

Statistical Survey Report on the Internet Development in China (July 2007)



China Internet Network Information Center

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Chapter One Specifications

I. Glossary

△ Internet User

CNNIC defines the Internet user as Chinese residents aged 6 and above who used the Internet within half a year¹.

△ Computer Host

It refers to a computer which is used by at least one person to access the Internet.

△ IP Address:

It is used to identify a computer host, a server or other devices in the Internet. It is one of the fundamental resources of the Internet, without which one can not get connected with the Internet.

△ Domain Name:

It refers to an identifier of an IP Address which is more conveniently to remember. It is classified into two categories: gTLDs such as “.com”, “.net”, “.org”, etc.; and ccTLDs such as “.cn” for China, “.us” for the United States, etc.

△ Website:

It refers to a website that uses a domain name or “www. + domain name” as the identifier of its IP Address, including those with the Chinese ccTLD “.cn” and gTLDs in China. For instance, the domain name “cnnic.cn” only has one website “cnnic.cn” or www.cnnic.cn”. Other names such as “whois.cnnic.cn”, “mail.cnnic.cn” are treated as different channels of this website.

△ Scope of the Survey:

The statistics of Hong Kong, Macao and Taiwan are not included unless specified.

△ Closing Date for the Survey

The closing date for the survey is June 30, 2007.

¹In the 19th and previous Statistical Survey Reports on the Internet Development in China, an Internet user was defined as a Chinese citizen aged 6 and above who used the Internet at least one hour per week. The definition of “used Internet one hour per week” is to take the statistics, for the initial stage of the Internet, of the active Internet users who are of much substantial matter. According to international practice, however, the Internet User is defined as people who used the Internet within half a year. With the development and penetration of the Internet, the Internet Users in China are mostly active. The data collected respectively according to the two definitions of “used the Internet at least one hour per week” and “used the Internet within half a year” are very close (the difference is within 3%). In this Survey, the CNNIC adjusted the definition from “used Internet one hour per week” to “used Internet within half a year”.

II. Methodologies

In accordance with the statistical theories and International common practice, on the basis of previous 19 statistical surveys, we adopted offline sampling, online survey, computer auto online searching and statistics reporting.

(I) Telephone Sample Survey

The telephone sample survey focuses on the amount and structural characteristics of China's Internet users, conditions for accessing the Internet, their behavior patterns and views as well as the demographic profile of non-Internet users.

1. Collectivity

The target population is divided as follows:

Group A: residents who have telephone at home

Group B: college students who live at school

Group C: residents who do not have telephone at home

Group C is subdivided into:

Group C1: residents with personal handy phones (wireless local service)

Group C2: residents with mobile phones (China Mobile or China Unicom)

Group C3: residents without any mobile phone

Considering that personal handy phones belong to the wireless local service without any charge on all incoming calls and it's impossible to tell the home phone number and the personal handy phone number apart according to an exchange code when conducting interviews, the home phone and the personal handy phone are considered together, namely the target population aged 6 or above in China is divided as follows:

Group A+C1: residents who have telephone at home (including personal handy phones)

Group B: college students who live at school

Group C2: residents who haven't any home phone but mobile phones

Group C3: residents who have neither home phones nor mobile phones

2. Sampling Method

This survey is targeted at the sub-population A+C1 and C2. Sub-population B and C3 are not surveyed because the Internet penetration rate for sub-population B has been up to 90%, the proportion of its Internet users varies little, the data obtained from the survey conducted in June 2006 can be adopted; and because the size of Internet users in sub-population C3 is relatively small, and can be ignored in the view that it will become smaller and smaller with the economic and social development.

Based on the principles of being feasible and scientific, sub-population A+C1 and C2 are stratified according to province.

* Establishment of Sample Target

For sub-population A+C1, the ratio between urban home phone lines and rural home phone lines varies significantly across provinces, and families in urban and rural areas differ greatly in terms of average family size; therefore the measure of people aged 6 or above with home phones is adopted in determining the sample size of each

province. For sub-population C2, the measure of mobile phone users in each province is used in determining each province's sample size, and the measure of people aged 6 and above in a city or prefecture is used in determining the sample size of each city or autonomous prefecture.

★ **Sample Size**

Taking into full consideration such requirements as accuracy, cost and time of the survey, the whole country is stratified into 31 stratum by province and sampling is conducted independently in each stratum. In addition to 5000 samples from the sub-population A+C1, 2500 samples more are taken in the same way in order to better analyze Internet users' behavior patterns; 5000 samples are taken from the sub-population C2.

★ **Sampling Method for Cities of Each Province**

Step One: Considering the accuracy of statistics and in order to get the sample much more close to the self-weighted sample, seven cities are sampled in each province according to PPS sampling, and eight cities are sampled respectively in Guangdong and Sichuan where the number of cities is relatively larger. This survey stratifies capital and sub-provincial cities in advance, in the view that they were more developed than other cities. In other words, capital and sub-provincial cities in a province are picked out as a separate stratum and must be sampled, while the remaining cities and autonomous prefectures are treated as another stratum, from which six or seven cities are sampled. The PPS sampling leads the probability of a city being sampled to be equivalent to the ratio of population aged 6 and above in this region to such population in the province.

Step Two: The telephone exchange codes and mobile segments of all cities and autonomous prefectures are obtained. The last four digits of a phone number, other than the exchange code and segment code, are randomly generated to make up two databases respectively on home phone and mobile phone numbers.

Step Three: In identifying respondents and searching the samples of sub-population A+C1, a person who answers the home phone (including personal handy phone) after the call have dialed through are taken for a respondent. His or her basic family conditions, whether to access the Internet or not, personal background and other family members' briefest profiles are inquired. If he or she doesn't surf the Internet but his or her family member does, then such a family member are randomly sampled to answer the telephone for some questions relating to Internet accessing and for basic personal data.

In searching the samples of sub-population C2, whether he or she is a student is inquired of the answering person after the call have been dialed through a mobile phone. If isn't, he or she will be asked whether there is a home phone or personal handy phone, and belongs to sub-population C2 if the answer is not. Being identified as a respondent, he or she would be asked about his or her access to the Internet.

★ **Weighting Method**

The results obtained in each province are then weighted to infer the national statistics.

3. Success Rate of the Survey

According to the formula III of the American Association for Public Opinion Research (AAPOR), the success rate of the survey is 38.7%

4. Pretreatment of Data

The values of and logical relations among variables are checked before analyzing the data, those invalid samples are subjected to checks, deletions and supplements, and part of variables were encoded afterwards.

There are some averages (e.g. weekly online hours) in the statistical report. Before calculating such averages, abnormal values were removed from the data by such methods as using three standard deviations and checking the logical relations among variables.

(II) Online Survey

The online survey focuses on Internet users' appraisals and typical applications of the Internet.

CNNIC conducted online questionnaire survey from June 8 to June 30, 2007 with a questionnaire posted on CNNIC website and its link provided in the central media websites, national larger ICP/ISP websites and provincial inforports to obtain the feedback from voluntary netizens. And the invalid questionnaires were screened out from those received copies by some technical means. Thanks to the strong support of websites and active participation of netizens, there were 32,161 copies of questionnaire received and 21,714 of them were valid ones upon validity check.

(III) Automatic Online Searching and Statistics Reporting

The automatic online searching is mainly to take such technical statistics as domain name, website, their geographic distribution and other measures. Statistics reported mainly includes total IP addresses, international outlet bandwidth, etc.

1. Total IP Addresses

The IP address statistics by province came from the IP address databases of Asia Pacific Network Information Centre (APNIC) and China Internet Network Information Center (CNNIC). The data statistics adopts the provincial summarization of registered IP address amount with ascertained address located province from two databases. As it is dynamic address allocation, the statistical data is for reference only. Furthermore, Ministry of Information Industry, the national competent authorities of IP address, requires China's IP address allocation units (such as China Telecom and CNC) to report their owned IP address amount semiannually. In order to ensure the accuracy of IP data, CNNIC will

compare the data from APNIC and the above reported data to identify the ultimate IP address amount.

2. Totals of China's Domain Name and Website

The amount of websites and domain names in total, by category and location can be obtained by adding up the following two parts of data.

The first part of data is the amounts of the gTLDs and websites in China, the provision of which are facilitated by domestic gTLD registrars. These data include the amounts of gTLDs and websites that have been launched under gTLDs; the amounts of gTLDs and websites calculated according to domain categories (".COM", ".NET" and ".ORG"); the amounts of gTLDs and websites by province where registrars are located.

The second part of the data is the amounts of domain names and websites under ".CN", which are obtained by the CNNIC through automatic online searching.

3. Total International Bandwidth of China

With the system of reporting data by telecommunication companies, the Ministry of Information Industry can get regularly the data on total international bandwidth that China's operators hold. The data reported are included in the Statistical Survey Report on the Internet Development in China by the CNNIC.

Chapter Two Size and Demographic Structure of Internet Users

I. Size of Internet Users and Internet Penetration Rate

(I) Size of Internet Users

By June 2007, the total of Internet users in China had reached 162 million (Fig. 2.1)², only next to the 211 million³ of United States, ranking the second in the world. Twenty-five million are newly increased as compared with the total number at the end of 2006, and 39 million within a year as compared with that in the same period of 2006. The growth rate was up to 31.7%, entering a new round of rapid growth.

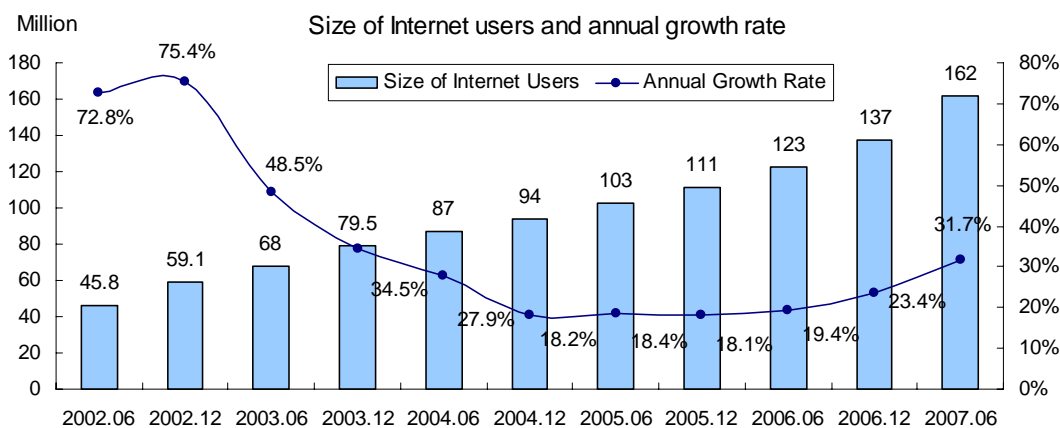


Fig. 2.1 The size and annual growth rates of Internet users in China

(II) Internet Penetration Rate

The Internet penetration rate in China reaches 12.3% at present, increasing about 3 percentage points compared with 9.4% in the same period of 2006 (Fig. 2.2). Internet is

² If Internet users are calculated according to the previous statistical definition, the amount would be 157 million.

³ Source: www.internetworldstats.com, June 2007.

increasingly widely used in China; more and more people will have access to and benefit from it. According to the statistics by the CNNIC, 99% of those accessed the Internet would continue to access the Internet.

In spite of the large size of Internet users in China, the fact of its large population base determines that, its Internet development is characterized by that there has been increases in penetration rate year after year, but the overall level is fairly low (Fig. 2.3) and a big development gap with other countries exists. Iceland's penetration rate, up to 86.3%, is the highest in the world. The United States with the largest population of Internet users and our neighboring Japan and Korea are all above 65%. To advance the rate in China apace and bridge the gap with the developed countries, it calls for persistent efforts to be made by the Chinese governments, Internet enterprises and individuals.

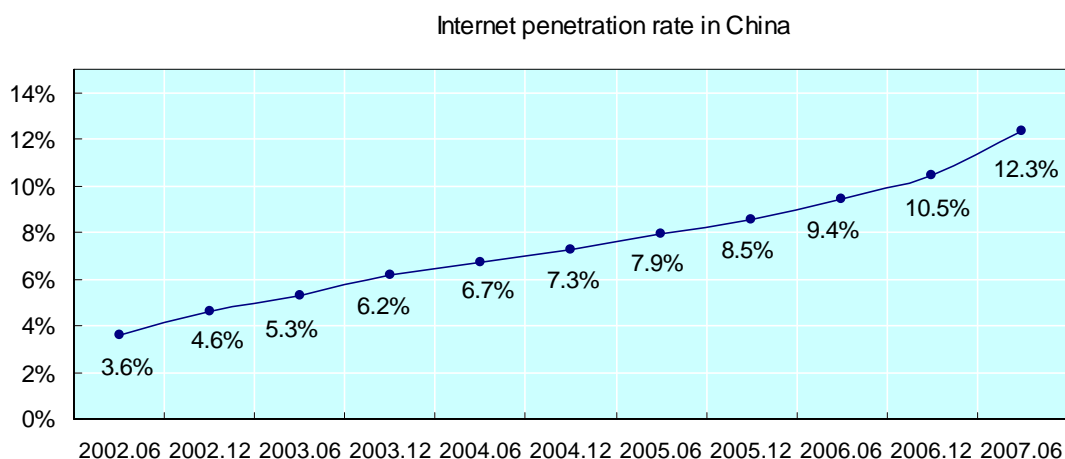


Fig.2.2 Internet penetration rate in China

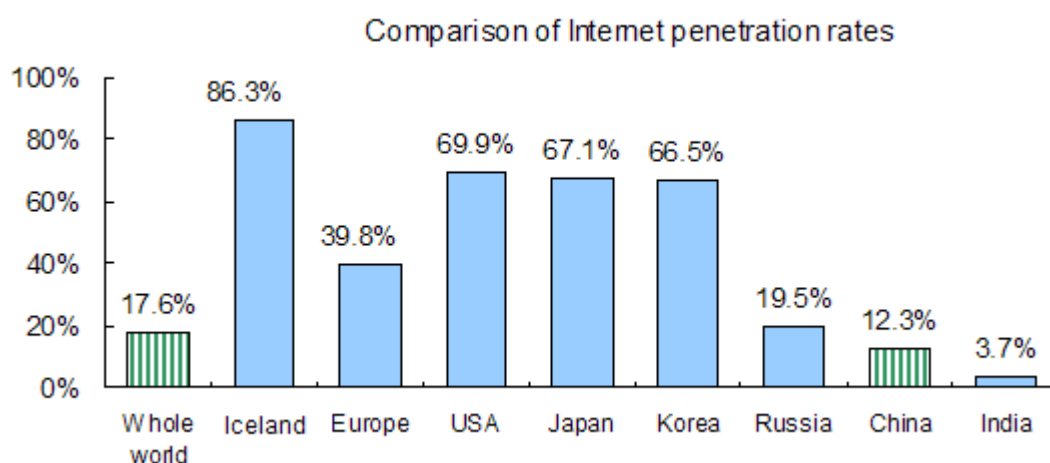


Fig.2.3 Global Internet penetration rates

Studies have shown that the penetration of most innovations features the S-shaped curve, namely there will be a significant increase in the scale as the penetration rate exceeds 10% (Fig. 2.4).

Internet users in China had been totaled 137 million by December 2006, with the penetration rate over the critical point of 10%. In these developed eastern and central provinces, the proportion of Internet Users is above 10% or even 20%, and in some western provinces close to 10%. All these explain that the penetration of the Internet in China as a new phenomenon have reached the critical point, entering into a new phase of rapid growth, and the amount of Internet users will soar within future three to five years.

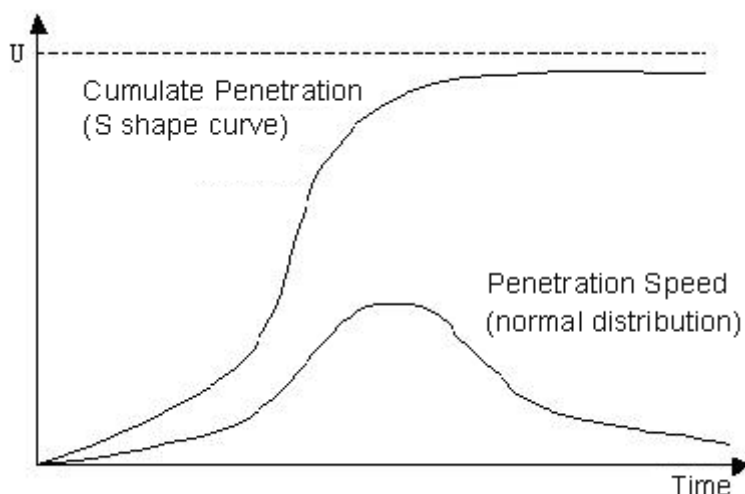


Fig.2.4 S-shape curve for the Penetration of Innovation

Fig. Source: *Penetration of Innovations*, Everett M. Rogers, Central Compilation & Translation Press, June 2006

II. Size of Internet Users by Access Method

Note: Access methods are mainly classified into broadband (including dedicated lines) access, dial-up access and wireless access. According to current situations of development, this survey gathers the statistical information on users with wireless access and users with mobile phone access in particular.

Of the total 162 million Internet users, broadband (including dedicated lines) users have already been up to 122 million⁴. The increase in broadband users implies that the access conditions in China have been further improved and therefore more users could enjoy pleasant visits to the Internet with faster speed and more stable connection. The ADSL and dedicated line account for a considerable proportion of the broadband users.

The trend of development and the amount of Internet users vary across the main access methods. Compared with that of the end of December 2006, the amount of broadband users (including dedicated line) obviously went up, with an increase of 18 million within half a year. In particular, the number of dedicated line users grew steadily to

⁴ The number is 108 million except for those users of dedicated lines.

28.80 million, by a slight increase of 1.7 million; the number of dial-up users continues to decline, and nevertheless more than 31.60 million users are dial-up users.

Wireless access⁵, especially the mobile phone Internet access has developed rapidly in China. Satisfying some users' special needs, it has a certain size of users. The wireless users add up to 55.64 million at present (Fig. 2.5), and in particular the size of mobile phone users is 44.30 million.

