

Logistics service transformation and its system construction in colleges and universities based on the "Internet plus"

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Abstract. With the continuous development of computer technology and network technology, more and more people hope to establish a new logistics service model that can make full use of the Internet. In order to study the new logistics service mode, in this paper, with the university logistics service as an example and the method of literature research, sample analysis and other methods, the information technique was introduced to construct the "Internet plus logistics system"; the university logistics service mode based on Internet plus new services and micro video resources as the core was constructed. The final experimental results show that the new logistics service mode can promote the transformation of traditional logistics system upgrade, improve the management efficiency, and innovate the education service industry state, so it is conducive to improve the quality of university logistics service.

Key words. Internet plus, university logistics, strategic transformation.

1. Introduction

Pony Ma, a pioneer of Internet technology application and the chairman and CEO of Tencent, put forward the "Internet plus" strategy at the National People's Congress in 2015. In simple terms, "Internet plus" strategy is to use the Internet platform, information and communication technology, and big data to combine the Internet with all walks of life, including traditional industries, so as to create a new ecology in the new field.

"Internet plus university logistics system can fully optimize the optimization and integration function of Internet in the allocation of logistics resources, so as to realize the rational allocation of resources and the resource sharing. It can integrate the innovative achievements of the Internet into management and services, construct the digital work platform, build good and efficient management teams, form a mechanism

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with scientific decision, fine management fine, and quick response, and improve the management and service level of education. In short, the Internet work is the comprehensive concentration of pain and fatigue in everyone's eyes. According to previous experience, the logistics staffs rely on manual form, so not only the labor is dense and heavy, but also the efficiency is relatively low. The traditional mode of logistics management cannot meet the growing demands of the contemporary teachers and students for food, shelter, transportation, study, purchase, medical treatment, water conservancy and electricity, greening environment and so on. The logistics department must quickly take advantage of "Internet plus" and the Internet, big data, e-commerce technology and platform to carry out a full range of services, so as to truly respond to demands of public and improve service satisfaction. Therefore, the construction of "Internet plus university logistics" system is of great significance.

2. State of the art

As the "Internet plus" in today's society is becoming increasingly popular, many foreign experts and scholars have carried out comprehensive studies on specific Internet plus. Based on the institutional drawbacks of many colleges and universities over the years, some people have put forward the practice of the service system of "big logistic view" in colleges and universities [1]. Among them, the two stage model can simply and completely present the characteristics of the traditional university logistics model. With the increasing demands of the group, the model can no longer satisfy the needs of the modern people [2]. After research and comparison, the logistics service and management mode of universities in China and America were compared. By comparing the logistics services of Chinese universities and the rear service of American universities, the gap between the logistical services of Chinese universities and colleges was found [3].

At present, China's colleges and universities are faced with many "bottleneck" problems that need to be broken through in the reform of social reform. Especially, the dilemma of logistics service management caused by the pattern of individual schools needs to be solved urgently. In addition, the improvement of service quality, low work efficiency, scientific and reasonable performance distribution also need innovation policy urgently [4]. In the mobile Internet, the repaid development of cloud computing, big data, networking, new media as the representative of the information technology has undoubtedly become the bottleneck of logistics cracking in Chinese universities, which is also a key factor to realize the transformation of traditional logistics to modern logistics [5].

2.1. Methodology

The daily operation of today's society is more and more inseparable from the Internet. The report shows that as of December 2015, China university computer usage rate, the proportion of computer usage in Chinese universities, the proportion of Internet usage, and fixed broadband access ratio increased by 4.8, 10.3 and 8.9 percentage points, respectively, reaching 95.2%, 89% and 86.3% [6]. The total

number of Chinese websites was 4 million 230 thousand, which was 880 thousand higher than in 2014, and the annual growth rate reached 26.3%. At the same time, the number of Chinese web pages has exceeded 200 billion for the first time [7]. Chinese colleges and universities have been increasingly using Internet tools to carry out communication, information acquisition and distribution, internal management and other aspects of work, which has laid a good foundation for the "Internet plus application".

