Research on Express Terminal Distribution in Colleges and Universities

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Abstract. Under the background of the continuous improvement and development of network technology and e-commerce, college students undoubtedly become the main force of online shopping. Therefore, the express delivery business generated by online shopping has considerable development space, but there are many drawbacks in the existing mode of express operation serving the campus. This paper investigates the basic situation of colleges and universities, analyses and studies the problems existing in the distribution of express terminals in Colleges and universities, and constructs a new mode of campus express operation in view of relevant problems.

1. Introduction
As a gathering place for young people, online shopping is very popular in College campuses, with the explosive growth of express demand. Campus distribution has become a problem faced by many university logistics departments. There is a contradiction between campus safety management and express delivery. The distribution of campus express terminal has become the main problem of the "last kilometer" distribution, which has seriously affected the enthusiasm of college students in online shopping. After analyzing the mode of campus express delivery, we find that there are many problems in the process of campus delivery.

2. Types of Express Distribution Mode in Colleges and Universities Campus

2.1 Traditional "open-air stall" distribution mode
The traditional "open-air stall" mode means that express companies set up open-air operating points on campus. In order to ensure the safety of teachers and students, most colleges and universities prohibit foreign express vehicles and their personnel from entering the campus at the entrance of each campus. Therefore, many express packages can only be placed on the ground at the school entrance or directly on the van. They choose to go to the school gate at a fixed time every day, with the delivery man carrying the express car. As a recipient, it has no autonomy, but is based on the information or telephone notification of the express delivery personnel, and the temporary construction of the receiving yard is crowded with many people and miscellaneous places. This distribution mode mainly saves costs. Its schematic diagram is shown in Figure 1.
Rookie post distribution mode is quite common in University campuses. First, the courier manually sorted, scanned or entered the express bar code. Then, The courier places the express on the shelf and edits the pick-up message to the recipient to indicate the number of the express on the shelf. Finally, the recipient receives the item by number. This model allows consumers to receive information in advance and quickly find their own express delivery. The service and quality are guaranteed. The pickup time is unlimited. If something can not be picked up immediately, it can often be delayed by two days. The traditional distribution mode of rookie post is convenient for picking up parts, but it is easy to cause queuing, congestion and other phenomena during picking up peak period, which affects the normal development of picking up parts.

The traditional distribution mode of rookie posts is shown in Figure 2.

The delivery mode of express cabinet is that the courier delivers the express to the school gate, the administrator arrives at the terminal network to deliver the delivery, uses the ID card landing system, scans or enters the express bar code, enters the recipient's mobile phone number, chooses the appropriate cabinet, and the system automatically sends the message to the target recipient. Express cabinet mode is the best distribution mode, with fixed receiving place, free pick-up time and no longer queuing congestion. However, at present, due to the expensive construction price and the distribution of space, the development of the number of express cabinets is limited. The operation process of express cabinet is shown in Figure 3.
3. Analysis of Traditional Distribution Model of "Open-air Shop"

The traditional "open-air stall" distribution mode has the advantages of simple distribution process, but it also has some shortcomings.

3.1 Distribution time is not equal to the free time of teachers and students in Colleges and Universities

In order to save costs, most campus express companies often do not have fixed stores. Most of them transport express by mobile express delivery truck, which shortens the time of picking up the items. For college teachers and students, their leisure time is usually after class or after work. This time is usually shorter and is not equal to the time of distribution. Teachers and students find it difficult to pick up the express, and miss the time of picking up the express, which results in the delay of distribution time. On the one hand, this time inequality affects the quality of express delivery, teachers and students' satisfaction with express delivery. on the other hand, it also affects the receipt and delivery volume of teachers and students and express companies.

3.2 Door-to-door, peer-to-peer services cannot be implemented

The direct investment mode of express delivery in Colleges and universities mainly relies on the teachers and students themselves to pick up parts at designated locations. It fails to realize door-to-door service and can’t meet the individualized needs of teachers and students. This not only affects the quality of express delivery, but also shortens the idle time of teachers and students, and fails to meet the idealized distribution needs of teachers and students. Because the delivery time is relatively shorter, the courier did not seriously verify the information of the recipient, so loss and mistake often occur.

3.3 Logistics information updates slowly and business content is single

The main business of campus express is the distribution of express, but the main profit point is the collection of express. Campus express delivery volume is unstable and business forms remain unchanged for a long time, which makes the profits of campus express relatively low. Distributors often send short messages and make phone calls when notifying the recipients, which makes the logistics information of express delivery not updated in time, and often makes the information received by customers inconsistent with the distribution information, resulting in delays in distribution.

4. Problem Analysis on Distribution Model of Rookie Post

4.1 The division of powers and responsibilities is not clear
The rookie post itself only bears the short-term storage of express parcels, but does not have the transport function of logistics, which reduces the cost of its participation in logistics, but also leads to problems such as the damage of parcels or goods in other links of logistics, which can’t be followed up. Because rookie posts are facing consumers directly, they are most vulnerable to face-to-face criticism from consumers, thus causing confusion in the division of powers and responsibilities.

