

The Development Status and Strategy of Cainiao Post in the Current Environment: A Case Study of Guangzhou Huashang College

Kai Wang*, Chenghao Lin, Chao Chen

Department of Artificial Intelligence, Guangzhou Huashang College, Guangzhou, Guangdong, China

**Corresponding Author*

Abstract: Express delivery is an essential component of the rapid development of e-commerce. The express delivery service on university campuses is a topic of current concern among various parties, and among these, the business model of Cainiao Post has become a solution widely adopted by universities. With the increase in the number of students on campus in universities, new problems have also emerged in campus express delivery services. It is imperative to improve the service model and enhance service efficiency. The construction of Cainiao Post at Guangzhou Huashang College has significantly reduced the cumbersome express collection procedures of the past. Under the current model, the efficiency of campus express delivery services has been greatly improved compared to before, and the efficiency of express handling has also been notably enhanced during periods of explosive growth in express volume during various shopping festivals. However, although the existing model has made great progress in efficiency compared to before, there are still many problems in actual handling. This paper first uses the literature research method and the Internet to search for, collect, and review academic papers, research theories, and data reports related to "campus express delivery services." It then screens and studies the content with reference value, summarizes and organizes it, and combs through the relevant theoretical concepts as the theoretical basis and foundation for the research. In the second part, this paper takes the Cainiao Post at Guangzhou Huashang College as the research object. By distributing questionnaires and other forms, it investigates the current development status

of Cainiao Post at Guangzhou Huashang College, analyzes its service strategies, and examines the survey results. It also studies the existing problems in the current development process and, in combination with the results of relevant literature research, provides suggestions with certain guiding and reference value for the development of Cainiao Post at Guangzhou Huashang College.

Keywords: Campus Express Delivery Services in Universities; Cainiao Post; Current Development Status; Business Model; Service Efficiency

1. Introduction

Since China fully connected to the global Internet in 1994, the Internet has played an important role in promoting the optimization and upgrading of China's industrial structure, driving the rapid development of China's digital economy, and meeting the growing needs of the people for a better life. Since 2013, China has been the world's largest online retail market for eleven consecutive years. In 2024, China's online retail sales reached 15.52 trillion yuan, an increase of 7.2% compared to 2023. Among these, the online retail sales of physical goods amounted to 13.08 trillion yuan, accounting for 26.8% of the total retail sales of consumer goods. As of December 2024, the number of online shopping users in China reached 974 million, an increase of 59.47 million compared to March 2024, representing 87.9% of the total number of Internet users in China [1].

As of February this year, the development scale index of express delivery reached 519.3, with a year-on-year increase of 27.6%. Given that February last year included the Spring Festival holiday, which resulted in a lower

base for comparison, it is expected that the volume and revenue of express delivery business in February this year will grow by 24.6% and 16.6% respectively compared to the same period last year. In February, the industry's development accelerated, with an average daily business volume of nearly 540 million items. By February 8, the cumulative volume had exceeded 10 billion pieces, 9 days earlier than in 2023 and 10 days earlier than in 2022. In the middle and late part of February, factors such as students returning to school further drove the growth of delivery demand, with the average daily business volume remaining around 350 million items. The industry's scale continued to grow steadily, ensuring the accelerated development of online consumption [2].

According to the "Campus Express Industry Development Report (2022)" released by the China Education Logistics Association and Alibaba Research Institute, the number of express packages in universities across the country was expected to reach 3 billion pieces in 2022. Data from the State Post Bureau shows that the total volume of express delivery in China reached 110.58 billion pieces in 2022. Therefore, the express delivery volume in universities accounted for approximately 2.7% of the total express delivery volume in the country in 2022. With the continuous increase in the number of university students, the proportion of express delivery in universities is also rising. University logistics services have now become a key link in the last mile of express delivery, which is crucial to the service deepening and long-term development of the entire logistics industry. Due to the particularity of universities, schools have strict management over students and non-university personnel. As the volume and scale of campus express delivery continue to grow, the traditional express delivery network of courier companies is finding it increasingly difficult to meet the demands of teachers and students for timeliness and service quality [3].

With the rapid development of e-commerce, express delivery companies such as SF Express and STO Express have also begun to focus on the expansion of campus express business, which has gradually occupied an important position. The campus express market has become a key business area of competition among many express companies.

However, in the early stage when many express companies entered the campus, they adopted a fragmented business model. Teachers and students had to go to different locations on campus to send and receive packages from different express companies. The loss and damage rate of packages was high, the quality of service personnel was uneven, the express market lacked order, and there was cutthroat competition among express companies, making it difficult to improve customer satisfaction [4].