Chairman Yu Yang of the domestic well-known consulting firm Yiguan International first proposed the concept of "Internet plus" in public. On November 14, 2012, Yu Yang first proposed the "Internet plus" in the fifth session of the mobile Internet Expo, and carried out the related interpretation: the nature of the "mobile Internet" can't do without "Internet plus". In the future, "Internet plus" should be a way for our industry's current products and services to achieve promotion and sales through the network, and to combine the network platform and entity platform [8]. The board of directors of the Tencent chairman Ma Huateng has carried forward the concept of "Internet plus". Ma Huateng proposed that: the integration of the Internet and traditional industries represents a need for the market now, and in the case of multi resources and multi environments, it can improve various industries [9].

With the development of a series of Internet technologies, they have been applied to daily life and teaching practice. Figure 1 show the present situations of the Internet application in the university logistics service in several universities for the past ten years.

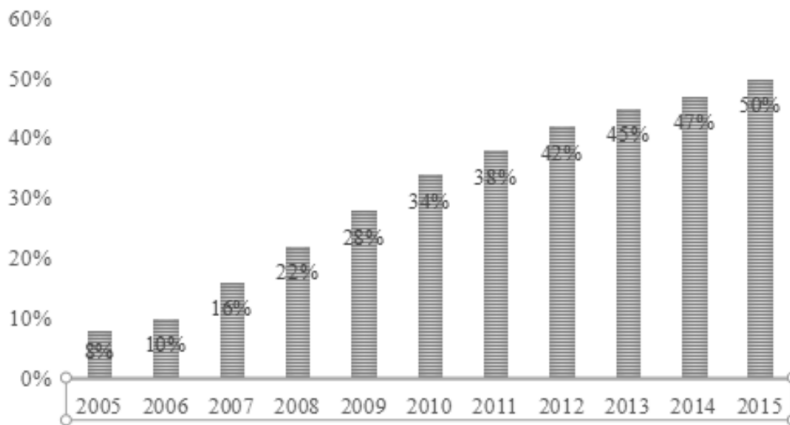


Fig. 1. Development of situation in the Internet application in the university logistics service at several universities for the past ten years

According to Fig. 1, it can be seen that in the past ten years, the development of Internet application in university logistics is showing a benign growth. In 2005, Internet applications accounted for only 8% of logistics services. Within ten years, the proportion of Internet applications in late service has reached 50% [10]. During the ten years, it has maintained a growth rate of 2% to 6% per year.

"Internet plus" is the integration of the two upgrade, and it regards the Internet as the core feature of informatization development, and the key factor is innovation. Only innovation can make this "+" really valuable and meaningful. Internet plus logistics service mode gives the autonomy to the hand of the party being served: under the support of information technology, service party can use a party to provide services by making services, media services, software and service channels and a series of service resources to accept service independent and complete logistics support staff; and students can use activities of Internet plus service with high efficiency, high quality and low interactive service to solve problems encountered in life, learning, and work, with the realization of intelligence [11]. In brief, logistics services have been integrated into the daily life of students and teachers, and the disadvantages of the fixed time of traditional logistics services have been changed to services at any time. Its comparisons with the traditional logistics service are shown in Table 1.

Table 1. Comparative analysis of traditional logistics and Internet plus logistics

	Traditional logistics	Internet plus logistics
Teaching staff	The process is inefficient and material is tedious	Quick, convenient and efficient
Student	Unable to choose independently	Self-choice
Service time allocation	Working hours of service personnel	Non-working hours for service personnel
service content	Areas of human services that can be reached	Human and computer services
Application of service means	Artificial services	Internet intelligent service
Service evaluation	Paper test	Multidimensional evaluation

The mobile phone client APP in the intelligent Internet plus post service should not be ignored. As a third-party smartphone, few people use it in logistics. In this field, Ocean University of China has made a positive exploration, and it has the courage to try and come out of a new path. APP has the advantage of being more convenient, quick and intelligent, and it can give people a new experience of mobile terminals. It uses the same database as the digital logistics lobby website and the logistics WeChat public number, so all the information is displayed synchronously, which can avoid duplication and omission, and set up the "trinity" logistics online service pattern of universities. In the maintenance declaration, after entering the APP repair module, according to the prompts, teachers and students can enter the corresponding information. Upon completion of the submission, according to the project category, the system will automatically send information to the corresponding maintenance staff on the mobile phone, and then the staff can go the scene

according to information for inspection and maintenance. At the same time, the repair will also receive information that the maintenance personnel have accepted the project information [12]. When the staff member submits the completion of the maintenance task, the maintenance personnel will receive SMS alerts, and then he can confirm and evaluate the maintenance results.

