other occupations.

(iii)High school graduates whose mothers’ occupations were “business/service personnel, industrial workers, agricultural laborers, urban and rural unemployed personnel” were more inclined to obtain information through “online media” than those whose mothers had other occupations.

(iv)The senior three students whose mothers’ occupations were “technical personnel, clerk” were more inclined to obtain information through “parents or relatives” than students whose mothers had other occupations.

(4) Students in different high schools had significant differences in the individual possession of information sources.

(i)The senior three students located in "county-level cities, towns and villages" were more inclined to obtain information through "online media".

(ii)The senior three students located in "prefecture-level cities, provincial capitals and municipalities directly under the central government" were more inclined to obtain information through "publicity materials for college enrollment".

(iii)The students of "national model high schools and provincial model high schools" were more inclined to obtain information through "college entry guide distributed by high school" than the senior three students of "municipal model high schools and ordinary high schools".

(iv)"Ordinary high schools" had the highest proportion of students who use the "Internet" to obtain information among all students.

(v)The senior three students from "municipal model high schools and ordinary high schools" were more inclined to obtain information through "teachers and college websites" than students from "national model high schools and provincial model high schools".

(vi)The proportion of the senior three students from "national model high schools" who were informed by their parents or relatives was nearly 10%, the highest among all the students, while only approximately 3 percent of students from other types of high schools obtained information this way.

## **5. Result analysis**

### **5.1 Few sources for senior three students to obtain information**

Information is highly open in modern society, and individuals can obtain information related to education through sources in the form of reading, audio-visual, practice, experiment, visit, discussion, communication, report meeting and so on. Despite the objective existence of these sources, individuals do not have the ability and opportunity to access all sources due to various unfavorable conditions. Typically, an information source is absent due to the different educational backgrounds of the students and their parents and the relatively low levels of their high schools.

Among 3,605 questionnaires for senior three students, 60%-70% of their parents have an educational level of high school or below. Therefore, for this portion of the students, the lack of direct college experience from their parents prevents them from attaining more direct and effective information. Moreover, this portion of students and their parents have less access to people with a higher education background, and they are unable to obtain more relevant information. As a result, these students seek more information online. In contrast, parents with a master's degree have a more profound experience and understanding of higher education and occupy more cultural and social resources. Therefore, they can provide their children with the most effective guidance compared with other parents. At the same time, they are familiar with more people who have a higher education background, which can meet some of their needs for higher education information.

In the same way, key high schools located in big cities have the best source of students; therefore, universities are prone to take the initiative to recruit students in such high schools to attract excellent students. At the same time, the parents of high-quality senior three students are relatively high in both academic level and professional status and occupy more economic, cultural and social resources, so students can obtain more effective information from their parents or relatives. However, ordinary high schools do not have this advantage, and students can only rely on the Internet and the introduction of teachers.

In fact, such students and schools with an information disadvantage comprise the majority of the country. They depend more on traditional information sources, such as the college entry guide distributed by the high school, traditional television, newspapers, magazines, radio and other media known as secondary sources (secondary sources: perceptual information source, processed and extracted from the primary source).

### **5.2 Fewer information sources are actively occupied by individuals**

In the questionnaire for college students, the question, “Do you think the senior three students have enough sources of higher education information during college entrance examination?” was asked. Judging from the answer, 71.1% of the students thought information sources are sufficient. Considering the overall interview results, sources available for senior three students to search information are rich, such as college websites, professional online information platforms, social information consultancies, college student BBS, video courses, and college entry guides. However, students do not actually know about these sources because they pay no attention to information gathering and lack relevant guidance. Thus, they have to rely on traditional, passive, collection sources.

## 6. Discussion

The selection of higher education has the dual nature of investment and consumption. From the perspective of the personal consumption of higher education products, it is nonrepeatable and has strong imperceptibility. Once a student enters college, the cost to change or end his or her consumption would be enormous if he or she finds a mistake in previous decision-making. It causes not only high economic cost but also irretrievable time and psychological cost. The reality tells us students and parents know little about higher education. They usually collect indirect experience and direct information to reduce the risk of purchase before decision-making through various sources. They rely mainly on external information in addition to self-judgment, such as some of the so-called authorities, public media, and the self-promotion of colleges and universities for information acquisition, recognition and screening. For this reason incomplete and inaccurate information has become an important reason for education decision error.