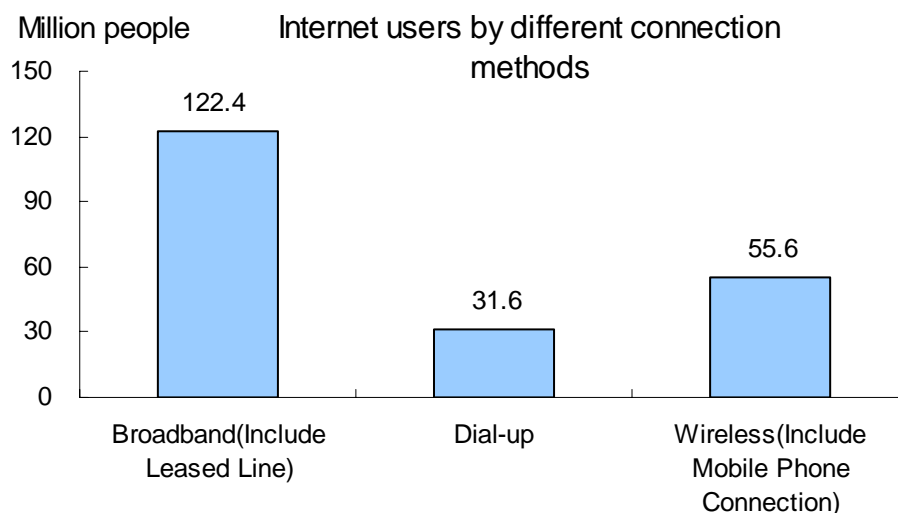


Fig.2.5 Size of Chinese Internet users by access method

III. Size of Internet Users and Internet Penetration Rate by Group

△ Structural Characteristics of Internet Users

They refer to the proportions of Internet users of different groups to the total 162 million Internet users. In the age structure, for example, the proportion of those aged between 18 and 24 to the total of 162 million Internet users is 33.5%, that is:

Proportion of Internet Users Aged 18-24= Amount of Internet Users Aged between 18 and 24/ Total of 162 million Internet Users=33.5%

△ Internet Penetration Rate by Group

It refers to the proportion of Internet users of a certain group in China to the very group. Take age group for example, the penetration rate in the age group 18-24 is 43.4%:

Penetration Rate in the Age Group 18-24=Amount of Internet Users Aged between 18 to 24 / Amount of Population Aged between 18 to 24=43.4%

⁵ Wireless Access: It includes the Internet access through a mobile phone, a laptop and other devices.

(I) Gender

1. Gender Structure

The proportion of female Internet users is gradually increasing (See Fig. 2.6), with the gap between proportions of female users and male users gradually filled. By June 2007, such proportion had registered a record 45.1%. Female Internet users are holding another half on the Internet. However, it has not yet been in proportion to the ratio of 51.5% male to 48.5% female in China.

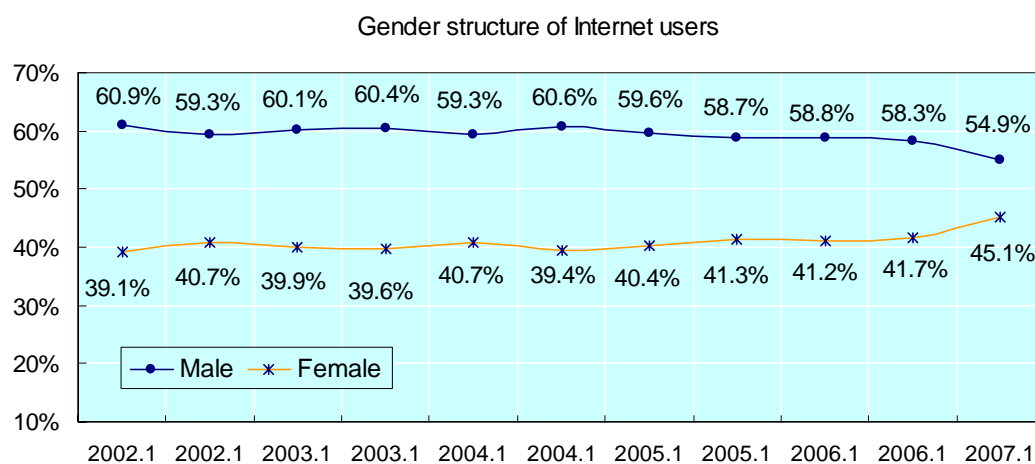


Fig.2.6 Gender structure

2. Size of Internet Users and Internet Penetration Rate by Gender

Female Internet users have totaled 73 million and male counterparts 89 million.

Corresponding with the gender structure of Internet users, the gap in Internet penetration rate by gender is relatively small. The rate of female users is 11.5%, 1.6 percentage point lower than that of male counterparts, gender equality being earlier embodied in the Internet than in other areas. However, the Internet penetration rate in China, whether of the male or the female, is not high as compared with those in foreign countries.

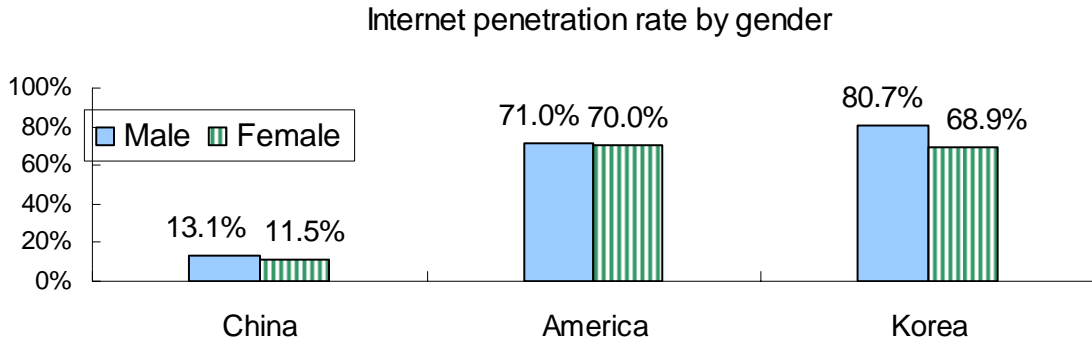


Fig.2.7 Internet penetration rate by gender

Source: 1. Data of USA - www.pewinternet.org, March 2007;
 2. Data of Korea - NIDA, February 2007.

(II) Age

1. Age Structure

The development is uneven in China in terms of age structure of Internet users, which are mostly younger users. More than half (51.2%) of the total 162 million Internet users are those under the age of 25, and those at the age of no more than 30 account for 70.6% (Fig. 2.8).

The proportion of student users is high, which is corroborated by the age structure. As shown in table 2.1, the proportion of non-student users aged below 25 was close to 1/4 (24.8%), down by 50% as compared with that of Internet users aged below 25.

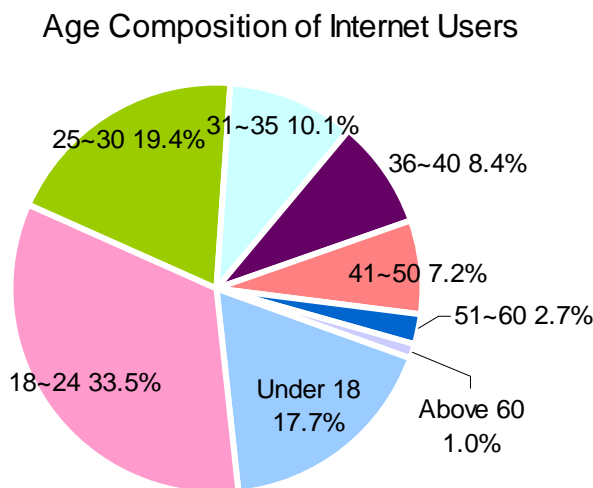


Fig.2.8 Age groups of Internet users

Table 2.1 Comparison between student users and non-student users

	Student	Non-student	Total
Under 18	46.2%	1.0%	17.7%
18 ~ 24	50.2%	23.8%	33.5%
25 ~ 30	3.4%	28.7%	19.4%
31 ~ 35	0.1%	16.0%	10.1%
36 ~ 40	0.1%	13.2%	8.4%
41 ~ 50	—	11.4%	7.2%
51 ~ 60	—	4.2%	2.7%
Above 60	—	1.7%	1.0%
Total	100.0%	100.0%	100.0%

2. Size of Internet Users and Internet Penetration Rate by Age

The Internet users aged below 25 have totaled 82.94 million in size, accounting for a half of the total of 162 million users (Fig. 2.9). Then as the age grows, the amount of Internet users become much less. There are only 1.7 million Internet users among the population aged over 60 years of 170 million.

In the age structure, Internet users aged between 18 and 24 account for the largest proportion. Ranking the highest, the Internet penetration rate of this age group exceeds 40%, which indicates that 4 out of 10 persons at this age are Internet users (Fig. 2.10).

As shown by data, the Internet penetration rate varies greatly by age in China, the figure below on the Internet penetration rate by age is obviously a tailed curve. According to the level of Internet penetration rate, China's population can be roughly classified into four groups (Fig. 2.11): the first one consists of those aged below 18, whose Internet penetration rate is 8.9%; the second one is the youth group at the age of 18 to 30, and the rate hits 34.5%, indicating that more than 1 out of 3 persons access the Internet; the third one is the young and middle-aged group at the age of 31 to 50, and the rate is 10.5%, indicating that more than 1 out of 10 persons accesses the Internet; the fourth one includes the rest middle-aged and elderly people at the age of above 50, and the rate is only 1.7%, indicating that only about 1 out of 50 persons accesses the Internet.

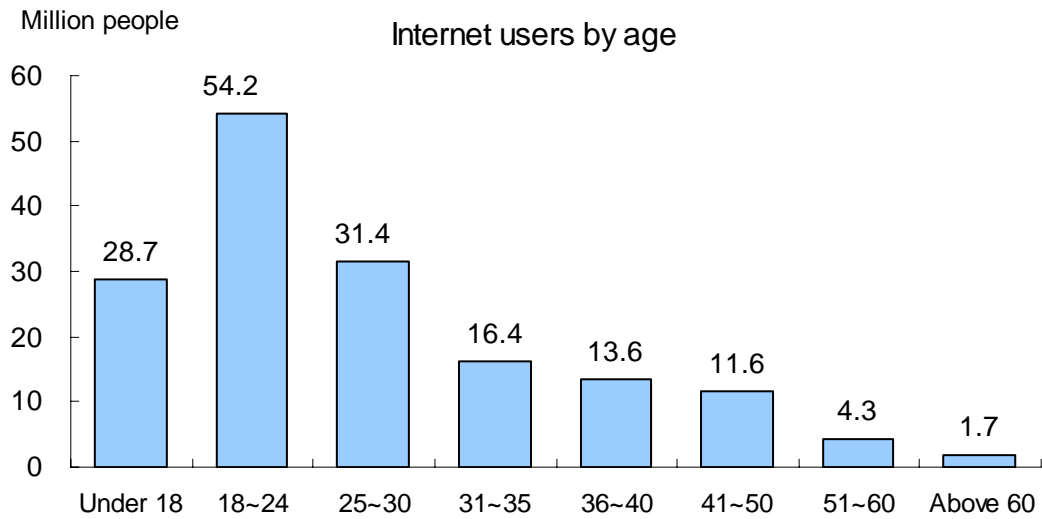


Fig.2.9 Number of Chinese Internet users in different age group

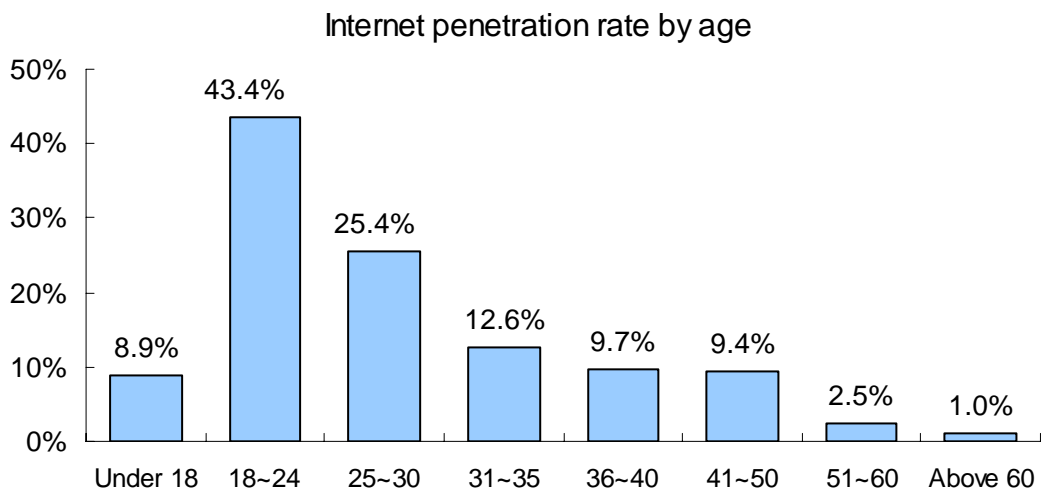


Fig.2.10 Internet penetration rate in different age group in China (1)

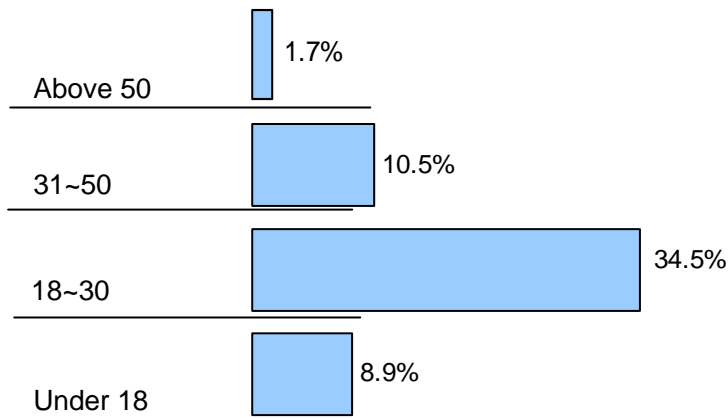


Fig.2.11 Internet penetration rate in different age group in China (2)

(III) Educational Level

1. Structure of Educational Level

A large proportion of Chinese Internet users hold high academic degrees, those with tertiary education accounting for 43.9%, of which 50% have received undergraduate education or more. Historically, the structure of Internet users have undergone changes in terms of educational degree, with the proportion of these holding higher academic degrees declining and that of those holding lower academic degrees gradually increasing (Fig. 2.13).

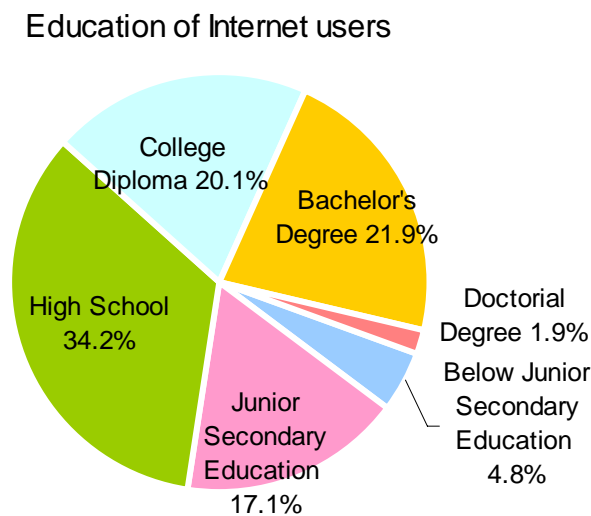


Fig.2.12 Education levels of Chinese Internet users

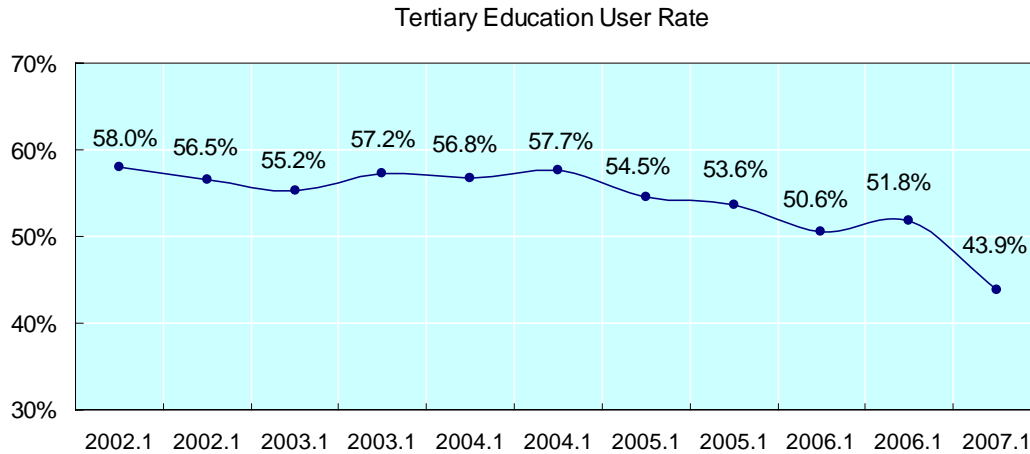


Fig.2.13 Proportion of Chinese Internet users with junior college educational background

2. Size of Internet Users and Internet Penetration Rate by Educational Level

According to the demographic distribution by educational level, the CNNIC defines those with tertiary education⁶ as high academic degree holders. It can be seen from Fig. 2.14 that Chinese Internet users with tertiary education amount to 71.21 million, accounting for over 40% of the 162 million Internet users, and those with junior secondary education or less amount to 35.43 million. The quick and effective way to popularize the Internet, therefore, is to try our efforts to make the operations on the Internet much easier and simpler.

With respect to penetration rate, the Internet is still the tool of these holding higher academic degrees and has yet to be a stage for common public to understand the world. The penetration rate has exceeded 90% for the group with tertiary education, equaling to those of developed countries. However, it slumps with the lower level of education. The penetration rate falls sharply to 34.8% for the group with senior secondary education, and less than 6% for the group with junior secondary education or less. In the demographic structure of educational level, the proportion of the group with tertiary education is only 5.8%⁷

⁶Tertiary education here refers to college education received through full-time study and also includes adult tertiary education and other equivalent education

⁷ Source: China Statistical Abstract 2007, China Statistics Press, May 2007.