4.2 Small-scale operation of a single rookie post
The advantage of the community management mode is that there are clear target groups, which have geographical advantages over other non-rookie post competitors, and can be easily managed by "acquaintance relationship". Once the market is opened, consumers will become dependent on rookie posts. The disadvantage lies in the limited audiences of community management mode and the small scale of operation of individual rookie posts, which can be clearly seen from the origin of joining rookie posts. Some rookie posts are even the “sideline” of their stationmaster's income increase, so the growth space is still relatively limited.

4.3 Bearing more pressure than other links of logistics
The purpose of the service of the rookie post operation mode is to give consumers a good user experience. It is the rookie posts that face consumers directly, and thus bear greater examination and pressure than other links of logistics. Successful rookie postmaster will consolidate and develop user groups through its good service, and then give users the impression of good service of rookie network; but failed rookie postmaster will lose user groups, and then give users the negative impression of rookie network. User experience is a double-edged sword. It is obviously not an easy task for a rookie post station to do a good job of user experience service in a number of sites in the country.

5. Analysis of Problems in the Mode of Intelligent Express Cabinet

5.1 Quality Problems of Intelligent Express Cabinet
At present, there are still some quality problems in the intelligent express cabinet. In the process of using the intelligent express cabinet, students often report that there are problems in the intelligent express cabinet, which can’t be used normally.

5.2 Damage of packages often occurs in express delivery in intelligent express cabinet
According to users, express delivery in smart express cabinets is often damaged. However, users do not know who the delivery is, nor can they determine who actually damaged the package, nor can they be specifically accountable, and it can only end in fruitlessness.

5.3 Intelligent Express Cabinet Profits Slight
The small profit of intelligent express cabinet is an important reason that it has been unable to promote. Intelligent express cabinet has three main profit points: express delivery fee, user delivery fee, express overdue fee. However, these three profit points can obtain very low profits, return capital is very slow.

5.4 Limited number of express counters
The number of express cabinet outlets is limited, only suitable for limited size items. A group of standard express cabinets consist of a control cabinet and two sub-cabinets. They have about dozens of slots in size. Most of them are divided into three types: large, medium and small, but the size of the slots of different express cabinets is different. Because of the complexity of various commodities and different sizes, the use space is limited to a certain extent.

6. Constructing a New Campus Express Operation Model

6.1 Establishment of Students' Self-Management Express Service Center
At present, the Ministry of Education is vigorously promoting college students' innovation and entrepreneurship, strengthening the education of College Students' innovation and entrepreneurship, and strengthening the training of innovation and entrepreneurship ability. China has officially entered a new era. The policy supports college students' entrepreneurship very much. To construct a new mode of campus express delivery operation is to establish the express delivery service system managed by students independently. In order to solve the problem that campus express delivery can't provide door-to-door service, we can introduce the concept of "student service" and establish campus express service center. On the one hand, many university campuses consider the safety of the school and generally do not allow express vehicles to enter the campus. As a transit service station, the campus Express Service Center solves this problem very well. On the other hand, the campus express service center provides an entrepreneurial platform and opportunity for students who want to start their own businesses, and helps students, especially those majoring in e-commerce and logistics, to do more. Do a good job in Entrepreneurship practice. Establish campus express service center to help students who want to start a business and do part-time express work gather together, responsible for campus express delivery, collection, pick-up and other business. Colleges and courier companies sign cooperation agreements and charge transfer fees to clarify the rights and obligations of both parties. At the same time, they set up work-study posts in the campus courier service center so that students can practice in the courier service center, which has the characteristics of "win-win at one stroke" and improves the satisfaction of teachers and students. The basic work of the traditional agency point is that sending and receiving express mail is easy to cause the problem of narrow income and low profit. And the campus express service center will display in front of teachers and students in the attitude of diversified value-added services.

6.2 Providing diversified business services
First of all, it provides door-to-door delivery and door-to-door pick-up services to meet the needs of most teachers and students who can enjoy services without going out. If the number of one-time deliveries or one-time pickups in campus express service center is large, then the unit cost will be reduced. With the increase of the number, the cost will be lower, and the feasibility of door-to-door service is strong. Secondly, innovate business content. When it comes to holidays, the distribution of gifts on campus provides a business opportunity for it; and if most of the campus letters are confused, many students and teachers do not know where to get the letters, the campus express service center can cooperate with the school free of charge, and set up a special campus transceiver station for teachers and students to pick up and send letters; the delivery of baggage during graduation season, etc. Finally, the development of information technology is also an effective boost to improve the efficiency of campus express service center. For example, on the technical level of information collection and transmission, besides creating a short message platform, we can also invite relevant professional students to develop APP. Teachers and students can send and receive information online, pay online and so on, which greatly saves students' time cost, and makes full use of other students' resources, thus realizing the complementarity of students' spare time.

7. Conclusion
The establishment of campus Express Service Center fully conforms to the spirit of innovation and entrepreneurship advocated by the State Council, and has great significance. However, we should see that there are some limitations in its development. In terms of school management system and the selection of personnel, we need to continue to explore and improve, hoping to better serve the campus express delivery.

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