In May 2013, Alibaba joined hands with many express logistics companies such as STO Express, YTO Express, and Yunda Express to jointly establish Cainiao Post. Cainiao Post is a logistics service network platform led by Cainiao Network and oriented towards communities and campuses. It mainly provides package collection and delivery services for online shopping users and is committed to providing diversified last-mile services for consumers, including comprehensive life and online shopping. As a mature logistics service system, Cainiao post became the world's largest cross-border e-commerce logistics company in 2022, with a market share of 8.1%. In universities, Cainiao Post has solved two major problems of campus express services with its service and technological advantages: the problem that university students cannot receive packages and the problem that the large volume of campus express packages makes it impossible for couriers to deliver each package individually. It has gradually occupied most of the campus market. Now, Cainiao Post on campus has become the mainstream choice for campus logistics services [5].

The resolution of the two major issues in campus logistics services has enabled Cainiao Post on university campuses to thrive and develop a comprehensive system, facilitating the collection and dispatch of packages for teachers and students. However, it is important to recognize that despite its vigorous growth, there are still many pressing issues that need to be addressed. With the continuous expansion of China's digital economy, the requirements for logistics service infrastructure are also increasing. For universities, the inevitable growth in the number of on-campus personnel each year naturally places higher demands on campus logistics services. Taking Guangzhou Huashang College as an example, with nearly

32,000 students currently enrolled, the burden of logistics services for the school is self-evident. At present, the processing efficiency of Cainiao Post at Guangzhou Huashang College has been steadily improving. The introduction of intelligent technology has reduced the occurrence of lost packages and enhanced the convenience for teachers and students to collect and send parcels. However, during shopping festivals such as Singles' Day, it is still inevitable that the warehouses become overwhelmed, leading to difficulties for teachers and students in collecting packages and delays in the shelving of parcels. The optimization of Cainiao Post services remains a long and arduous task [6].

2. The Significance of this Paper's Research

The logistics service in universities is an important part of the modern logistics system in China, and it is the foundation to ensure that every university student can enjoy equal access to express delivery services. Cainiao Post, as the mainstream logistics service platform in universities, integrates the resources of major express delivery companies and provides both sending and receiving services, which has greatly improved the efficiency of campus logistics services. A study on the current development status and strategies of Cainiao Post in Guangzhou Huashang University can help identify the existing problems and thus put forward relevant suggestions to promote the improvement of its services and better serve the teachers and students. This research has both theoretical and practical significance.

Theoretical significance: This research on the current status and development strategies of Cainiao Post in Guangzhou Huashang University is a case study of a campus logistics system. From the perspective of management science, it is an investigation into the organization of Cainiao Post at Guangzhou Huashang University, focusing on its internal resource allocation and utilization efficiency. This study aims to identify the existing management issues within the organization and summarize the key factors that influence organizational innovation. By doing so, it seeks to provide suggestions for organizational innovation and optimization, helping Cainiao Post to improve its services and provide more convenient services for teachers and students in universities.

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3. The Methods of the Research

In order to achieve the objectives of this research, the author has primarily employed the following research methods: Literature Review Method: At the beginning of this research, the author utilized the internet to collect and review a large number of documents, research theories, and data reports related to the content of this study from various search websites and journal databases. The author selected, studied, learned from, and summarized the content with reference value, and finally organized the relevant theoretical concepts as the theoretical foundation and basis for this research. Inductive Method: The author analyzed and categorized the various issues that arose during the operation of Cainiao Posts in rural areas to draw relevant conclusions. Internet Resource Method: The author reviewed books related to express delivery stations, express delivery service platforms, and information systems both domestically and internationally on the internet. By understanding and analyzing the knowledge within these materials and integrating it with the relevant knowledge previously learned, the author applied it to this thesis [8].

4. The Current State of Domestic and International Research

4.1 The Current State of Domestic Research.

The current domestic research is mainly focused on Cainiao Post. As a logistics

service platform under Alibaba Group, Cainiao Post is committed to solving the "last-mile" delivery problem in rural areas and has achieved certain results. However, the problem has not been well resolved yet. Meanwhile, other models, such as the Fengchao Parcel Locker, have also emerged, proposing corresponding solutions to some extent. China's express delivery industry has a relatively short development history [9]. Both the relevant laws, regulations, and policies, as well as the scale of express delivery companies, their professional technology levels, and service quality, still need to be improved. In recent years, with the rapid development of e-commerce and the increase in online shopping volume, the express delivery industry has also developed rapidly [10]. The establishment of Cainiao Post has largely solved the problem of end-mile delivery. However, due to the particularity of express delivery in universities, the problems faced by different universities' logistics delivery are not entirely the same, and the same problems may not be universally applicable in different contexts. In addition, for some universities, the infrastructure construction of Cainiao Post is still not satisfactory [11].