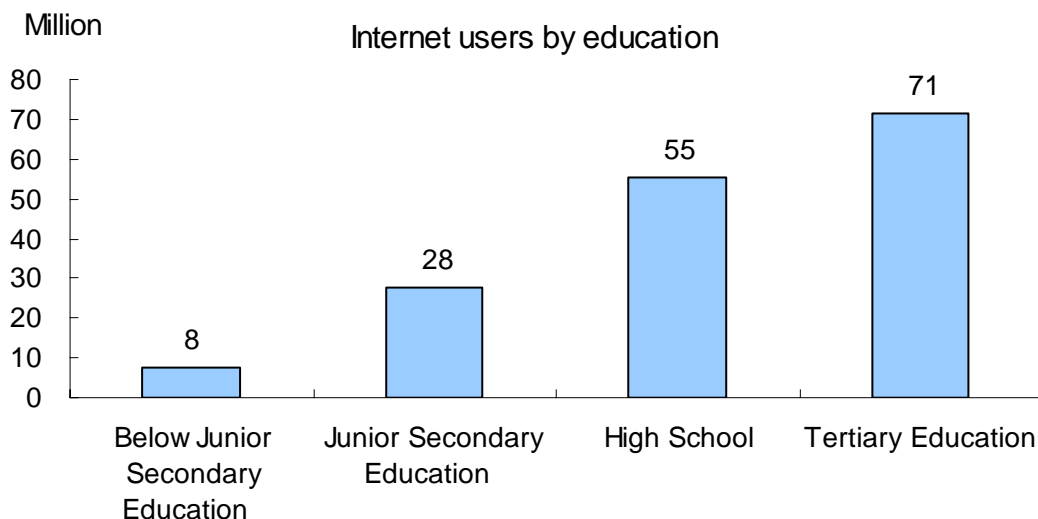


Fig. 2.14 Internet users by education

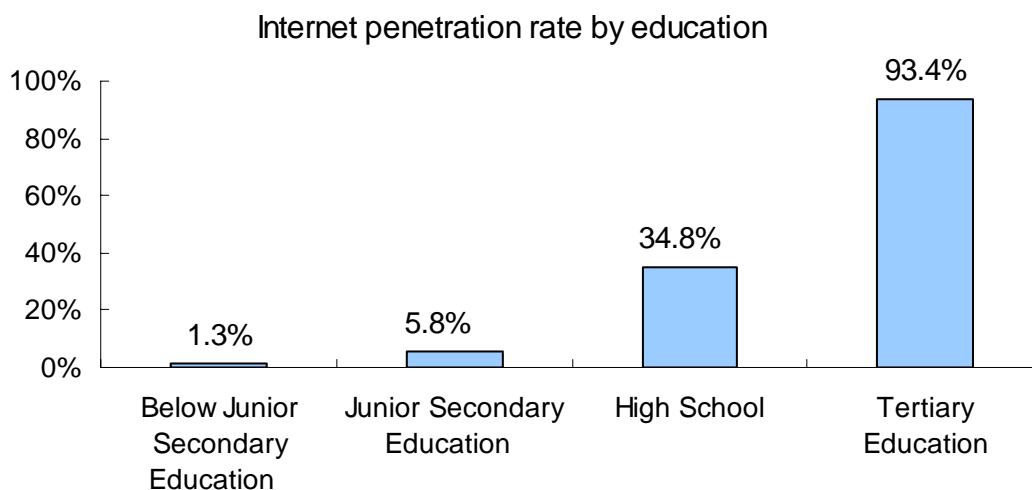


Fig. 2.15 Internet penetration rate by education

(IV) Marital Status

Note: The statistical scope of the married and unmarried is the population at the age of 15 or above while that of Internet users is the population at the age of 6 or above. In view of the different scopes, the size of Internet users and Internet penetration rate by marital status are not represented here.

Continuing the previous structural characteristic of marital status, the unmarried users constitute a major proportion of the Internet users on the whole, up to 57.9%. The main determinant of this characteristic is the age structure. The Internet user population is characterized by the younger age structure and therefore the marital structure is correspondingly featured by the fact that the unmarried is in majority.

(V) Profession

Note: There is no demographic data by enterprise and public institution in China Statistical Yearbooks, therefore no Internet penetration rate for the population excluding students is presented here.

The proportion of student users is quite large, up to 36.7%. This characteristic, in mutual corroboration with the younger age structure, have an influence on the structure of individual monthly income, leading to a large proportion of people with low monthly income and a small consuming capacity by students.

Profession structure of Internet users

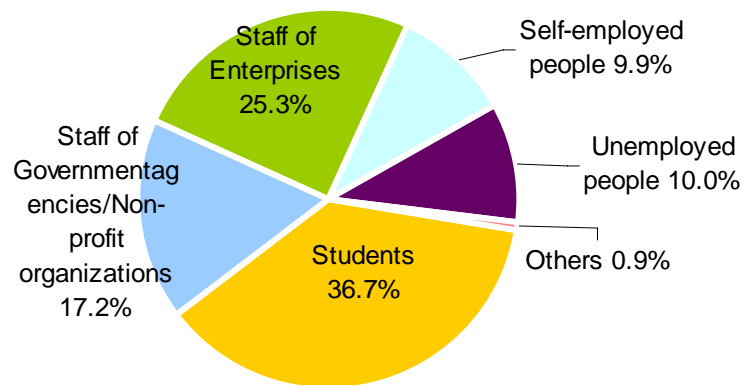


Fig.2.16 Profession structure of Chinese Internet users

Of the 216 million students⁸, the Internet users have reached 59.45 million, with the Internet penetration rate up to 27.5%, that is, 1 out of 4 students is an Internet user. Leaving students aside, company employees take up the largest proportion and have added up to more than 40 million as shown in Fig. 2.17. Moreover, the amounts of the unemployed and freelancers are also large and exceed 16 million respectively.

The non-student users, which have larger consuming capacity than student users, are more valuable to Internet firms. As shown in the curve of development, the number of non-student users with larger consuming capacity has been going up steadily, close to 103 million at present.

⁸ Source: China Statistical Abstract, China Statistics Press, May 2007. Preschool children are not included in the data on students.

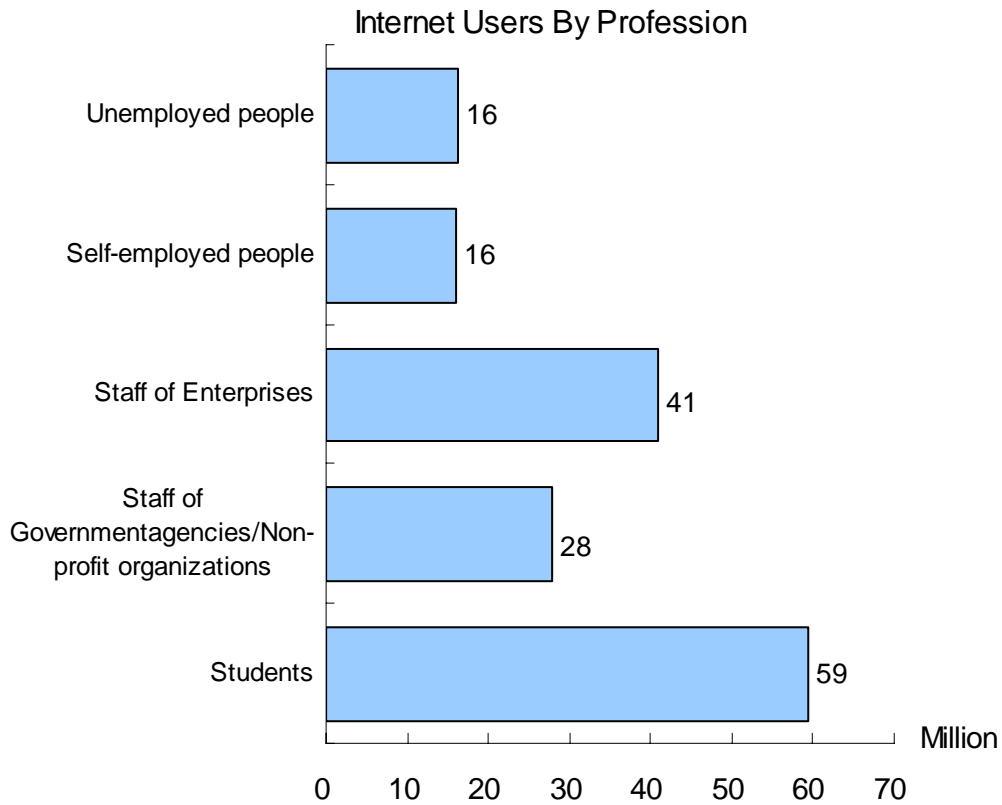


Fig.2.17 Size of Chinese Internet users by profession

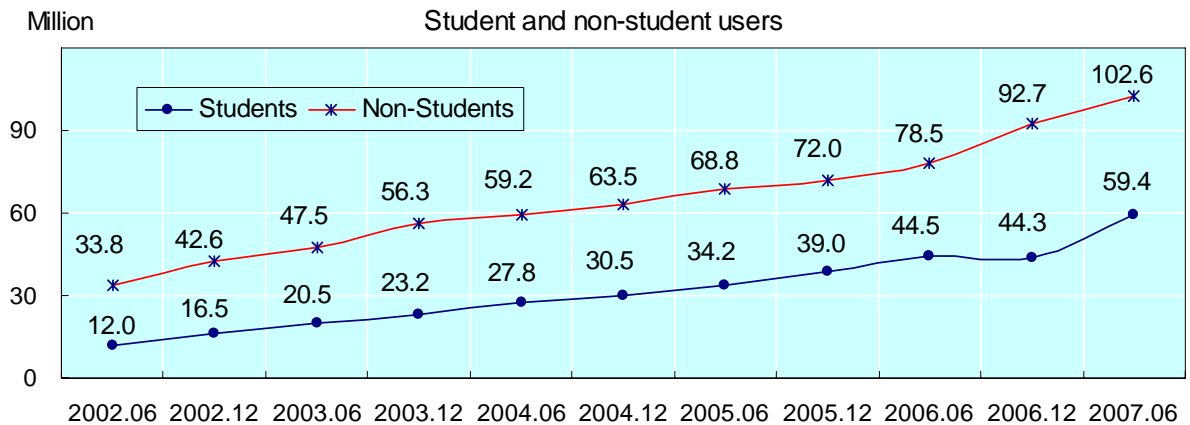


Fig.2.18 Size of student users and non-student users in China

(VI) Individual Monthly Income

Note: The Internet penetration rate and size of Internet users by individual monthly income are not presented here due to lack of the statistical data on the individual monthly income of the whole population in China.

In general, Internet users in China have a relatively low income. Users with a monthly income of no more than 1,500 Yuan account for 66.1%, and only 33.9% users have a monthly income above 1,500 Yuan. In particular, those who have an income but of less than 500 Yuan take up a larger proportion, up to 30.3%.

A large proportion of student users have a significant influence on the income structure. As shown in Table 2.2, if we leave the student users aside, the proportion of users who have a monthly income over 1,500 Yuan climbs to 53.6% of the non-student users, up by 20 percentage point.

Personal monthly income of Internet users

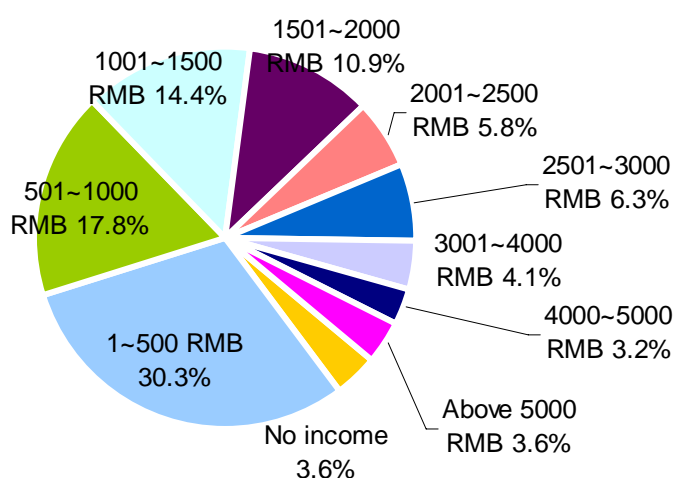


Fig.2.19 Income structure of Chinese Internet users

Table 2.2 Monthly income comparison between student users and non-student users

	Student	Non-student	Total
No income	4.5%	3.0%	3.6%
1 ~ 500	73.5%	4.0%	30.3%
501~1000	18.5%	17.3%	17.8%
1001~1500	1.8%	22.1%	14.4%
1501~2000	0.5%	17.3%	10.9%
2001~2500	0.4%	9.1%	5.8%
2501~3000	0.7%	9.7%	6.3%
3001~4000	0.1%	6.5%	4.1%
4001~5000	0.0%	5.1%	3.2%
Over 5000	0.0%	5.9%	3.6%
Total	100.0%	100.0%	100.0%

(VII) Place of Residence

A percentage of 76.9% of the 162 million Internet users are urban users, and the urban penetration rate has registered 21.6%, well above the rural penetration rate of only 5.1%.

The gap between urban and rural areas is great, but has already narrowed: As compared with December 2006, the urban penetration rate of the Internet have increased by 1.4 percent point as against 20.2% half a year ago, while the rural penetration rate of the same period have increased by 2 percentage points from 3.1% at the end of 2006.

Chapter Three Fundamental Resources of Internet

I. IP Address

China has been allocated with 118 million IPv4 addresses, with annual growth rate of 39.5%. Like the number of Internet users, the amount of IP addresses is soaring at its swift growth period.

China owns 4.4% of IPv4 addresses, ranking third in the world, just next to the United States (59.7%) and Japan (6.6%)⁹. As China's National Internet Registry, CNNIC has an IP address allocation windows of 4B, which is the largest throughout the world. CNNIC now can allocate over 260,000 IP addresses at one time, needing no examination of APNIC.

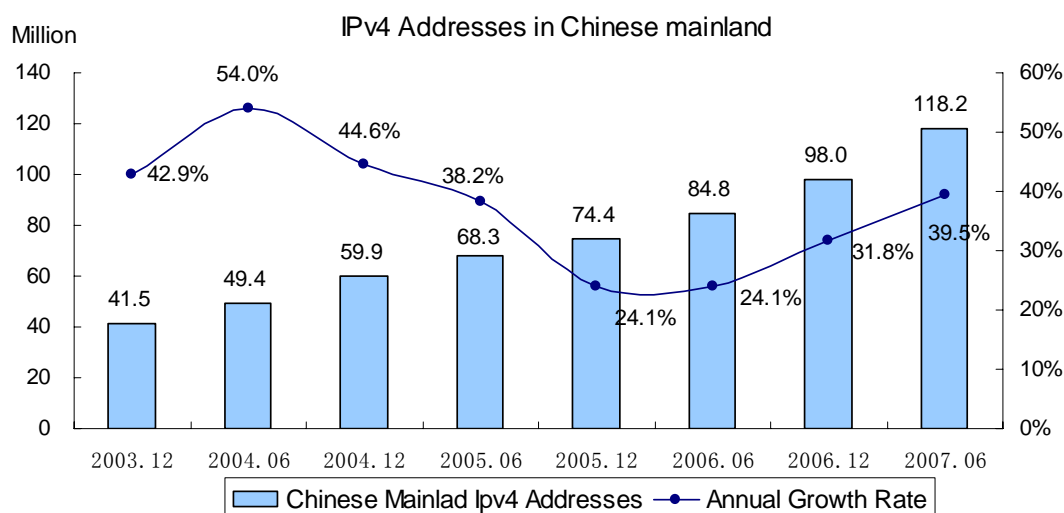


Fig.3.1 The growth of IPv4 addresses in Chinese mainland

Up till now, there are less than 800 million IPv4 addresses to allocate globally. According to the current address allocation progress, it is predicted that all these IPv4 addresses shall be used up somewhere in 2009 to 2012. Therefore the research of IPv6

⁹ Date source: Regional Internet Registry (RIR).

address is significantly emphasized in every country.

China's research on IPv6 address assignment is still in its initial stage. The Chinese mainland has been allocated 27 blocks of /32 of IPv6 address. By the end of April 2007, the global top five countries in the amount of IPv6 addresses allocated were Germany, France, Japan, Korea and Italy. It can be seen that IPv6 addresses have been principally allotted to some developed countries. By geography, Japan and Korea in Asia-Pacific Region are getting ahead in the development of IPv6. Chinese mainland ranks fifteenth in the world for its amount of IPv6 addresses. Please refer to Table 3.2 for the amount of IPv6 addresses in the mainland, Hong Kong, Macau and Taiwan, China. The appendix Table A3 is about the assignment of IPv6 addresses in different units in the Chinese mainland.

Table 3.2 IPv6 address quantities in Chinese mainland

Region	Address quantity
Chinese Mainland	27 blocks /32
Taiwan	2308 blocks /32
Hong Kong	9 blocks /32
Macau	2 blocks /32

II. Domain Name

The swift growth of China's domain names has facilitated its Internet industry. As of the end of June 2007, the Chinese mainland had owned 9.18 million domain names, an increase of 5.07 million in the first half and a growth of 6.23 million over the same period in 2006, with average annual growth rate of 211%. China's domain names are growing in an explosive way. The major factor that contributes to the growth is the increase of China's ccTLD, or CN domain name.

CcTLD is the foundation and guarantee for a country to develop the Internet and plays a significant role in facilitating Internet development and keeping Internet information security of the country. Thanks to the guidance of the competent authorities and the efforts of China's ccTLD registry, CNNIC and those registrars, CN domain name has been dominant in China. So far, the CN domain names have amounted to 6.15 million, 58.9% of China's total domain names, with annual growth rate of 416.5%, which is the first that the registration number of ccTLD exceeds that of gTLD in China.

Compared with other countries, China's ccTLD number is only second next to Germany. Please refer to Table 3.5.

From the view of per capita resource, every 10,000 Chinese own 70 domain names in average, yet 22 domain names in June 2006, thus the per capita resource has increased greatly.

Table 3.3 Domain names in China

	Number	Percentage
CN	6,149,851	67.0%
COM	2,301,912	25.1%
NET	553,372	6.0%
ORG	174,304	1.9%
Total	9,179,439	100.0%

Table 3.4 .CN domain names in China

	Number	Percentage
.CN	3,620,051	58.9%
.COM.CN	2,018,880	32.8%
.NET.CN	215,797	3.5%
.ADM.CN	147,121	2.4%
.ORG.CN	103,585	1.7%
.GOV.CN	31,093	0.5%
.AC.CN	10,178	0.1%
.EDU.CN	3,139	0.1%
.MIL.CN	7	0.0%
Total	6,149,851	100.0%

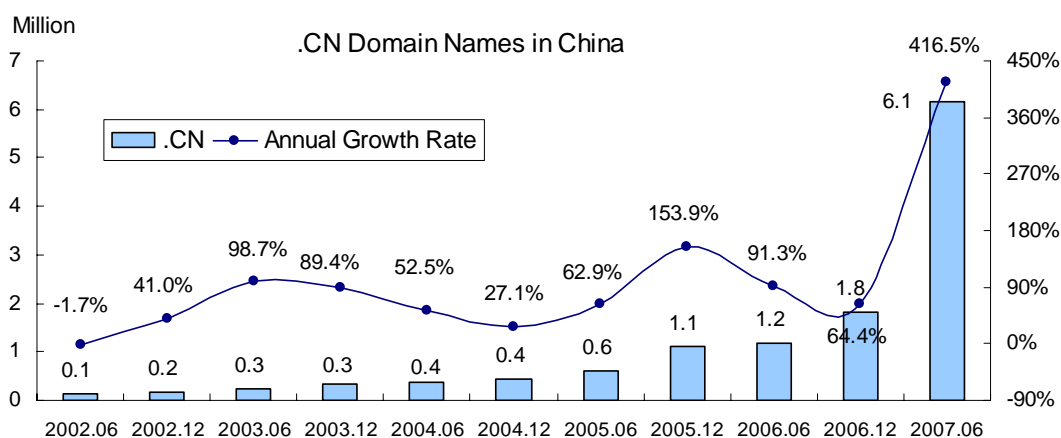


Fig.3.2 The growth of .CN domain names in China

Table 3.5 Top 3 ccTLDs in the world

	Domain postfix	Quantity of ccTLD (100 thousand)
Germany	.DE	1105
China	.CN	615
United Kingdom	.UK	604

Data source of other countries www.denic.de, June 2007.