Survey data are shown in Figures 8 and 9:

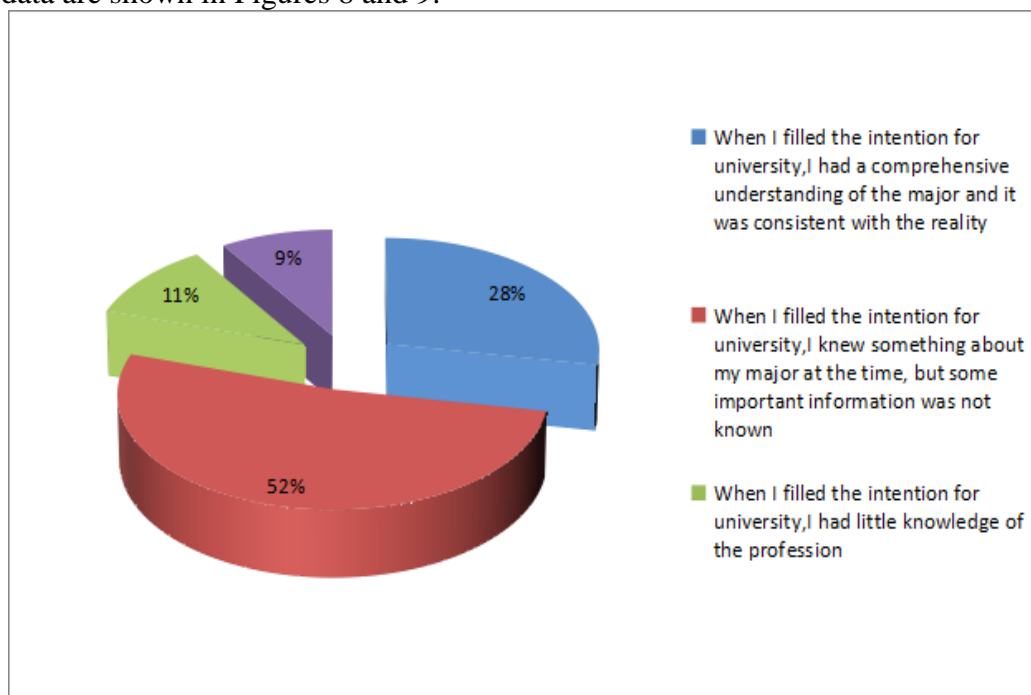


Figure 8 Ratio chart

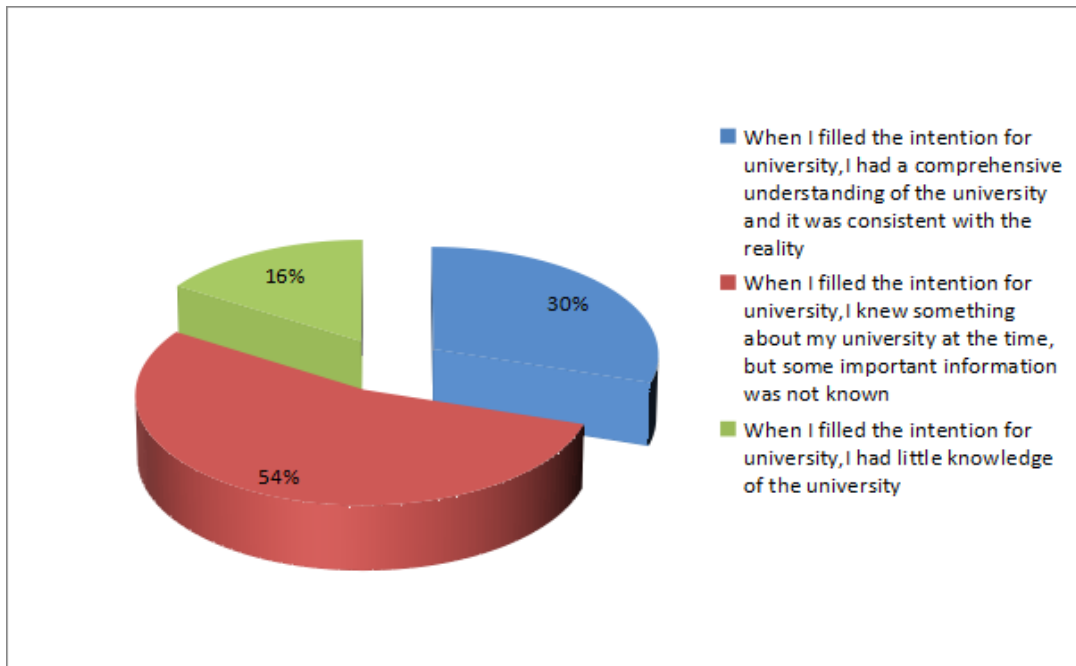


Figure 9 Ratio chart

When filing their intention for university, only 28% of the freshmen surveyed thought they had a comprehensive understanding of the major that was consistent with the reality. When they filed their intention for university, 52% thought they knew something about their major at the time but some important information was not known, 11% thought they had little knowledge about the profession, and 9% did not expect they would major in their current profession (they may have been transferred to this major and therefore did not know about it).