4.2 The Current State of Research Abroad

The international express delivery industry emerged in the 1960s and 1970s and has matured and improved over the years. In recent years, international express companies have been entering the Chinese market. The top four international express companies possess high profitability, a well-developed global network, standardized international operations, advanced infrastructure, and state-of-the-art information technology. The entry of international express companies into the Chinese market has injected new vitality into the development of China's express delivery industry, giving it an unprecedented level of dynamism [12].

5. The Development Status of Cainiao Post at Guangzhou Huashang College

5.1 Introduction to Cainiao Post at Guangzhou Huashang College

Guangzhou Huashang College is located in

Licheng Subdistrict, Zengcheng District, Guangzhou City, Guangdong Province. Its predecessor was the Suli Bao Express Service at Guangzhou Huashang University. After resource integration, different express collection points were centralized into one location, which changed the previous situation where teachers and students had to run around to multiple places to collect their packages, greatly facilitating the process of package collection for them.

As of now, the Cainiao Post at Guangzhou Huashang University handles over 2,000 incoming packages and over 200 outgoing packages daily. During special periods such as the "Singles' Day" shopping festival, the volume of incoming packages can reach around 10,000. As a courier station, Guangzhou Huashang College has a relatively large volume of express package processing.

5.2 The Operation Process of Cainiao Post at Guangzhou Huashang College

5.2.1 The Business Process of Cainiao Post at Guangzhou Huashang College

The Cainiao Post at Guangzhou Huashang College (hereinafter referred to as the Cainiao Post) is equipped with the functions of storing and collecting packages as well as the process of sending parcels.

Storing parcels:

1. Parcels addressed to Guangzhou Huashang College and Huashang Vocational College are delivered to the Cainiao Post for unloading at specific time points.
2. Cainiao Post staff scan the incoming parcels into the inventory and identify them through the barcode, which helps the courier companies update the parcel information, upload the information that the parcels have reached their destination, and synchronize the updates to the Cainiao Post app.
3. The parcels that have been scanned into the inventory are initially sorted into different categories. Currently, the Cainiao Post mainly sorts parcels by size and category.
4. Cainiao Post staff shelve the initially sorted parcels according to the existing shelf categories in the station. They update the parcel information using a barcode scanner, also known as a Bajun scanner, and attach labels to the parcels.
5. While shelving the parcels, the Cainiao Post notifies teachers and students to collect their

parcels through text messages or other means.

Parcel collection process:

1. Teachers and students obtain the label numbers on their parcels through text messages, the Cainiao Post app, or other means. Upon arriving at the Cainiao Post, they are directed by the staff to the corresponding shelves.

2. After collecting the parcels, they proceed to the Cainiao Post's checkout point, where the high-speed camera scans the identity code on the Cainiao Post app to complete the checkout process. (If someone other than the recipient collects the parcel, it will be marked as "picked up on behalf of.")

Parcel sending process:

1. Senders place orders independently on various courier apps or mini-programs. The app calculates the fee based on the weight and category of the package and assigns it to a Cainiao Post courier for collection.

2. The courier inspects the items on the spot. After confirming that there are no issues, the courier packages the items and waits for the courier company to collect them.

3. The courier company sends a courier to the Cainiao Post to pick up the packages and send them to their destinations.

5.2.2 Cainiao Post Operation Process

The operating hours of Cainiao Post are from 8 a.m. to 10 p.m. At 8 a.m., dedicated staff members go to the sorting center to collect goods addressed to Guangzhou Huashang College. A special vehicle transports the goods to the Cainiao Post, where they are then displayed, labeled, and notification messages are sent out. For parcels that have not been collected on the same day, timely phone calls or text messages are made to remind the recipients to pick them up. It is also important to ensure that all parcels to be sent out are dispatched before the end of the workday. The Cainiao Post closes at 10 p.m., when the premises are tidied up.

5.2.3 Personnel Arrangement

The staff of Cainiao Post consists of courier company personnel, Cainiao Post employees, and student part-timers, with the following job divisions:

1. Unloaders: These are the people who unload parcels from the courier vehicles and are in charge of the warehousing process. The majority of this role is filled by student part-timers.

2. Shelfers: They are responsible for placing the warehoused parcels onto the categorized shelves. Most of these positions are also held by student part-timers.