III. Website

The number of websites has some relativity with the richness of contents in the Internet. The more websites, the more information available for the Internet users. By June 2007, there were 1.31 million websites in China, an increase of 470,000 websites in the first half year, and 520,000 websites more than that in the same period of 2006, with annual growth rate of 66.4%.The websites with .CN domain name increased most. There were 810,000 .CN websites with annual growth rate of 137.5%, which has a direct relation with the explosive increase of .CN domain names in the first half of year 2007 in China. So far, every 10,000 persons have 10 websites in China, an increase of four over the same period in 2006.

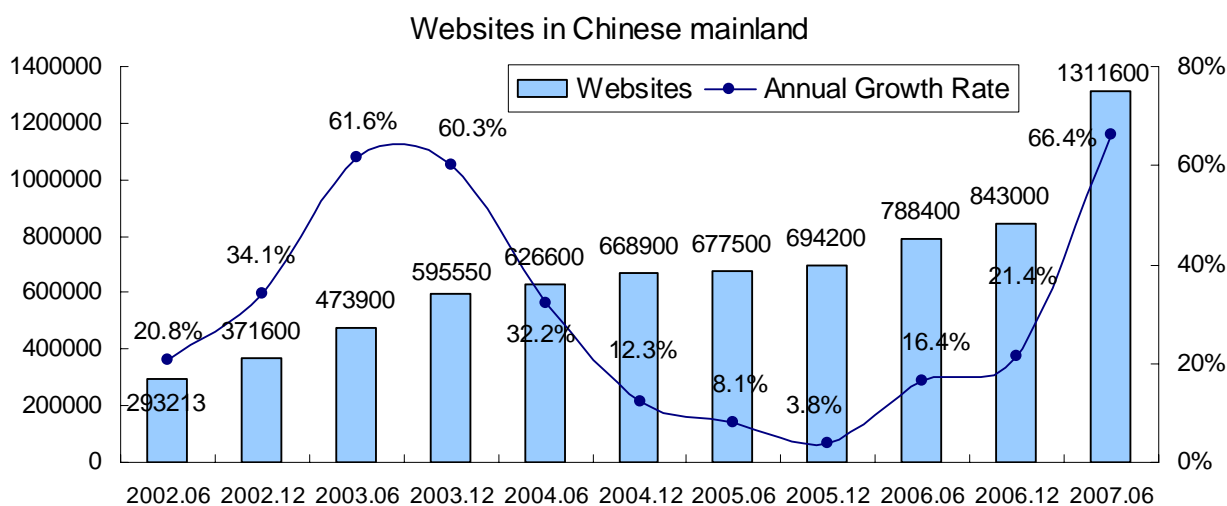


Fig.3.3 The growth of website in Chinese mainland

Note: the data is not inclusive of websites under EDU.CN.

Table 3.6 Website number in China

	Number	Percentage
CN	813,357	62.0%
COM	399,004	30.4%
NET	85,355	6.5%
ORG	13,884	1.1%
Total	1,311,600	100.0%

Table 3.7 CN website number in China

	Number	Percentage
.CN	498,635	61.3%
.COM.CN	261,842	32.2%
.NET.CN	21,057	2.6%
.GOV.CN	15,334	1.9%
.ORG.CN	8,927	1.1%
.ADM.CN	7,108	0.8%
.AC.CN	453	0.1%
.MIL.CN	1	0.0%
Total	813,357	100.0%

IV. International Bandwidth

The bandwidth has close relationship with the speed. The wider the bandwidth, the faster the access to the Internet. A country's international bandwidth indicates its connection capability with the international Internet. China has an international bandwidth of 312,346Mbps and it is connected with the United States, Russia, France, Britain, Germany, Japan, Korea and Singapore, etc.

China's international bandwidth grows quickly with annual growth rates that are over 40% almost every year, and even 200% in June 2002. Currently, China's every ten thousand Internet users enjoy a bandwidth of 19.3Mbps, small increase from the 18.7Mbps in December 2006.

The Internet international access can only be conducted by China's operators. In China, the Chinanet occupies the majority of the international outlet bandwidth, as high as 155,705Mbps and CNC comes next with bandwidth of 122,066Mbps. See Table 3.8.

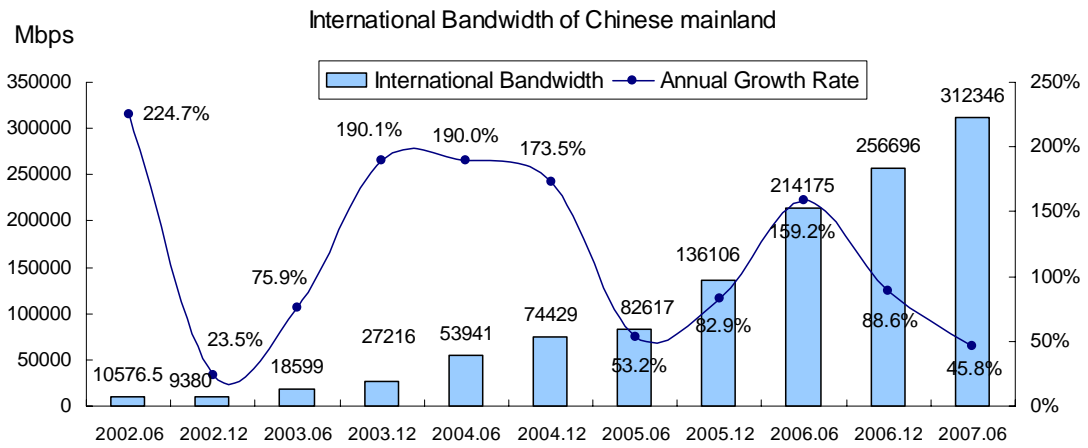


Fig.3.4 The growth of International bandwidth in Chinese mainland

Table 3.8 International bandwidth of seven backbone Networks in China

	International bandwidth (Mbps)
CHINANET	155,705
CHINA169	122,066
CSTNET	17,710
CERNET	4,796
CMNET	8,260
UNINET	3,807
CIETNET	2
Total	312,346

Chapter Four Internet Access Conditions

I. Equipment

(I) General

Computers (including desktops and laptops) are the major basic equipment for connection to the Internet. China's computer hosts have amounted to 67.10 million, an increase of 7.70 million sets over the year end of 2006, an increase of 12.60 million sets over the same period of 2006, with annual growth rate of 23.1%, lower than the Internet user growth rate of 31.7%.

The increasing computer hosts implies China's improvement on access to the Internet. In per capita, it is 0.41 set of computer host per capita, which is related with China's actuality. A high proportion of Internet users surf online in Internet cafés and many Internet users don't possess their own computers.

As to the equipment adopted, the desktop is dominant yet diversification is coming. So far over 96% of Internet users use desktops to access to the Internet (see Fig.4.2). And laptops are entering Internet users' everyday life with about 20% of Internet users using them to connect the Internet. Another big change is that WAP has become a fashion with 27.3% of Internet users using mobile phones to access the Internet.

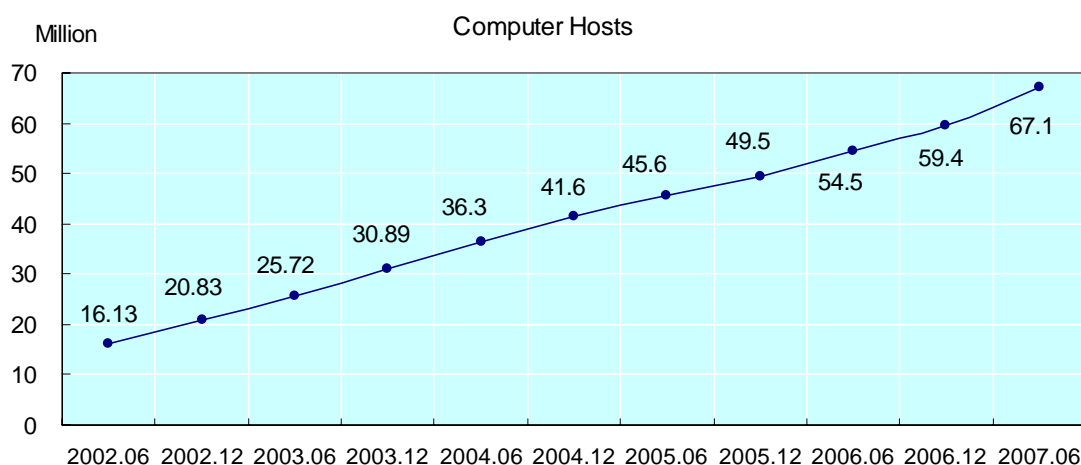


Fig.4.1 Computer hosts of Chinese Internet users

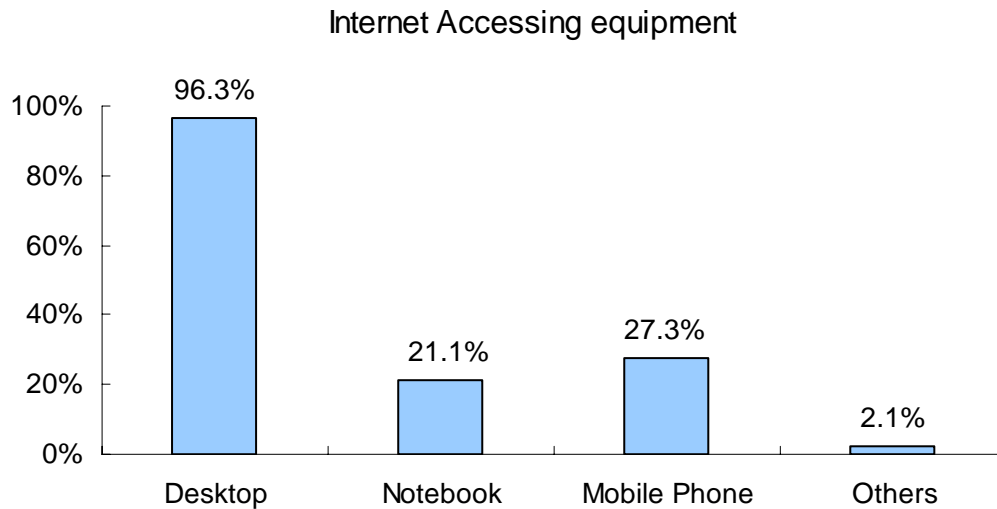


Fig.4.2 Proportion of accessing equipments of Chinese Internet users

Note: "Others" include PDA, IT appliances and other Internet-capable facilities.

(II) Home Surfing Equipment

The home is the most important site to surf online. According to the experience of Internet developed countries, the higher the Internet development degree, the higher the proportion of surfing online at home. For example, the proportion of surfing at home is 97% in Korea and it is 93%¹⁰ in Hong Kong (China). China is also witnessing an escalating proportion of surfing at home with the current 73%. Undoubtedly the development status of home surfing equipment is an important parameter to weigh China's surfing equipment.

According to the data as of the end of 2005 publicized by National Bureau of Statistics, there was one or more computer(s) in 20.3% of Chinese families, which methods about one fifth of families have the precondition to connect to the Internet. Yet CNNIC data indicates that the proportion of families connected to the Internet was only 13.0%. Compared with Internet developed Korea, China families' basic surfing equipment is lagging behind as shown in Fig.4.3. China still has a long way to go on Internet penetration in families.

¹⁰ Korean data source: NIDA, Feb. 2007; Hong Kong data source: *Statistical Survey Report on the Internet Development in China*, CNNIC, Jan. 2007.

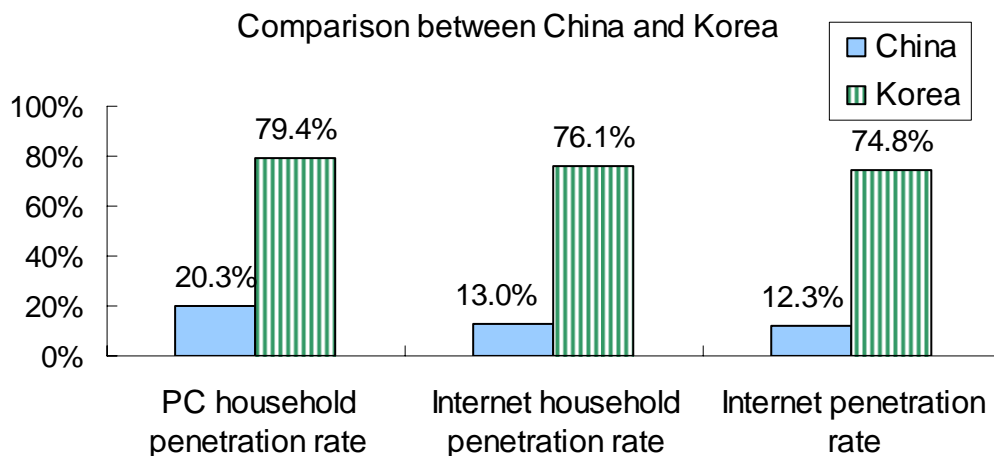


Fig.4.3 PC/Internet penetration rate in China and Korea

II. Methods of Internet Access

As to methods of Internet access, broadband (including dedicated lines) are focused on for its high speed and stable connection, benefiting Internet users and Internet enterprises as well. It is broadband that can make many kinds of application such as online video realized and popular.

According to the broadband connection statistics launched by CNNIC since 2002, the number of broadband users soared with current broadband access proportionated 75.6%. The Internet access conditions are growing better. Yet the rest Internet users still suffer from slow dial-up connection.

WAP (including mobile phones) has become a rising connection method. If broadband connection can be described as "swift", then WAP, especially mobile phone connection features "convenience". As Fig. 4.4 shown, among frequently used connection methods, WAP accounts for 34.3% and its mobile phone connection is dominant with a proportion of 27.3%. The particularity of WAP caters to some special demands with faster development obtained. Given sufficient time, WAP would break through the limit of speed, expenses and contents, then it, especially the application of mobile phone to connect, would be an emerging market. Currently more and more Internet users are using mobile phone to connect to the Internet.

In general, China's Internet access is developing in a proper and swift way, and the connection methods and surfing equipment are tending to diversify. China has owned the typical characteristics for rising Internet sector. The Internet is necessarily to develop at

high speed.

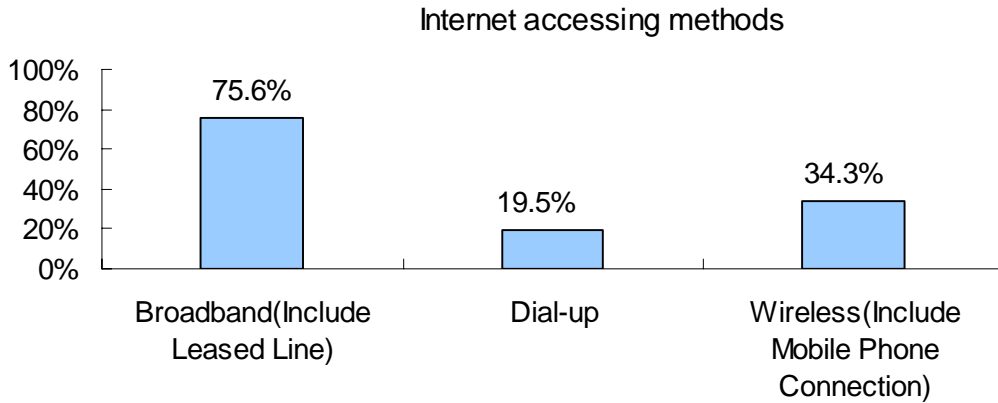


Fig.4.4 The three major Internet accessing methods among Chinese Internet users

III. Internet Access Expenses

In China, the Internet access expenses are falling year after year. It is no longer the exclusive activity of good-paying crowd. Just like everyday commodity, it is also consumed by ordinary people.

(I) Most of Chinese Internet Users Pay Their Own Internet Access Expenses.

Over 90% of 162 million Chinese Internet users pay for their Internet access expenses, 71.7% of them pay in full and only 8% of them don't pay by themselves, as shown in Fig. 4.5. In China, the access expenses are also significant factor deciding whether to connect the Internet and how long will be spent.

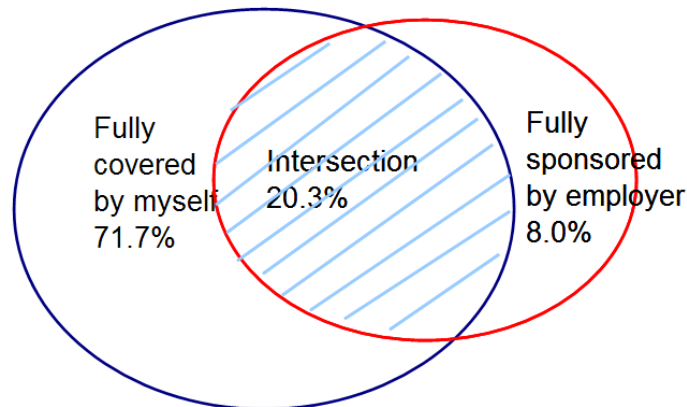


Fig.4.5 Payment sources of Chinese Internet users

(II) Falling Internet Access Expenses in China

The access expenses per capita are 75.1 Yuan/month in China, lower than before. The improving citizens' income and falling access expenses will certainly promote the Internet access. In light of the access expenditure pattern, 44.6% of Chinese Internet users at their own expenses spent less than 50 Yuan/month for access to Internet (see Fig. 4.7). As to the form of settlement for access expenditure (as shown in Fig. 4.8), it is diversified for free selection.