In terms of the choice of colleges and universities, 30% of the students thought they had a comprehensive knowledge of the college and they were in line with the actual situation; 54% thought they had some knowledge of the college, but some important information was not known; and 16% thought they had little knowledge of the college.

This result indicates the amount and quality of information students obtain is insufficient to support a relatively rational choice when students are faced with major choices possibly affecting their career development in life.

What if they had a second chance? As shown in Figure 10, a substantial 52% of the students said they would not stick with their current choice if they could choose again. Among them, 20% would choose another college but not change their major, 19% would change both their college and major, 13% would change their major but not change their college, and 48% would stick with their current choice if they had another chance.

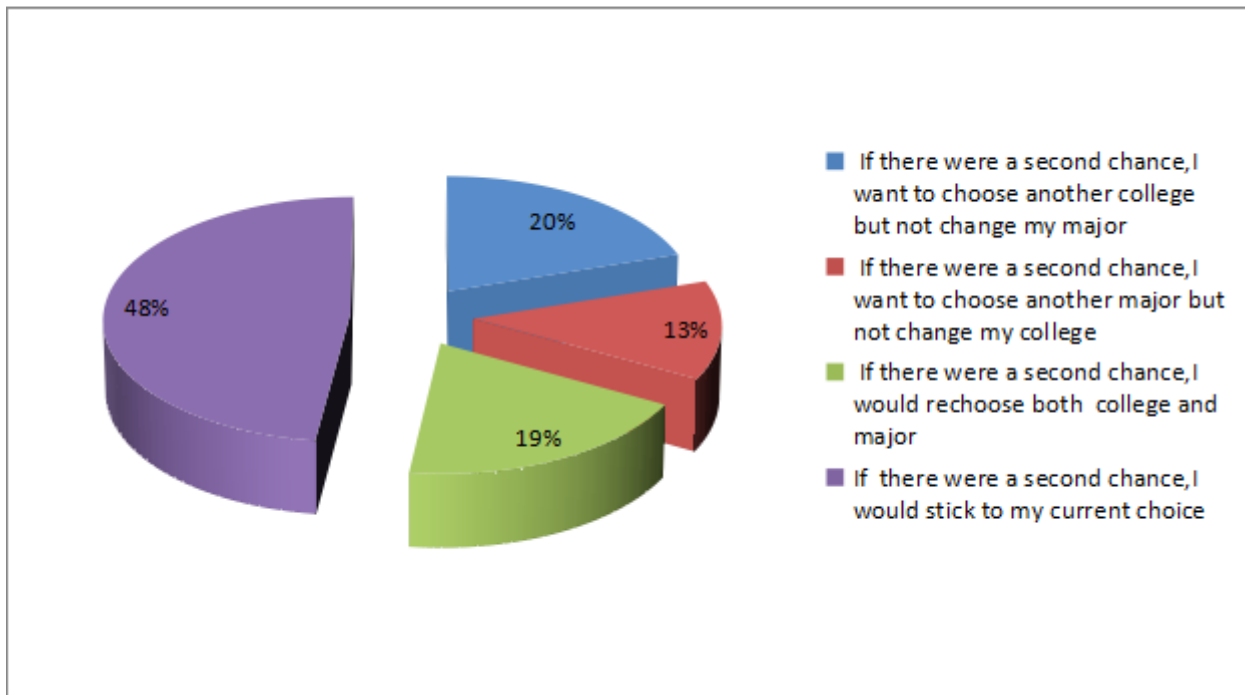


Figure 10 Ratio chart

According to research and analysis, this situation can be attributed to the incomplete information release of colleges and universities, an unsmooth information transmission between colleges and high schools, nonstandardized social media communication, a lack of individual information awareness, a lack of high school development guidance courses and the weak coaching ability of teachers and parents. Therefore, several steps are suggested to enrich information sources, such as constructing the information intermediary government leads or controls, establishing long-term effective information transmission between university and high school, and establishing students' development guidance courses in high school. We should, at the same time, guide senior three students to pay more attention to higher education information to reduce the decision-making risk.

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