3. Cainiao Post Customer Service: They handle communication with the recipients and promptly inform them of any parcel damage or loss. This role is shared between student part-timers and courier company employees.

4. Manager: This person oversees the staff's work, calculates employee wages, schedules shifts, handles parcel claims, and other related tasks. The manager is appointed by Cainiao Post.

5. Courier Company Resident Staff: These are the permanent staff from the various courier companies who are stationed at Cainiao Post. They are in charge of the courier company's business operations related to parcel collection and dispatch, and they act as the liaison between the courier company and Cainiao Post. Apart from a small number of courier company and Cainiao Post employees, the majority of the workforce is made up of student part-timers.

5.3 Analysis of the Layout of Cainiao Post

The following is the distribution of survey results:

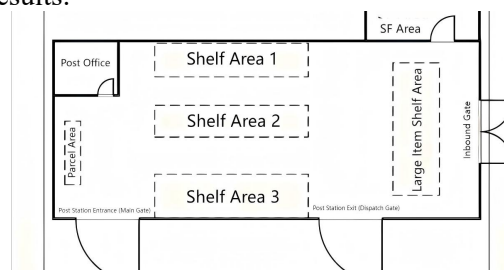


Figure 1. Floor Plan of Cainiao Post at Guangzhou Huashang College



Figure 2. Sample of Cainiao Post Station Shelf

The general layout of the Cainiao Post at Guangzhou Huashang College is shown in (Figure 1, Figure 2). As shown in the (Figure 1, Figure 2), each shelving area consists of 22 rows of shelves, with each shelf having 5 layers, and both the front and back sides of the

shelves can be used to store parcels. Shelving area 1 has two shelves, while shelving areas 2 and 3 each have three shelves. These three shelving areas are used to store smaller-sized parcels. In front of the checkout area is the large-item shelving area, which is used to store larger-sized parcels. The shelves in this area only have 4 layers.

Since SF Express has not collaborated with the college's Cainiao Post, a separate area has been designated for storing SF Express parcels. The checkout of SF Express parcels does not require scanning an identity code through the Cainiao Post app; instead, it uses SF Express app authentication for checkout. The Cainiao Post office is the place where Cainiao Post staff conduct management work. In front of it is the parcel sending area, which is equipped with devices for weighing parcels to facilitate billing.

5.4 Analysis of Profit Model

5.4.1 Parcel storage on behalf of others

Similar to most Cainiao Posts, Cainiao Post generates revenue through its parcel storage service, charging between 0.4 and 0.6 yuan per item. Given the high population density on campus, the large volume of parcels, and the fact that most courier companies have signed agreements with the Cainiao Post, despite the relatively low profit margin of this service, it still manages to achieve a considerable income.

5.4.2 Parcel dispatch

Cainiao Post offers a proxy dispatch service. According to surveys, parcels dispatched on behalf of Guangzhou Huashang College can generate a profit of 4 to 5 yuan each. Given the substantial mailing needs of teachers and students at the school, it can also achieve a considerable income.

5.5 Analysis of Advantages

1. Market Advantage: The campus market has a natural market advantage. Guangzhou Huashang College has a large number of teachers and students with strong purchasing power. The large volume of parcels entering the Cainiao Post every day can bring considerable revenue from parcel storage services. During special periods such as graduation season, students have a high demand for sending parcels, which can generate substantial revenue from proxy dispatch services. The Cainiao Post has

cooperated with multiple courier companies, basically taking over all the incoming parcels from courier companies on campus.

2. Personnel Advantage: Most of the staff at Cainiao Post are student part-timers. The student group has a high quality and strong learning ability. Cainiao Post only needs to provide simple training for students to adapt to their job positions. The working schedule of students can be flexibly arranged according to their personal class schedules. Reasonable scheduling can adapt to various different situations. With a large number of students, Cainiao Post can attract student part-timers through certain publicity methods, which helps students to work and study at the same time. By accumulating a certain number of student part-timers, Cainiao Post can have a rich reserve of employees, effectively alleviating the problem of tight employee demand during shopping festivals such as Double Eleven.

3. Technological Advantage: Cainiao Post has the technical support of Alibaba Network. By introducing advanced equipment such as Bajun scanners and checkout scanners, the efficiency of Cainiao Post's business processing has been greatly improved. Parcels arriving at Huashang College only need a simple process to be shelved. The parcel collection process is faster and safer. Collectors can pick up parcels by scanning their identity codes. Through identity recognition, the identity of the collector can be verified, and each parcel taken out of the station can be tracked, effectively solving the problem of parcel misappropriation and reducing parcel loss. Cainiao Post has invested in and purchased Cainiao unmanned delivery vehicles, which have now begun trial operations. After paying a certain fee, parcels can be delivered to the dormitory building of students at the scheduled time, effectively solving the last mile problem of parcel delivery.