There is a little difference on the access expenditure between student users and non-student users. The access expenditure of student users is 63.6 Yuan/month averagely yet 80.8 Yuan for non-students.

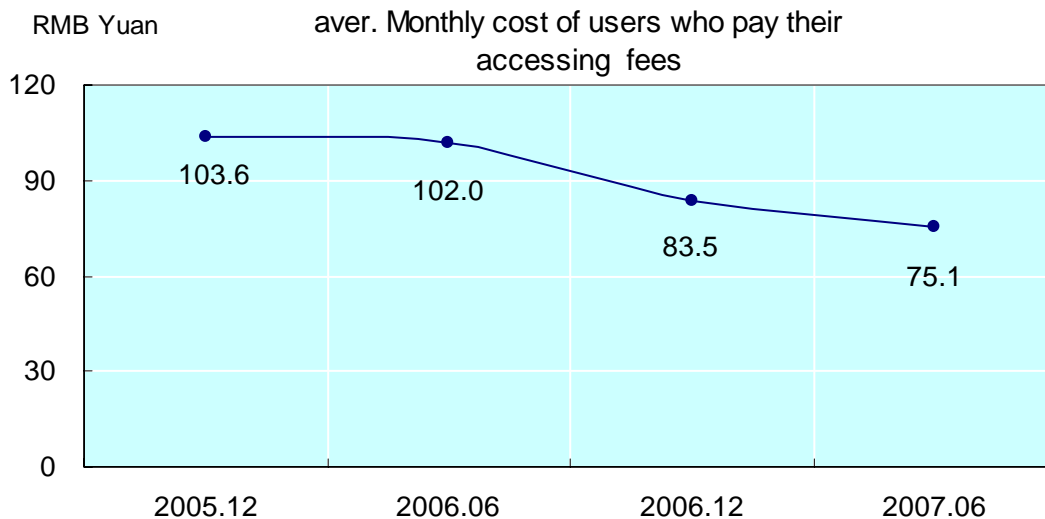


Fig.4.6 Average monthly Internet access expenses of Chinese Internet users

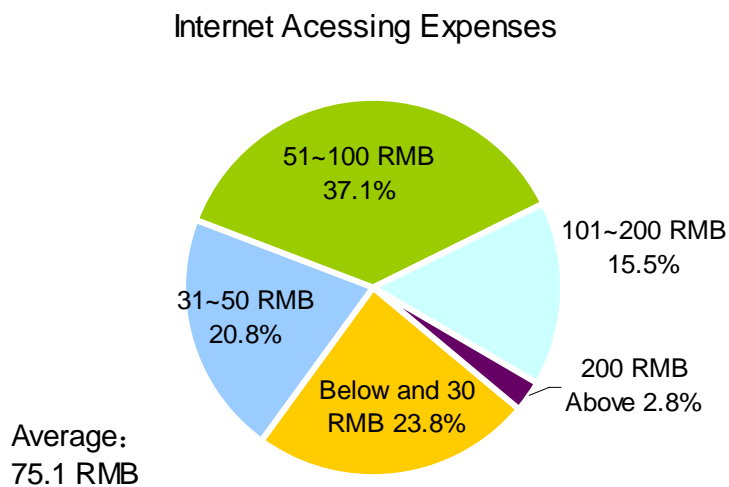


Fig.4.7 Average monthly Internet accessing expenses of Chinese Internet users

Forms of settlement for access expenditure

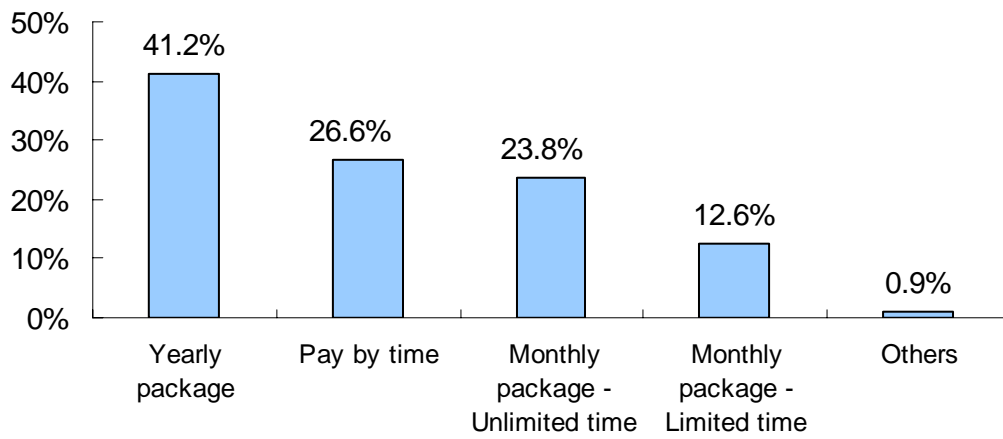


Fig.4.8 Form of settlement for access expenditure

Chapter Five Behavior and View of Internet Users

I. Habits of Surfing Online

(I) Place of Surfing Online

A significant change on the surfing site is the sharp rise of the proportion of Internet cafés. A percentage of 37.2% of Internet users declared they often went to Internet cafés, five percentage points higher than 32.3% in December 2006 (see Fig. 5.1), which was the first time that the proportion of surfing in Internet cafés was higher than the proportion of surfing in the working sites, and became the second largest Internet surfing site.

The proportions of Internet users surfing online at home and in working sites are stable with 73.8% and 31.2% respectively. In comparison with countries with higher Internet penetration, the proportion of surfing in Internet cafés is on the high side in China and the proportion of surfing online at home is not very high.

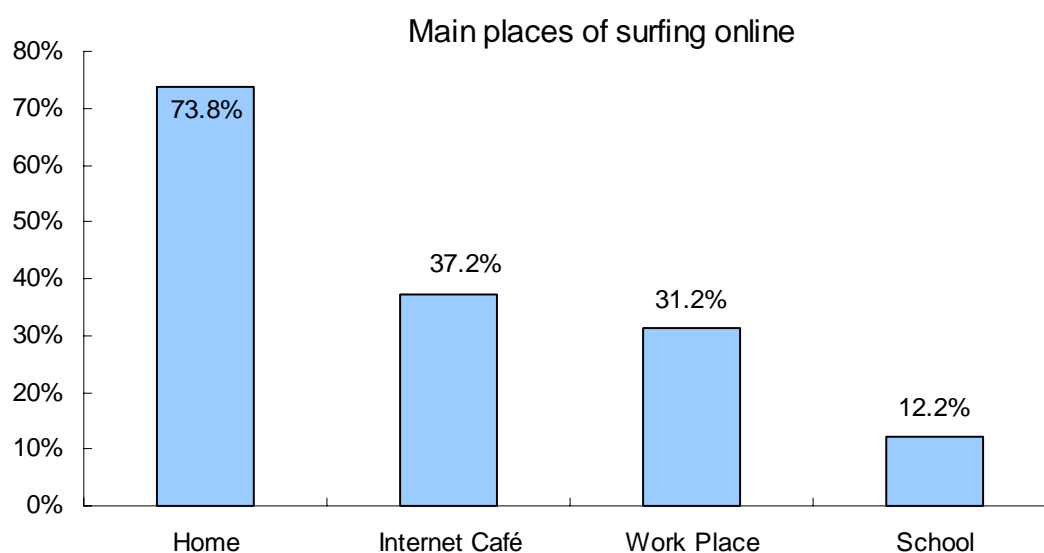


Fig.5.1 Places of surfing online of Chinese Internet users

(II) Duration of Surfing Online

Now the average weekly surfing hours are 18.6 hours for Chinese Internet users (see

Fig. 5.2), a little longer than that in Korea (13.3 hours) and Hong Kong (15.1 hours)¹¹ of China. Compared with the history data, the online hours are still increasing year by year for Chinese Internet users, nearly two hours more than the 16.9 hours of December 2006.

There is difference in online time for different types of Internet users. Compared by gender, the male Internet users have longer online time with average weekly 20.6 hours and the female with 16 hours. The Internet penetration is similar to the male and the female Internet users yet the female Internet users pay less attention to the Internet than the male Internet users do. Considering it by student status, it is obvious that student users have less online time for their attending of classes than the non-student users do with the former of 12 hours online per week on average and the latter of 22.4 hours.

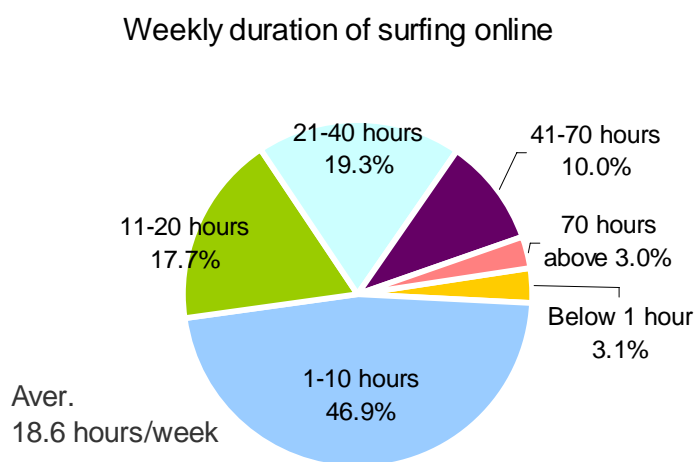


Fig.5.2 Duration of surfing online of Chinese Internet users

(III) Time Point of Surfing Online

As shown on Fig. 5.3, the online rush hour still focuses on 20:00 to 21:00 with the peak of 20:00 in a whole. Over 60% of Internet users surf online in the time period and the secondary maximum is 14:00. The trough is from 0:00 to 8:00.

There is some difference for student Internet users and non-student Internet users in the surfing time. The non-student Internet users have a higher proportion of surfing in the rush hour and the peak continues to 21:00 with 68% of non-student Internet users involved. Other parameters like gender and monthly income have little influence on the surfing time of Internet users.

¹¹ Korean data source: NIDA, Feb. 2007; Hong Kong data source: *Statistical Survey Report on the Internet Development in China*, CNNIC, Jan. 2007.

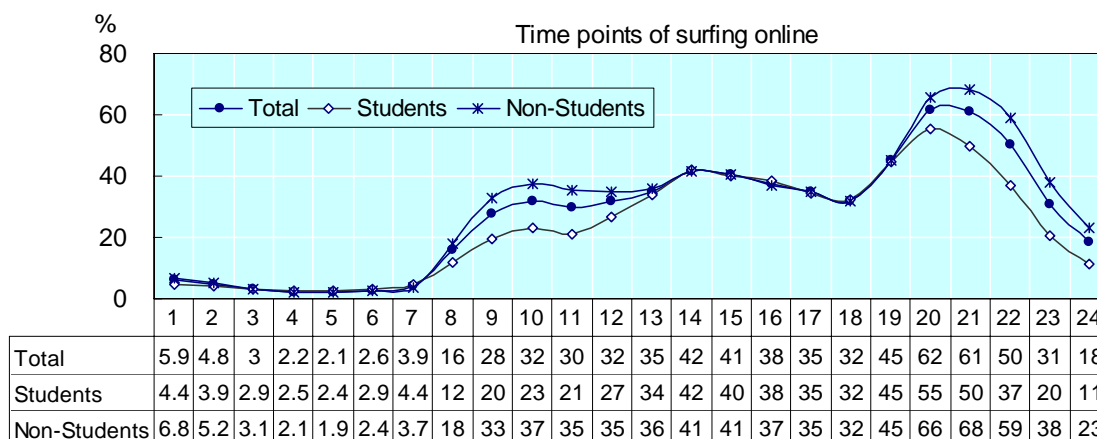


Fig.5.3 Time points of surfing online of Chinese Internet users

II. Application of Internet

Note: The utilization rate of network application used in this report refers to the frequency of "use", generally higher than the proportion of "frequent use" in former years. The former comes from the telephone sampling result and the latter from the online survey result. The current data and the history data can't be used for comparative analysis.

After a few decades' development, the functions of the Internet have developed into four aspects at least, i.e. information channel, communication tool, recreation tool and life helper. Its information channel function are mainly expressed by online news, search engines and burgeoning blog; its communication application are represented by electronic mails and instant communication; its typical recreation function has the forms of online music, online cinema and television, and online games; its life helper role are demonstrated in such matters as online hunting for a job, online education, online shopping, online reservation of a trip, online banking and online stock transaction. The authentic digital times will only come if these kinds of Internet application penetrate into people's daily life.

For the utilization rate of main stream network application, please refer to Table 5.1.

Table 5.1 Application of the Internet in China

	Usage		Usage
Information		Life assistance	
News	77.3%	Look for jobs	15.2%
Search Engine	74.8%	Online education	24.0%
Blog Writing	19.1%	Online shopping	25.5%
Communication		Online sales	4.3%
Instant message	69.8%	E-journal	3.9%
Email	55.4%	Online banking	20.9%
Entertainment		Stock	14.1%
Online music	68.5%		
Online video	61.1%		
Internet games	47.0%		

(I) Channel of Information

Information channel is a basic function of the Internet and has been widely utilized by Chinese Internet users. The Internet ranks first among the information sources for 76.3% of Internet users. For most of Internet users, the Internet is not only a principal information channel but also their preferred one. A great number of Internet users have formed the mindset that the Internet conveys the latest news at the highest speed. The online survey result shows that 90.4% of the Internet users would search online for any information needed and 76.3% of them admitted that they got to know critical news from the Internet firstly.

Yet the conventional information channels like television and newspaper are still important for most of Internet users. Over 60% of Internet users still obtain information from TV and newspaper frequently besides the Internet.

The Internet users with monthly income over 2,000 Yuan, aged between 25 and 40, and tertiary education received, feature certain power of consumption and relatively active thought. They are a group focused on by all enterprises. The CNNIC survey indicates that there are 15 million of the above-mentioned Internet users. The Internet's information channel function is especially important for the group. A percentage of 89.2% of the group takes the Internet as the main information channel, and their mentioned proportions of newspaper and television are lower than the Internet coverage ratio by nearly 15 and 22 percentage points respectively.

Online news and search engines are the typical application of the Internet as an information channel. The utilization rates of the two kinds of network application are pretty

high for Chinese Internet users with about 75% of them reading news and using the search engines online, yet compared with the developed United States, China's information channel function of the Internet still has something to desire. Please refer to Fig. 5.6. Besides the two kinds of application, blog writing is booming in China with 19.1% of Internet users, or 30.94 million persons, have interest in writing a web blog.

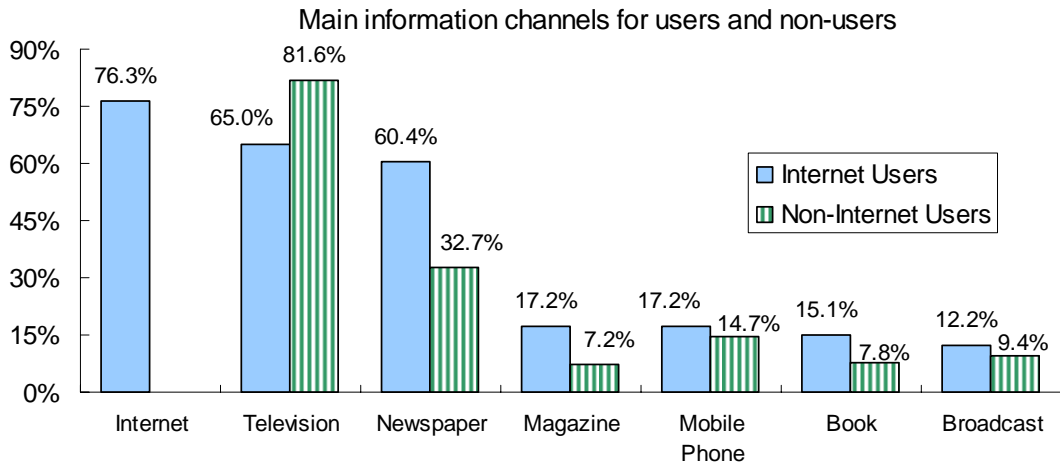


Fig.5.4 Information channels for users and non-users

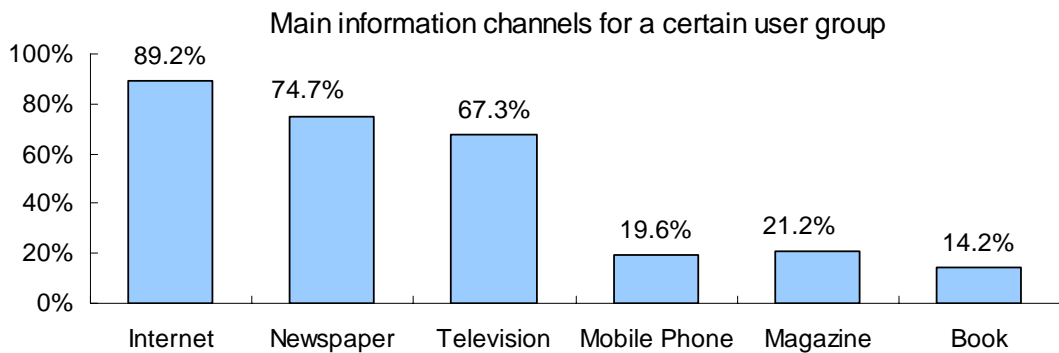


Fig.5.5 Main information channels for a user who earns more than RMB 2000 Yuan per month, age between 25~40, with education level above junior college

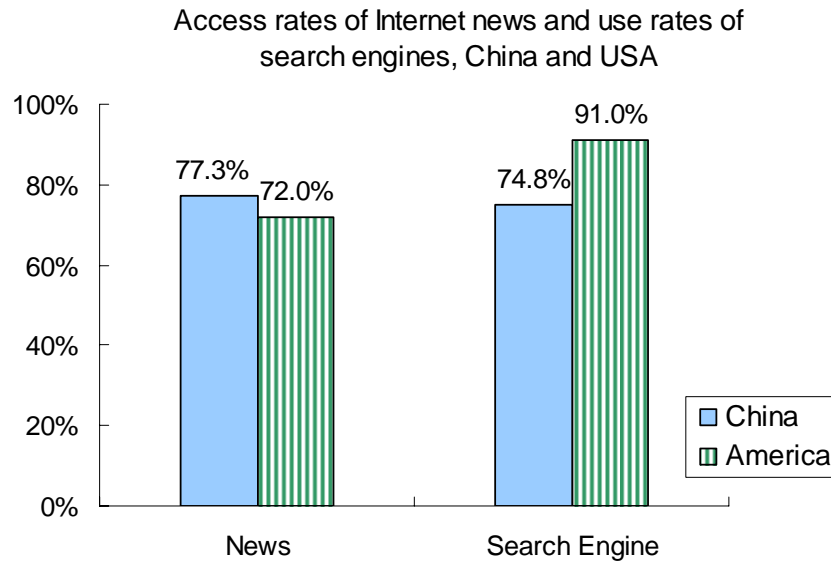


Fig.5.6 Comparison of access rates of Internet news and use rates of search engines China and USA

(II) Communication Tool

Chinese Internet users have a good utilization of the Internet's communication tool function yet the penetration still has something to desire.