Next, from the logistics department, this paper will set examples to analyze the importance of the construction and transformation system on university logistics service Internet plus.

Decentralized financial management model costs too high and it is inefficient, and financial personnel are busy all day on the basic accounting work and accounting data collation, so they are very difficult to have the energy to understand and support the business work. Financial personnel and business people cannot communicate in a timely manner, and can't accurately analyze data.

With the increasing population of China, the number of students in higher education is increasing day by day. Under this kind of big premise, the university enrollment expansion is the inevitable trend. The continuous expansion of the financial departments of colleges and universities and how to reduce financial costs and avoid financial risks has become the focus of attention of the financial departments of colleges and universities. The existing management model of the financial department of the university has exposed many problems, so the financial management model should be designed according to the development strategy of the university [13]. With the use of Internet plus in financial aspects, the construction of financial shared services can help colleges and universities to reduce financial costs by improving financial efficiency and avoiding risks, to optimize and refine the financial process, to monitor the company's financial condition and operating costs, and to achieve the ultimate support of college enrollment strategy. Therefore, the logistics management mode of Internet plus university has been gradually recognized and applied.

As shown in Fig. 2, in the "Internet plus" era, under the cloud computing and mobile internet background, the future trend of shared services is the use of cloud computing and mobile Internet to push financial sharing services onto the "cloud", so as to realize the service whenever and wherever possible. As the financial departments of colleges and universities that are keeping pace with the times, they are closely following the trend of the times and conforming to the times. They use cloud computing, Internet plus mode to make SSC (shared service center) change to the financial cloud services. Financial cloud is based on shared services, and it can use cloud computing, big data and other emerging technologies to expand the sharing center to more adapt to the development of the era of financial information systems. The advantage of financial cloud is the sublimation of the advantages of financial shared services [14].

The development of Internet economy in China started late, so it is not enough concerned about the knowledge level and operation ability of financial personnel. The relative shortage of talent also makes enterprises unable to innovate in the Internet economy, and related work is also in a more difficult situation. In the "Internet plus", financial practitioners not only need to have accounting professional

skills, but also need to keep pace with the development of changes to increase. This kind of talent is a complex type of accountant. Complex talents require accountants to have both professional knowledge of accounting and proficiency in the operation of the Internet, and they should skillfully use a variety of methods of accounting professional analysis, prediction and evaluation [15]. These requirements have brought great impacts to accounting practitioners the under the "Internet plus". For the older generation of accountants, the accounts on paper have fallen short of the needs of the times. Modern accounting requires financial personnel not only excellent in professional knowledge, but also qualified in business. They need to improve their knowledge and skills in line with policies and the direction of the times. The transformation of financial personnel will also promote the deeper integration and development of financial accounting under the "Internet plus". The university logistics service network is depicted in Fig. 3.