The Internet's communication tool function develops with certain Chinese feature in China. Instant communication is especially developed in China with 69.8% of Internet users communicating online, yet its utilization rates are less than 50% in the United States and Korea respectively; the utilization rates of emails in the United States and Korea have exceeded 90% yet only 55.4% of Chinese Internet users use them.

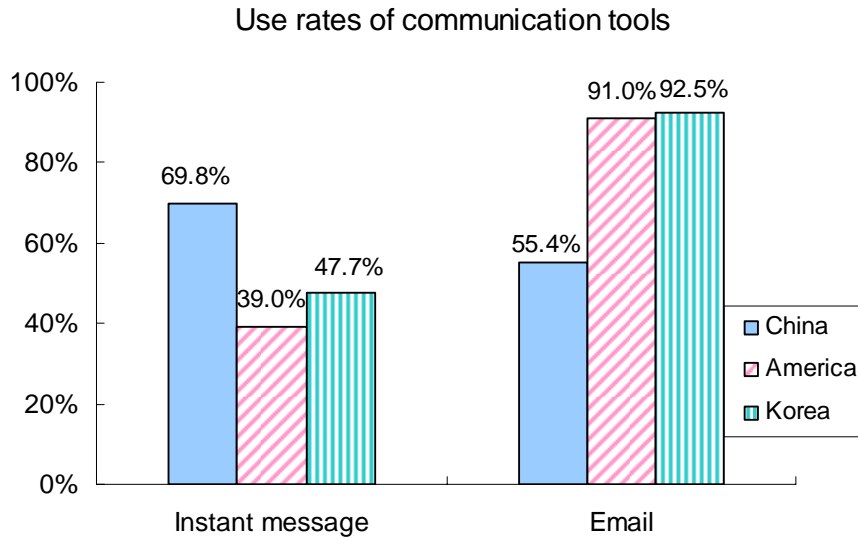


Fig.5.7 Use rates of communication tools

Note: USA data source : www.pewinternet.org, March, 2007;
Korea data source: NIDA, March, 2007.

(III) Recreational Tool

The recreational function of the Internet is universal in China. Its three kinds of representative application, i.e. online music, online cinema and television, and online games all have high utilization rates. A percentage of 68.5% of Internet users have appreciated or downloaded online music and 47.0% of Internet users have played online games with average monthly expenditure for online games charges of 84 Yuan for paying users. The online survey result shows that 51.1% of Internet users thought the recreation life would be less colorful if there were not the Internet.

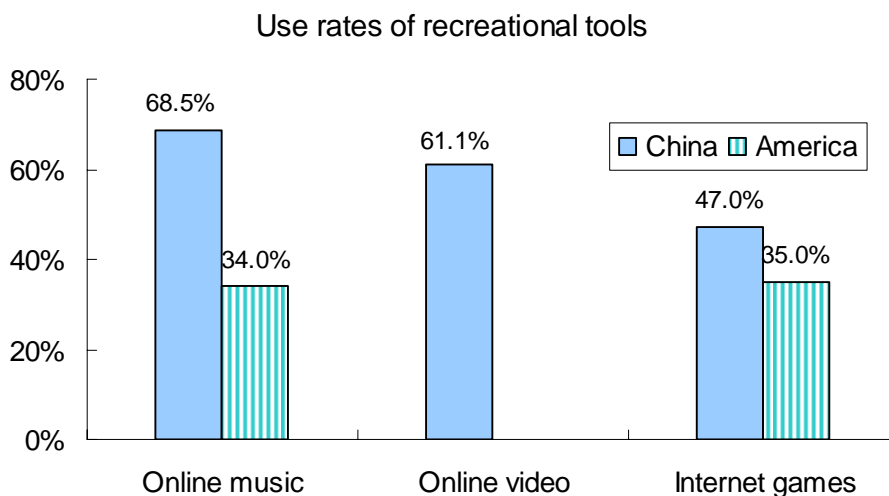


Fig.5.8 Use rates of recreational tools

Note: the figure does not show the segment of online video in the USA

Source: www.pewinternet.org.

(IV) Life Helper

Life helper is the extension function of the Internet with great convenience brought to Internet users. Some representing functions include: online hunting for a job, online education, online shopping, online marketing, online reservation for a trip, online banking and online stock transaction, etc. Yet so far Chinese Internet users still have little application with these functions, low in utilization rate. The Internet is not yet penetrated to the life in every aspect for the majority of Chinese Internet users.

In China, there is only 15% of Internet users who hunt for a job online yet it is 46% in USA; in shopping online, only 25.5% of Chinese Internet users do it yet it has become a universal action of Internet users in the USA; as to online reservation for a trip, only 3.9% of Chinese Internet users had made it yet over 60% of American citizens have done it. Chinese Internet users are still in the initial stage in using the Internet as a life helper.

Among different kinds of network application, online banking and online stock transaction seem a little different for both of them are concerned with the finance. Every one is involved in financial activity, and we need to make contacts with financial institutions such as a bank in our everyday life and management of capital. Yet owing to the issues like network security, only one fifth of Internet users have set foot in this kind of application. It is noteworthy that China's online stock transaction proportion is almost equivalent with the United States who has higher Internet penetration rate. That may be caused by China's hot stock and fund markets with the participation of a large number of Internet users.

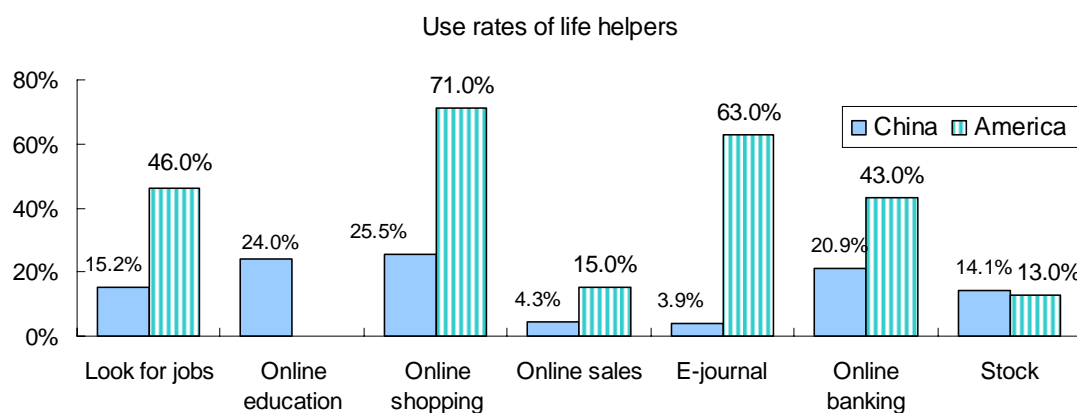


Fig.5.9 Use rates of life helpers

USA data source: www.Pewinternet.org

III. Views of Internet Users on the Internet

(I) Satisfaction of Internet Users

Note: The data of this part came from the online survey.

Chinese Internet users have a general satisfaction with the Internet of 60.5%. The richness of contents on the Internet is the most satisfying factor with 81.1% of Internet users turning up the thumbs on. Yet the least satisfaction is the Internet expenditures with only 24.6% of Internet users expressing satisfaction.

Compared with the satisfaction of December 2006, the general satisfaction had improved with an increase of 12 percentage points. Among them the satisfaction with the richness of contents was roaring with an increase over 27 percentage points. Yet the satisfaction on the expenses of the Internet was falling with three percentage points in the first half of the year.

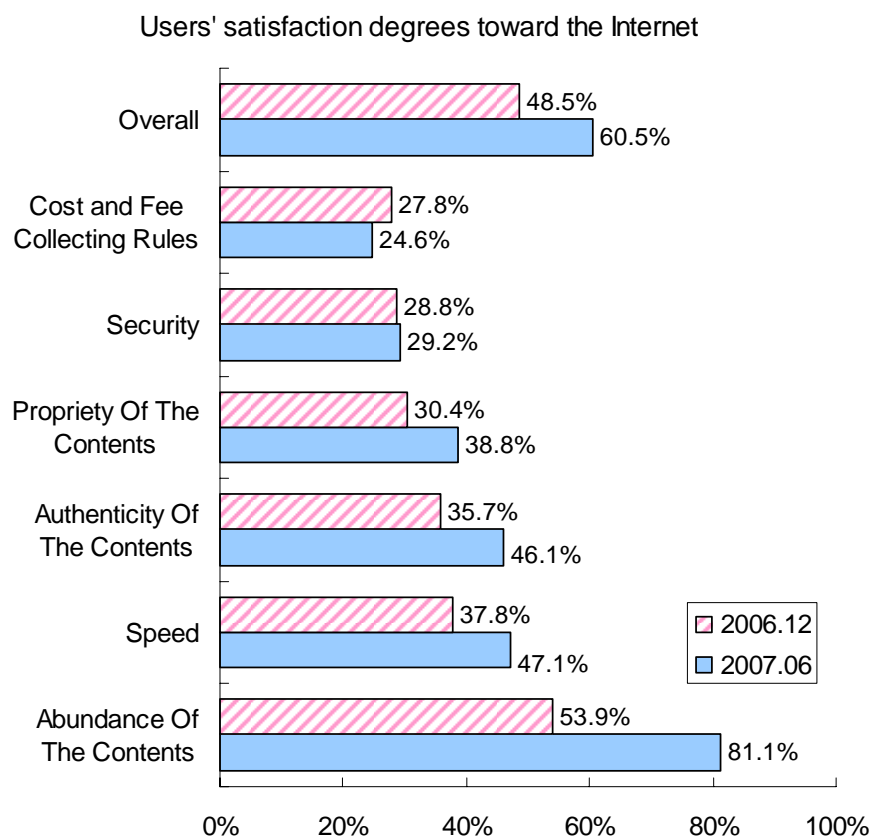


Fig.5.10 Users' satisfaction degrees toward the Internet

Table 5.2 Satisfaction Scores of the Internet in China

Item	Satisfaction Score	Item	Satisfaction Score
Richness of content	4.07	Properness	3.26
Speed	3.36	Security	3.01
Facticity of content	3.43	Expenses	2.86
Total satisfaction degree	3.65		

Note: The highest score is set to 5, with 1 the lowest; all scores are average scores.

To the great dissatisfaction of Internet users was network virus and network attack with stable and same results in several continuous surveys. It can be said that network virus and network attack are the two big problems crying for solution. Better than half a year ago was a sharp decrease of dissatisfaction of Internet users towards pop-up advertisement/windows, which indicated the improvement made in the launching methods of network advertisement in one aspect yet on the other hand it may be the result of the installation of some interception software of web browser for pop-up windows.

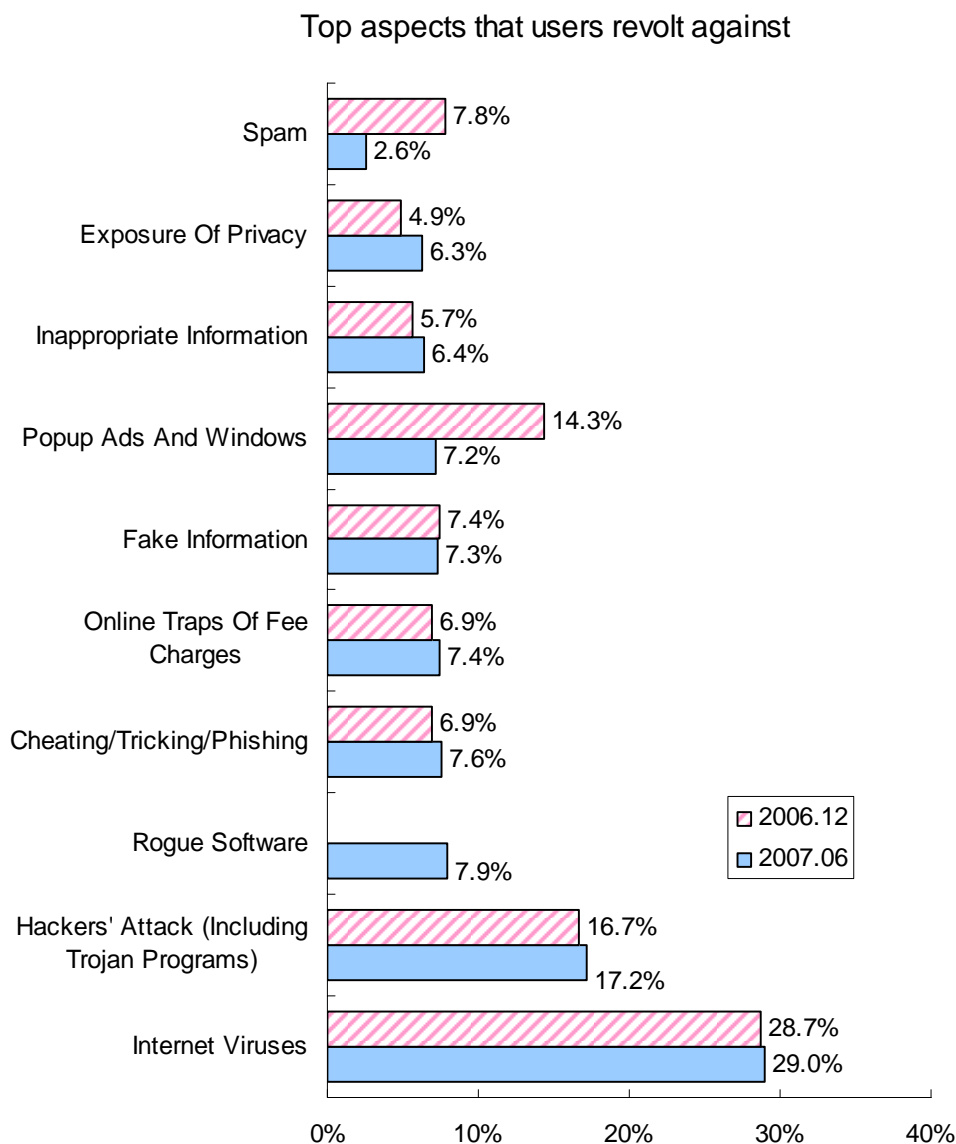


Fig.5.11

Top aspects that users revolt against

(II) Trustiness of Internet Users towards the Internet

Internet users have little trust with the Internet and only 35.1% of Internet users claimed that they believed the Internet. The Internet users' excessive nonconfidence with the Internet may have negative impact to the popularization of Internet application, even hindering the non-Internet users from entering the Internet. Furthermore, the higher the education received, the less confident with the Internet for the Internet users. As shown on Fig.5.12, a percentage of 45.9 % of Internet users with junior high school or lower education were confident with the Internet yet there are only 29.6% of Internet users with bachelor degree doing so.

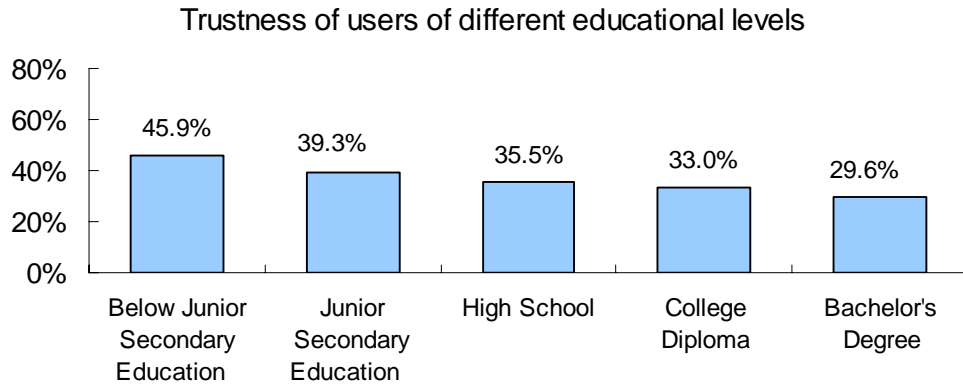


Fig.5.12 Trustness of users of different educational levels

Chapter Six Status of non-Internet Users

I. Why Not to Access the Internet and the Structural Characteristics of Non-Internet Users

Two major reasons not to access to the Internet are lack of skills and lack of connection hardware and conditions. They are also the major factors hindering the increase of rural Internet users. Korea, with developed Internet, has an Internet penetration rate of 74.8%¹². Its citizens don't connect to the Internet for the top cause of "no need", not China's "lack of skills and lack of relevant equipment".

The major characteristic of Chinese non-Internet users is low cultural level with few having received tertiary education, with 51.2% of them receiving primary education or below, and 90.5% of them not exceeding junior secondary education.

It is low level of education, lack of relevant skills and low income for relevant equipment that deters Chinese citizens to use the Internet and leads to the difference of reasons for Chinese and Koreans not to access to the Internet.

It is impossible to have a significant improvement in citizens' educational structure in a short period. With this provision, it will be efficient paths for quick increase of Internet penetration to increase the number of access equipment, popularize Internet knowledge, reduce Internet access requirements and increase Internet experience. Of course all these measures should get the supports of the government and every link of the industrial chain.

¹² Data source: NIDA, Feb. 2007.