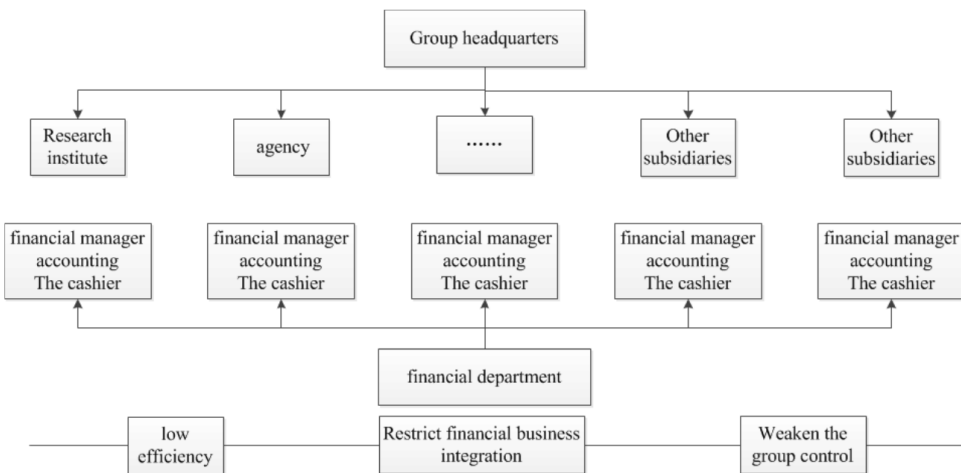


Fig. 2. Sketch map of university finance department

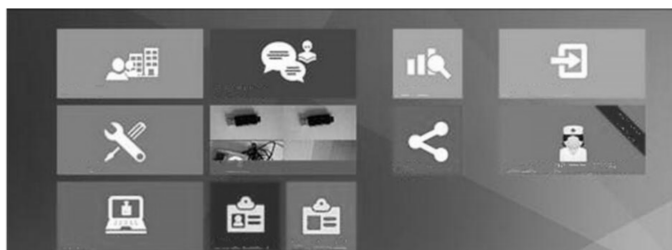


Fig. 3. University logistics service network

3. Result analysis and discussion

In order to prove that the above Internet plus model of university logistic service is feasible and advanced, the staff service was chosen to carry out experiments. Through a year's staff logistics support service, according to the school's standards and requirements, the service system was examined in practice, accompanied by the ten points system. Comparisons between the experimental faculty group and the control staff are shown in Table 2.

Table 2. Group comparison of laboratory staff and control staff

	Experimental population (A)	Control population (B)	A-B	P
Payroll	6.99	5.01	1.98	<0.05
Research cost	6.98	5.69	1.29	<0.05
Campus welfare	7.45	6.20	1.25	<0.05
social security	7.10	5.95	1.15	<0.05
Service supervision	6.78	5.55	1.23	<0.05
Maintenance declaration	7.73	6.10	1.63	<0.05

Note: in the table, A, B are the average of the selected samples, respectively; P is the probability value of significance test; A-B show that after the use of Internet plus in the experimental group of staff, the indicators of the experimental faculty group were higher than those of the control staff; staff and faculty group control experiment showed a normal distribution.

As can be seen from the table, the T value was tested by a significant level of 0.05. SPSS11.0 computational statistics show that the contrast values between the experimental staff group and the control staff group were significantly different, and this difference should be interpreted as experimental factors and be summarized as study results. The above chart can fully illustrate that the university logistics service model based on the environment of Internet plus can improve the work efficiency and convenience of teaching staffs, enhance the teaching efficiency of teaching staffs, enhance staff's concentration on class, and stimulate teaching effects.

According to the sample comparison in Fig. 4, the enthusiasm, efficiency, and recognition of faculty were improved after the implementation of Internet plus service in colleges and universities. Based on a numerical comparison of the figures, the efficiency of the staff was particularly pronounced on the basis of the contrast between the new service and the traditional service, which rose from 23% to 78%. The amount of increase was up to 55 percentage points. From this point of view,

compared with the traditional service mode, the university rear service based on the Internet plus had remarkable effects on the efficiency of teaching staff. The validity, feasibility and advanced logistics service mode of university Internet plus were verified.

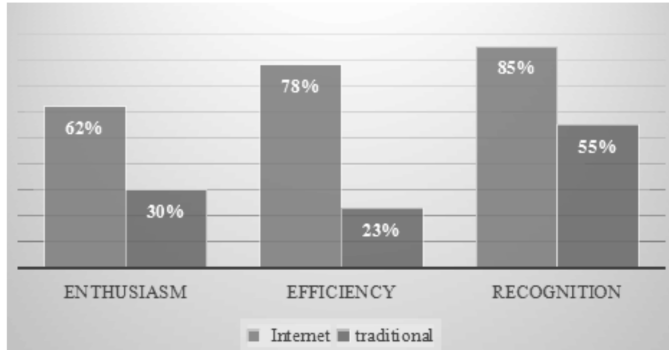


Fig. 4. Data comparison after the implementation of Internet plus service

At the same time, Internet plus university logistics service has been introduced into the students' daily life. According to statistics, as of September 2015, there were 370 student canteens in the whole province's colleges and universities. Among them, there were 131 self-operated university logistics, accounting for about 35%; universities with the introduction of service management Internet plus management accounted for about 65%. Figure 5 shows the comparison chart of the introduction of Internet plus service mode and traditional service mode in the college canteen. About 80% of the colleges and universities in the province have opened the catering market to varying degrees, and more than 90 catering enterprises have entered the universities.