Reasons for not using the Internet

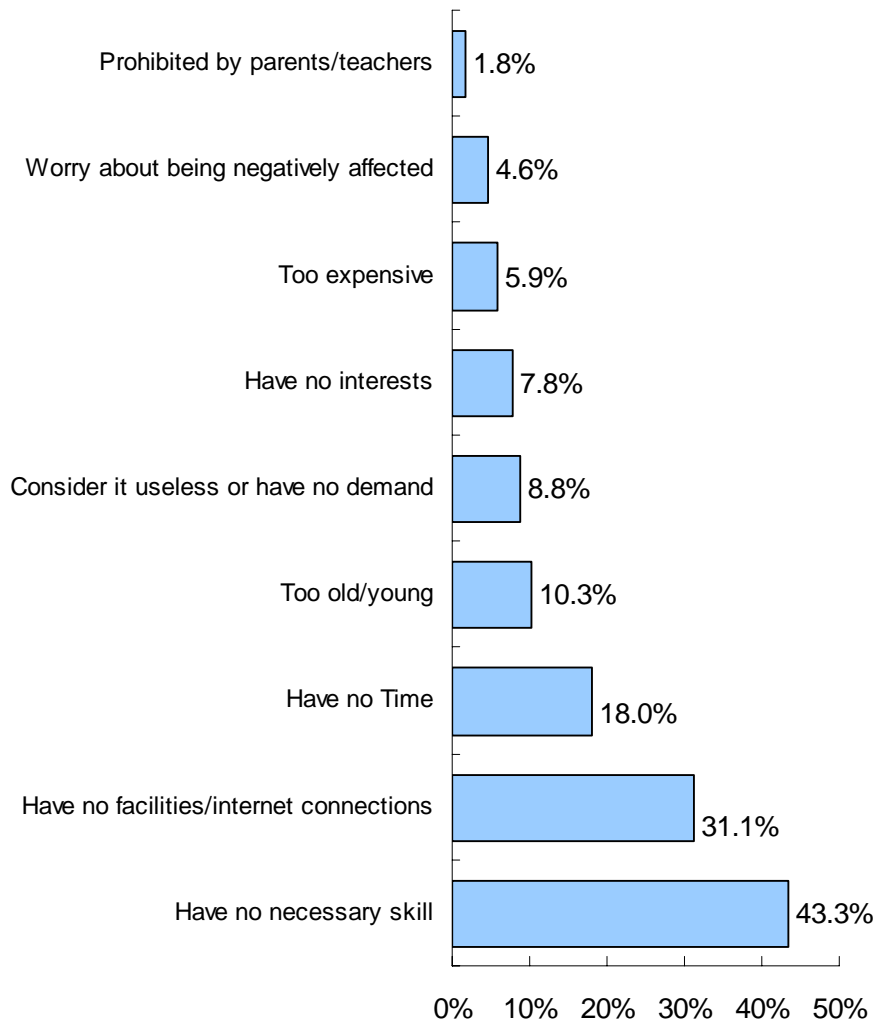


Fig.6.1 Reasons for not using the Internet

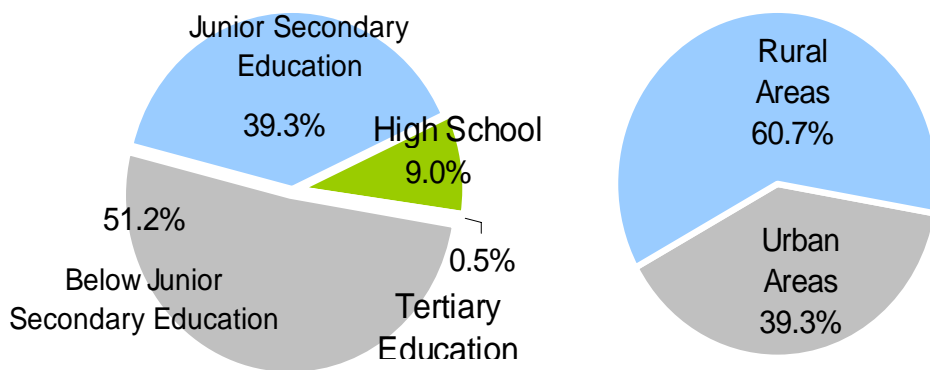


Fig.6.2 Structure of non Internet users

II. Efficient Paths to Popularize the Internet

Non-Internet users mainly get information from televisions. As indicated in Fig. 6.3, 81.6% of non-Internet users selected television to obtain information with little consumption of newspapers and other information channels. It can be said that the television is the best advertising medium for the Internet. The newspaper comes next for 32.7% of non-Internet users often get news from newspapers besides the television. Furthermore, mobile phone is emerging as an information channel. So far, more non-Internet users obtain information from mobile phones than from conventional media like broadcast, books and journals, etc.

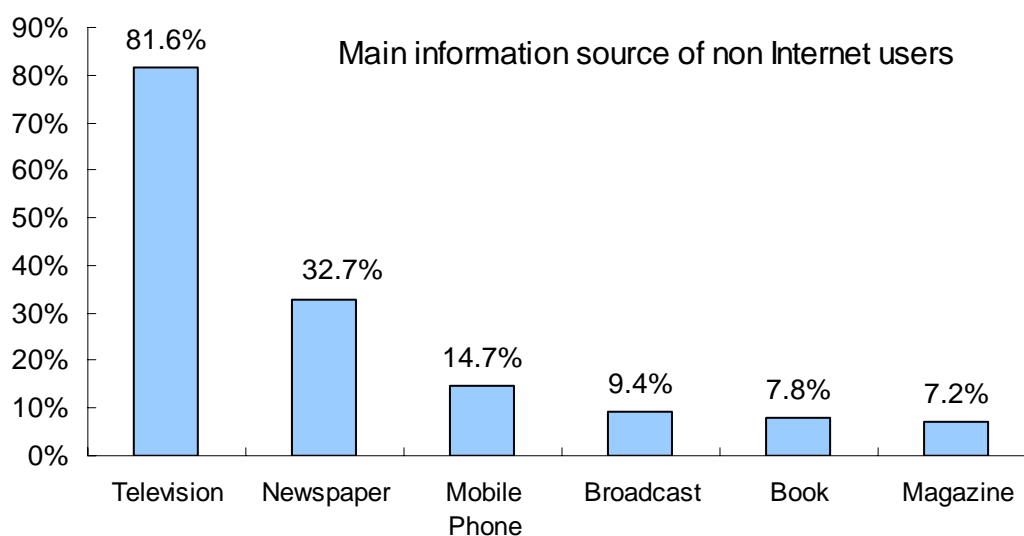


Fig.6.3 Main information source of non Internet users

There are some differences on the information channel between rural non-Internet users and urban non-Internet users. The reading rate of newspapers is very low in the rural, less than half of that in the urban. For the urban, television and newspaper can be adopted, yet television will be the best channel to popularize the Internet knowledge.

Main information source of non Internet users in urban and rural areas

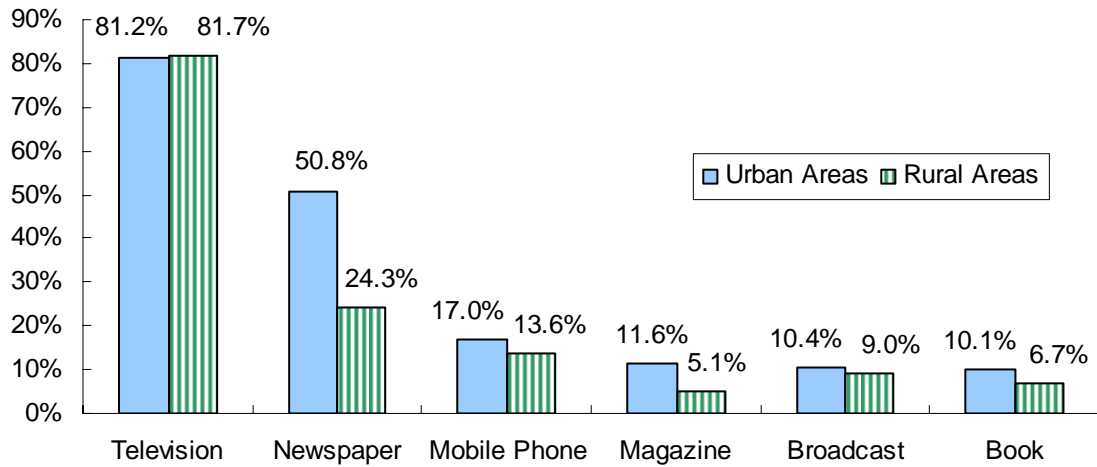


Fig.6.4 Main information source of non Internet users in urban and rural areas

III. Prospect for Non-Internet Users to Access the Internet in the Next Half Year

It is expected that 2.9% of non-Internet users will begin to access to the Internet certainly, i.e. nearly 20 million non-Internet users have the will to do so. Yet 68.2% of non-Internet users are expected not to do so in the period.

In view of China's Internet penetration of 12.3% and non-Internet users proportion over 80%, it is predicted that there will be a big increase in the number of new Internet users yet the Internet penetration rate will not grow quickly.

Anticipations of non-users for the next 6 months

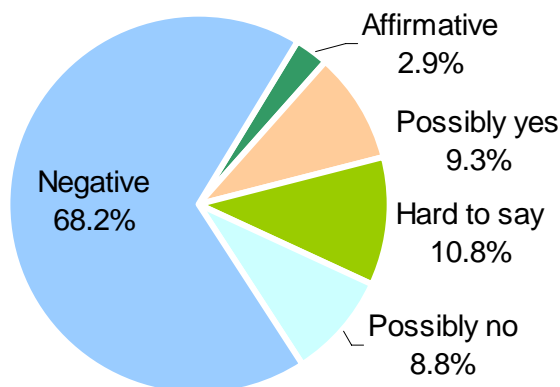


Fig.6.5 Anticipations of non-users for the next 6 months

Special Subject 1: Status Quo of Young Students with the Internet

The young: it is defined that the youth refers to the age group of 15-24 years old in the *World Programme of Action for Youth Towards the Year 2000 and Beyond* passed on the 50th Conference of the United Nations General Assembly on December 14, 1995. In this article, the group of 6-24 years is called the young group. In China, student Internet users below 25 years account for 70% of Internet users below 25 years old.

The Internet is a two-edged sword. On the one side, it provides an information and communication platform for Internet users and on the other side it also brings deleterious effect such as violence, eroticism and ultraism, especially serious to the young Internet users who are still lack of definite world view and values, with insufficient self-control capability. The young students will shoulder the construction and development of the country and the group also occupies a significant proportion (35.8/%) of the Internet users. To know their online status will help the competent authorities to make relevant decisions.

I. Size of Young Student Internet Users¹³

So far, the young student Internet users have amounted to 58 million, accounting for 35.8% of the total Internet users and 70% of the young Internet users in China. The 58 million Internet users are divided into three groups. The largest size is Internet users with senior secondary education, about 20 million persons; the Internet users of tertiary education come next with total amount of 18 million; the rest are the 20 million Internet users with junior secondary education and primary education.

Most of these young student Internet users are living in the urban area with a percentage of 71.7% and the rest 28.3% are living in the rural area with a number about 16 million.

¹³ The young student Internet user group here is different with the student Internet users mentioned in Chapter Two. Here refers to the student group below 25 years old. Any size, diffusion rate, online duration and online time point concerned here is different with that mentioned in Chapter Two.

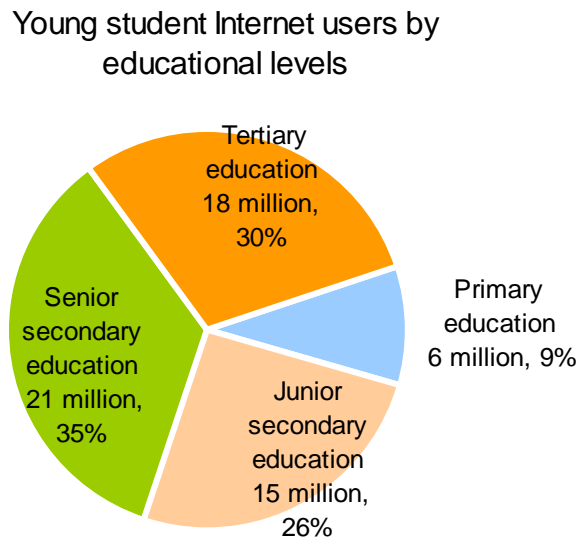


Fig.S1.1 Young student Internet users by educational levels

Note: In the group with tertiary education, the student Internet users over 24 years old account for about 2% of the total amount of student Internet users. The scale of Internet users from junior college and above in the report refers to the total scale of Internet user students in junior colleges and above with similar scale for the two types.

In penetration rate, the Fig. S1.2 shows that the Internet penetration rate among the youth is 18.5%, six percentage points higher than the national level. For the youth, the penetration rate is higher for the Internet penetration rate among students, 14 percentage points higher than the national level. The higher the education received, the higher the Internet penetration rate among students. The Internet penetration rate among students of tertiary education is approximately 100%, yet 54.2% for senior high school students and about 25% for junior high school students.

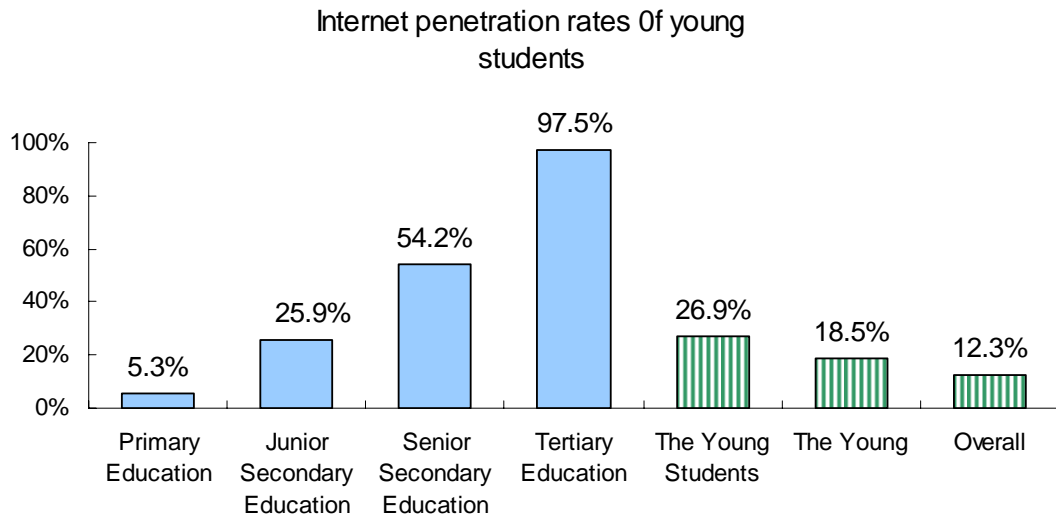


Fig.S1.2 Internet penetration rates of young students

Note: The penetration rate for students in associate or bachelor degree is replaced by the penetration rate for the tertiary education, not subject to the regulation of the youth below 25 years old.

II. Behavior and Views of Internet Users

1. Age for First Access to the Internet

It is a critical period for young students to access the Internet in their 13-16 years with 47.5% of students doing so. At that time most of students are in their junior secondary education or early senior secondary education. So it is very important to strengthen the guidance to them throughout the period.

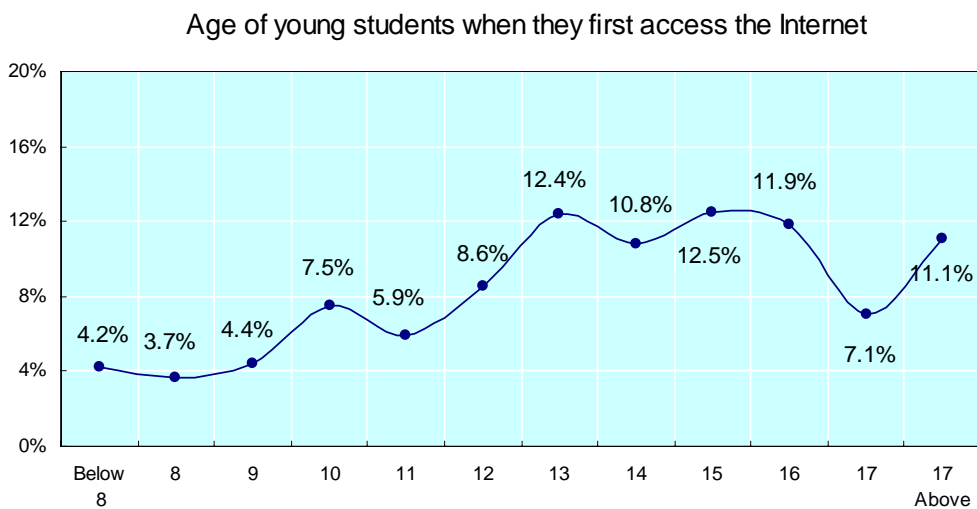


Fig.S1.3 Age of young students when they first access the Internet

2. Place of Access to Internet

Young student Internet users mainly surf online at home, in schools and Internet cafés, especially in Internet cafés with 48.4% of student Internet users frequently visiting. The more education received, the more the students select Internet cafés. About 40% of junior high school students surf in Internet cafés, about 50% of senior high school students and about 60% of young students in tertiary education.

Especially in rural areas, students select Internet cafés for short of surfing conditions at home, with 16 percentage points higher over the urban students. Most of tertiary education providers are located in cities, so the rural Internet users are mainly students in primary education and secondary education. About 60% of rural Internet users surf in Internet cafés, which deserves the attention and guidance of the competent authorities.

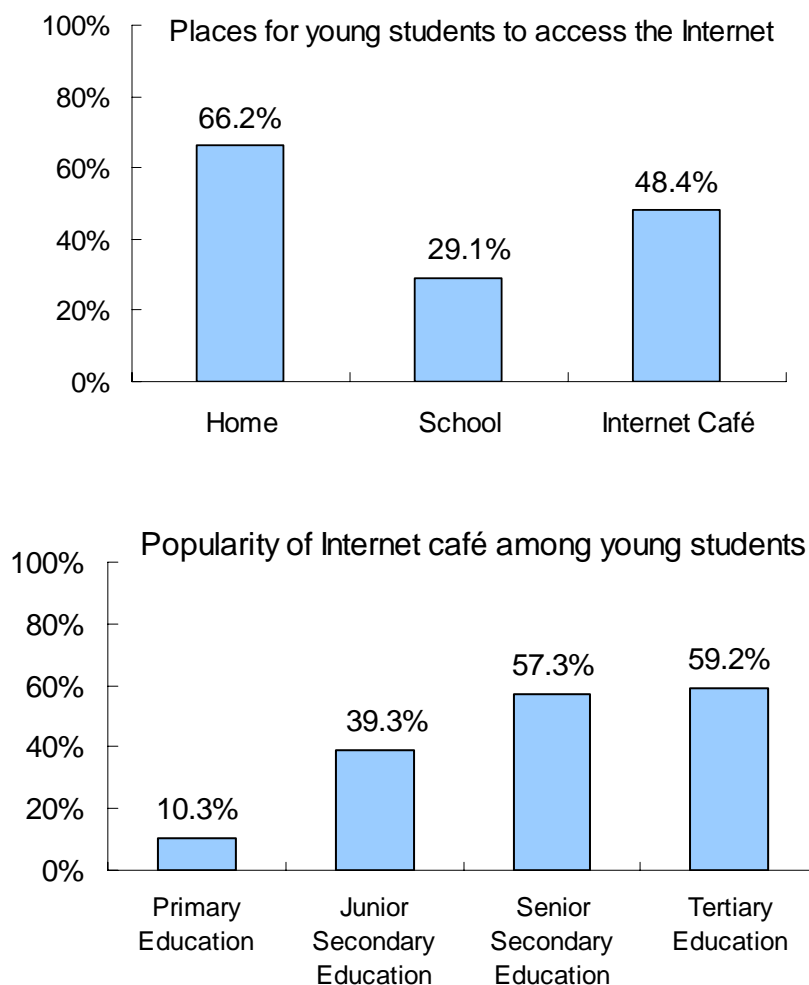


Fig.S1.4 Places for young students to access the Internet

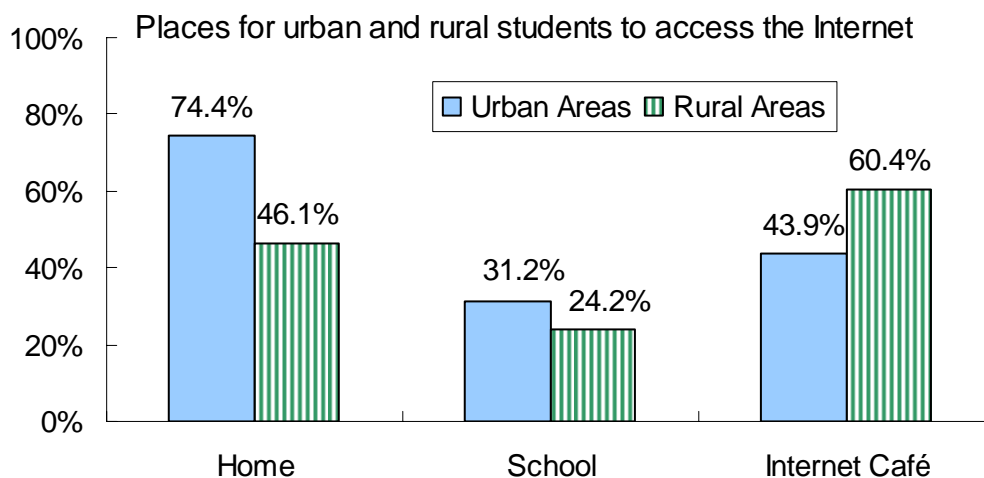


Fig.S1.5 Places for urban and rural students to access the Internet

3. Online Duration

In general, student users' online hours are 11.6 hours per week, lower than non-student users' 18.6 hours, as shown in S1.6. For general Internet users, the longer they are online, the more attention paid to the Internet. Yet to students, they should spend more time in classes. So if they are online too long, their study will be influenced.

As to students, especially from high schools and primary schools, who are required to go to classes five days a week, those online over 20 hours per week should get the notice of the management department, and those over 40 hours should be paid much attention to. A percentage of 18.2% of senior high school student users and 9.6% of junior high school student users should be noticed. Especially some need attention and instructions. The relevant education and guidance is not only on the online time but also on the surfing contents.

Weekly surfing time for young students

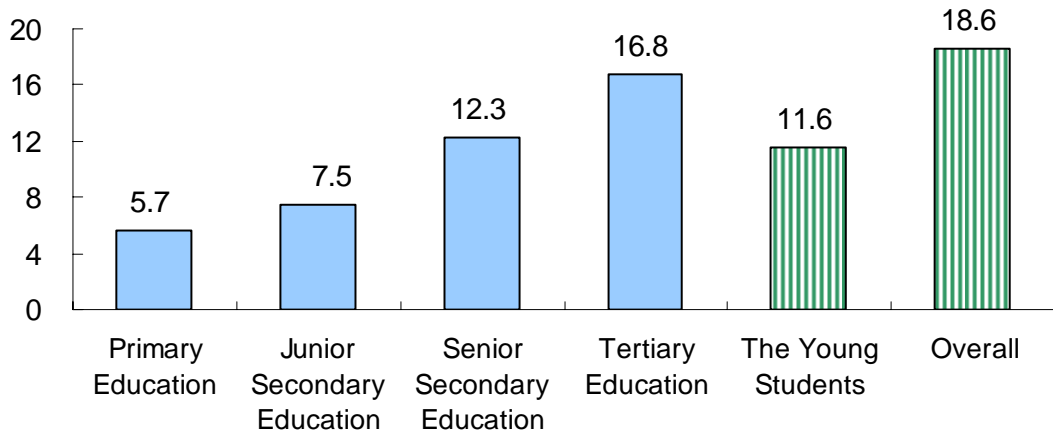


Fig.S1.6 Weekly surfing time for young students (hours)

Proportion for students who access the Internet over 20 and 40 hours per week

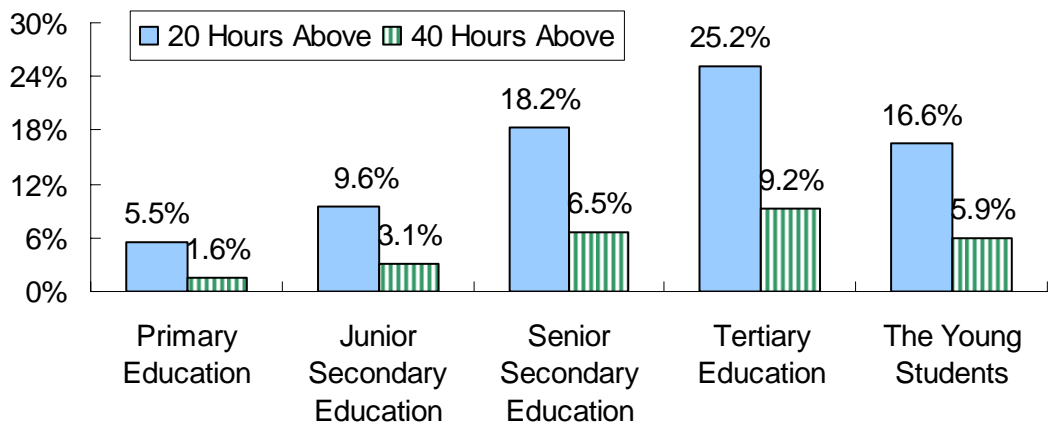


Fig.S1.7 Proportion for students who access the Internet over 20 and 40 hours per week

4. Online Time Point

By online time point, Internet users in secondary education behave like the general Internet users, with rush hours between 20:00 and 22:00, and peak in 21:00. The secondary maximum is about 10:00 a.m. In comparison, the students in junior secondary education perform especially clearly in the two points in time. As the schedule of students

in secondary education is different with that of the general Internet users, and most of students surf online at their own intentions, the Internet has influenced some student users' study and rest as shown in Fig. S1.8.

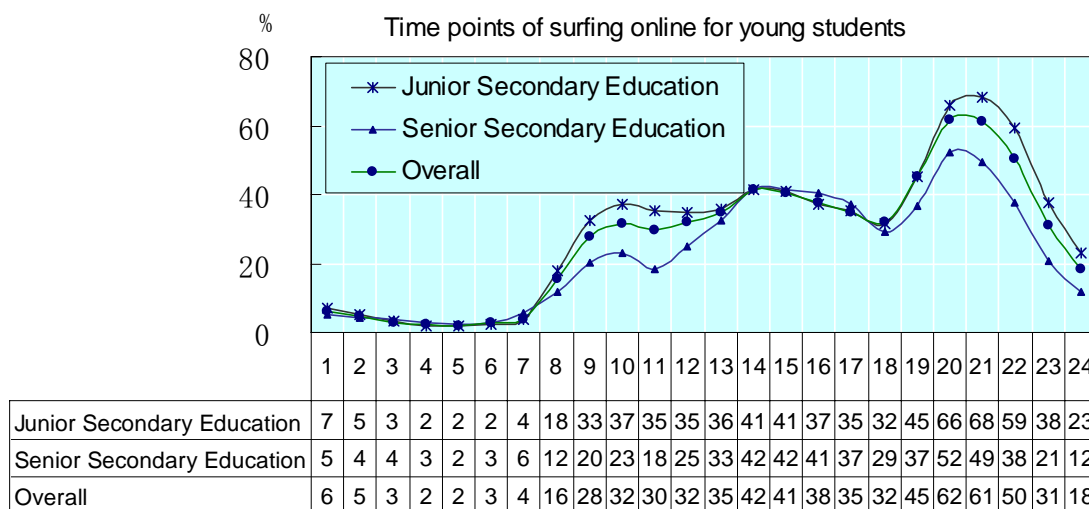


Fig.S1.8 Time points of surfing online for young students

5. Surfing Behavior

It is concluded in the above analysis on general Internet Users that general Chinese Internet users demonstrate such features in their network application as below: about three fourths of Chinese Internet users use the information channel function of the Internet, and the communication and recreation functions are also utilized widely. Yet the Internet's life helper function is not so popular.

To young student Internet users, the Internet's functions can rank by application as follows: recreational tool>communication tool> information channel> life helper. The students mainly use the Internet's recreational function, even information function comes next. This phenomenon should come into notice. It is necessary to provide more education and guidance to help student know more functions of the Internet, especially in the help in study.

Table S1.1 Internet application rates for Young student users

	Application rates for young student users	Application rates for all users
Information		
News	64.6%	77.3%
Search engine	70.7%	74.8%
Blog writing	22.6%	19.1%
Communication		
Instant message	74.6%	69.8%
Email	46.6%	55.4%
Entertainment		
Online music	91.4%	68.5%
Online video	79.6%	61.1%
Internet games	67.1%	56.0%
Life Helper		
Online education	28.0%	24.0%
Online shopping	8.9%	25.5%
Online sales	2.4%	4.3%
E-journal	1.0%	3.9%
Online banking	7.7%	20.9%

Special Subject2: Typical Internet Application

Note: all data of the subject are collected from online survey results.

1. Online Financing

Online financing: the survey covers browsing financing information and directly operating online transactions of financing products, such as filling bills online, online transfer, buy and sell financing products online, etc.

Table S 2.1 Channels for obtaining online financing information

	Percentage
Internet	86.6%
Newspaper/Magazine	49.6%
Bank counter	40.4%
TV/Broadcast	38.8%
Hear from friend	33.7%
Stock exchange	29.2%
Outdoor advertisement	13.9%
Others	8.6%

Table S 2.2 Internet users' financing products

	Percentage
Stock	54.2%
Fund	43.9%
Saving	38.0%
Insurance	14.7%
Bond	9.3%
Foreign exchange	9.1%
Futures	6.6%
Gold	5.5%
Trust	3.7%
Others	15.7%

Table S 2.3 History of user's online financing

	Percentage
6 months or fewer	32.6%
1 year of fewer	27.6%
2 year of fewer	19.5%
3 year of fewer	10.1%
5 year of fewer	5.5%
More than 5 years	4.6%

Table S 2.4 Reasons for doing financing online

	Percentage
Save time	74.7%
Simple operation	62.2%
No regional limitation	42.6%
No operation time limit	40.5%
Cheap sales rates	30.9%
Abundant financing products	27.3%
Pursue the fashion	10.9%
Affected by close friends	8.5%
Be required to use	5.4%

2. Online Job Hunting

Online job hunting: it refers to Internet users' behavior which they post personal resume on certain websites or search for job information.

Table S 2.5 Job information resource

	Percentage
Internet	85.1%
Paper/magazine	52.6%
Other people's recommendation	39.6%
School job fairs	30.4%
TV/radio	24.6%
Non school job fairs	22.7%
Intermediary agent	19.2%
Others	9.1%

Table S 2.6 Searching conditions that users set

	Percentage
Industry category	51.7%
Function category	49.5%
Major	49.2%
Release date	37.8%
Full time/part time	34.1%
Work experience	22.4%
Name of organization	17.4%
others	3.7%
Never use	2.7%

Table S 2.7 Successful rate of getting a job through online job hunting

	Percentage
Yes	55.8%
No	44.2%

Table S 2.8 For those who succeeded, the approaches of job hunting

	Percentage
I found my ideal job on professional job hunting website	47.4%
The employer found my resume on job hunting website	27.1%
I found my ideal job on employer's website	20.4%
Others	5.1%

Table S 2.9 Users' dissatisfaction toward professional job hunting websites

	Percentage
Very low successful rate	51.6%
So much useless information	43.3%
No prompt feedbacks after posting resume/job information	40.3%
Fake information	30.8%
No clear job categories or description	28.7%
Too complicated to post information	25.3%
Lack of job information	18.4%
Slow accessing speed	14.8%
Poor interface, hard to find information needed	13.6%

3. Online Travel Reservation

Online travel reservation refers to approaches that via Internet users can customize their vehicles, tickets, accommodations and travel courses. It includes customize travel courses, book tickets and reserve rooms in hotels.

Table S2.10 Online reservation status

	Percentage
I make online reservations for all my journey	7.4%
Some online reservations, some off line reservations	42.1%
Just search for information online, no reservation	48.1%
No online reservation, and no online information searching	2.3%

Table S2.11 Reasons for choosing online reservation

	Percentage
Save time	73.0%
Available for booking at any time	57.9%
Convenient for non-local booking	53.4%
Convenient for payment	46.3%
Wider choice	45.2%
Cheaper price	44.4%
Good service	20.9%
Pay safely online	16.3%
No reason, just adapt it	8.8%

Table S2.12 Travel products that users reserve online

	Percentage
Airline ticket	65.2%
Hotel	57.5%
Holiday travel courses set by travel agencies	30.0%
Tickets of destination	20.8%
Restaurant	19.9%
Vehicle renting	11.8%

Table S2.13 Users' dissatisfactions toward online travel reservations

	Percentage
Too much personal information needed when register an ID	43.0%
Hard to change/cancel a reservation	37.1%
Hard to search information	27.4%
Slow feedback	26.6%
Too much to fill in a booking form	26.2%
Slow searching speed	25.1%
To much limitation on bank card	24.1%
Slow response of booking system	21.8%
The booking result is no match to the fact	20.6%
Only electronic tickets available	15.4%
Poor customer service	6.6%

Appendix 1: Fundamental Internet resources

Table A1 Geographical distribution of IPv4 addresses

Province	Percentage of IPv4 address
Beijing	13.6%
Guangdong	10.7%
Zhejiang	7.7%
Jiangsu	7.2%
Shanghai	7.0%
Shandong	5.6%
Henan	4.3%
Liaoning	4.0%
Hebei	3.4%
Hubei	3.3%
Sichuan	2.9%
Fujian	2.9%
Tianjin	2.6%
Heilongjiang	2.5%
Shaanxi	2.3%
Jilin	2.2%
Chongqing	2.1%
Jiangxi	2.1%
Hunan	2.0%
Anhui	1.8%
Guangxi	1.7%
Yunnan	1.5%
Shanxi	1.5%
Inner Mongolia	1.4%
Hainan	1.1%
Xinjiang	0.9%
Guizhou	0.7%
Gansu	0.5%
Ningxia	0.3%
Qinghai	0.2%
Tibet	0.1%
Total	100.0%

Source: Asia Pacific Network Information Center (APNIC), CNNIC

Table A2 Geographical distribution of domain names

Province	Domain name		.cn domain name	
	Number	Percentage	Number	Percentage
Shanghai	1,714,721	18.7%	1,429,873	23.3%
Beijing	1,710,992	18.6%	1,346,010	21.9%
Guangdong	1,113,430	12.1%	631,977	10.3%
Fujian	704,150	7.7%	435,836	7.1%
Zhejiang	585,543	6.4%	320,125	5.2%
Jiangsu	460,611	5.0%	200,994	3.3%
Shandong	459,683	5.0%	325,957	5.3%
Sichuan	402,249	4.4%	253,174	4.1%
Hunan	181,977	2.0%	125,256	2.0%
Liaoning	170,877	1.9%	90,473	1.5%
Hubei	168,096	1.8%	97,948	1.6%
Henan	165,191	1.8%	101,015	1.6%
Hebei	155,060	1.7%	84,323	1.4%
Anhui	114,484	1.2%	79,226	1.3%
Shaanxi	96,136	1.0%	49,750	0.8%
Guangxi	94,684	1.0%	59,541	1.0%
Chongqing	94,432	1.0%	55,918	0.9%
Tianjin	94,203	1.0%	36,822	0.6%
Jiangxi	91,786	1.0%	56,194	0.9%
Heilongjiang	77,404	0.8%	42,900	0.7%
Jilin	74,558	0.8%	48,989	0.8%
Yunnan	54,699	0.6%	31,927	0.5%
Shanxi	51,172	0.6%	28,513	0.5%
Ningxia	32,453	0.4%	23,347	0.4%
Inner Mongolia	29,140	0.3%	16,457	0.3%
Guizhou	27,514	0.3%	17,130	0.3%
Hainan	26,248	0.3%	13,018	0.2%
Xinjiang	25,957	0.3%	14,385	0.2%
Gansu	22,722	0.2%	12,163	0.2%
Qinghai	3,794	0.0%	2,231	0.0%
Tibet	2,543	0.0%	1,974	0.0%
Oversea	169,791	1.9%	113,266	1.8%
Total	9,176,300	100.0%	6,146,712	100.0%

Note: 1. The data is not inclusive of websites under .EDU.CN, the total number is not equal to the total number of .CN domain names.

2. Domain names are distributed in accordance with their registrant locations their domain names.

Table A3 Geographical distribution of websites

	Number of website	Percentage
Beijing	305,380	23.3%
Shanghai	297,217	22.7%
Guangdong	157,407	12.0%
Jiangsu	68,160	5.2%
Zhejiang	66,971	5.1%
Fujian	52,729	4.0%
Shandong	45,357	3.5%
Liaoning	28,196	2.1%
Sichuan	27,470	2.1%
Hubei	26,169	2.0%
Hebei	26,079	2.0%
Henan	25,031	1.9%
Anhui	23,429	1.8%
Hunan	19,442	1.5%
Guangxi	14,273	1.1%
Jiangxi	13,724	1.0%
Shaanxi	12,962	1.0%
Chongqing	12,576	1.0%
Tianjin	11,969	0.9%
Heilongjiang	9,736	0.7%
Jilin	8,522	0.6%
Yunnan	7,369	0.6%
Shanxi	7,176	0.5%
Inner Mongolia	5,423	0.4%
Guizhou	5,318	0.4%
Hainan	4,441	0.3%
Gansu	4,349	0.3%
Xinjiang	3,336	0.3%
Ningxia	2,788	0.2%
Qinghai	758	0.1%
Tibet	460	0.0%
Oversea	17,383	1.3%
Total	1,311,600	100.0%

Note: 1. The data is not inclusive of websites under .EDU.CN.

2. Websites are distributed in accordance with the registration places of their domain names.

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