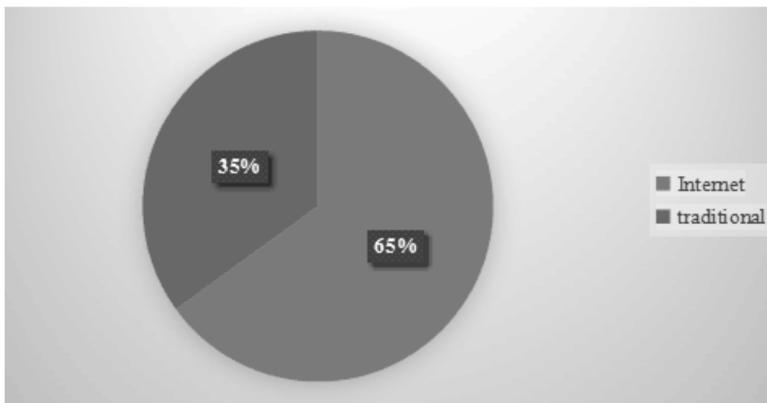


Fig. 5. The comparison chart of the introduction of Internet plus service mode and traditional service mode in the college canteen

Not only in the cafeteria, in terms of the student apartment management, there were 223 flats for student apartments in the province which adopted the Internet

plus management mode, and the number of students that it served accounted for 18% of college students throughout the province. Figure 6 shows the comparison chart of the introduction of Internet plus service mode and traditional service mode in the college dormitory.

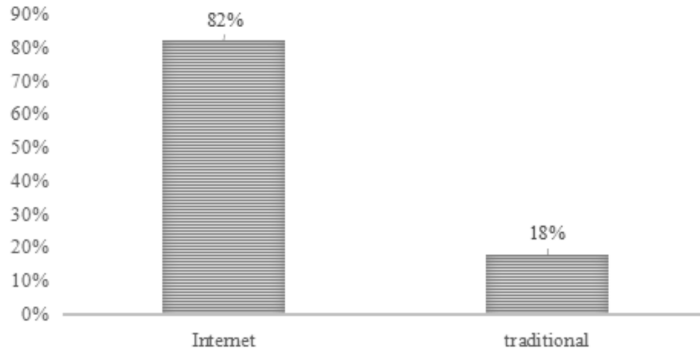


Fig. 6. The comparison chart of the introduction of Internet plus service mode and traditional service mode in the college dormitory

In addition, many colleges and universities have introduced high-quality social enterprises to carry out hosting services in the green, cleaning, supermarkets, laundry, bathroom, maintenance services and other aspects, we are not going to explain them in detail with data here.

The difference of sample data show that, after the implementation of Internet plus logistics "one-stop" service, colleges and universities can avoid duplication of posts and waste of resources, save costs, and increase revenues, efficiency and quality of service, and people-oriented management service model has won the recognition and praise of teachers and students. Logistics services, on the other hand, can become more efficient and transparent. The evaluation of teachers and students and the big data analysis become important references for the performance appraisal and awards. In this regard, the staffs are sincerely convinced, and their work enthusiasms are greatly improved.

4. Conclusion

At present, computer technology and network technology are developing rapidly. In order to study the logistics service model, through the analysis and summary of theoretical basis of the Internet plus and the existing modes, with the university as an example, the computer technology was introduced into the existing model to construct the new service model, and all aspects of the model were introduced in detail. Through this research, some conclusions were obtained as follows: compared with the traditional logistics services in colleges and universities, the new logistics service in colleges and universities is more practical, and it needs a lot of practice related activities, so it is suitable for the independent and exploratory research universities to study, so as to make the logistics service well develop. Internet plus

service model has more service modes and more flexible business hours arrangement. At the same time, the current colleges and universities have the conditions of access to the Internet, and students and faculty members have the ability to accept Internet plus new service, which is conducive to the advancement of Internet plus new service in the university. Rear service in universities can use the Internet plus mode, and can obtain good service effects. However, there are still shortcomings in this study. For example, due to the lack of front-line work experience in the university logistics services, this paper lacks the understanding of the logistics service practice process, so the service design and completion process may not be complete.

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Received August 7, 2017