5.6 Evaluation of the Services of Cainiao Post at Guangzhou Huashang College

Based on the service evaluations of Cainiao Post at Guangzhou Huashang College collected from the Internet, the author has collated and categorized them into the following different types of evaluations.

1. Evaluations on Service: There are opinions on the services provided by Cainiao Post, with the majority being negative. These include dissatisfaction with the service attitude of

Cainiao Post staff and the compensation for damaged parcels.

2. Evaluations on Location: There are suggestions regarding the location of Cainiao Post on campus, with most being negative. The main content is that the location is not reasonable, and it takes a long time for students to collect parcels from their dormitories.

3. Opinions on Charges: These are mainly about the charges for sending parcels, with the majority being negative. These include doubts about the charges for parcel packaging boxes and the belief that the charges for sending parcels are too high.

4. Evaluations on Efficiency: These are mainly about the parcel collection process, with the majority being negative. It is believed that during peak hours, it takes a long time to collect parcels. It is also thought that the process from warehousing to shelving is too long, affecting the timely collection of parcels. Considering the above evaluations of Cainiao Post by students on campus, it can be seen that although the Cainiao Post at Guangzhou Huashang College has a stable overall business situation and considerable profit income, there are still many shortcomings in the actual operation process. For Cainiao Post, which is a service-oriented business entity, continuously optimizing its service efficiency, improving the service process, and striving to gain customer satisfaction is the only way for long-term business success.

5.7 Analysis of the Personal Perceptions or Opinions of the Survey Respondents

In addition to the completely subjective factors such as personal background and experience of college students, to understand the factors influencing college students' choice of entrepreneurship or to reflect on the current state of college student entrepreneurship, it also depends on the group's perception and choice regarding entrepreneurship. Therefore, the third part of the questionnaire mainly focuses on the college students' perception of the concept of entrepreneurship, their perception of the best age for entrepreneurship, their willingness to start a business, and if they choose to start a business, the related investigation of the industry fields they would select.

6. Analysis of the Problems Existing in the Cainiao Station of Guangzhou Huashang College

6.1 The Space Layout is too Crowded

Due to the large volume of courier packages in the college and the substantial number of packages that need to be temporarily stored at the station every day, the station has installed a large number of shelves to meet the campus's package storage needs. However, due to space limitations, the shelves are placed quite densely. This has resulted in limited space for people to move around within the station, making it very crowded. During peak package collection times after classes, the station often cannot accommodate the influx of many people. When the station becomes too crowded, it is necessary to restrict the entry of more people to ensure that the flow of people inside does not exceed the limit. This significantly extends the package collection time for teachers and students and reduces the efficiency of package movement within the station. Additionally, the dense placement of shelves makes it difficult for teachers and students to locate their packages, which severely affects the service experience. Moreover, with only a few exits available for package collection, only a limited number of teachers and students can collect their packages at the same time. This leads to long queues at the exits, which can squeeze the package collection space inside the station during busy times and greatly increase the pressure on handling the flow of people within the station.

6.2 Low Efficiency in Warehousing and de-Warehousing

As previously mentioned, the college's Cainiao Station has adopted devices such as barcode scanners and high-speed cameras to improve the overall package handling efficiency. However, in the actual package handling process at the station, the efficiency remains barely satisfactory. One reason for this issue is the large volume of packages. When packages are warehoused, a considerable amount of time is required for sorting and then transporting them to the corresponding shelves, which is a time-consuming process. Another reason is that although the existing package shelving method has been significantly improved, the

warehousing time for packages coincides with the peak hours of foot traffic at the station. In order to maintain service efficiency, the station has to assign staff to guide teachers and students in collecting their packages, temporarily abandoning some shelving work, which greatly affects the shelving efficiency. At the same time, the barcode scanner, as a shelving tool, is not widely used. During periods of package surges, it cannot meet the shelving demand. Some packages can only be shelved using handwritten codes, which occasionally leads to issues such as incorrect codes, causing packages to be mistakenly collected or lost. Furthermore, the current shelving work is generally carried out by two staff members working together, with one person responsible for scanning the packages to assign codes and the other person responsible for shelving and organizing the packages. However, with the increasing popularity of barcode scanners, the process of scanning packages has been greatly shortened. This mode of operation has now become a hindrance to work efficiency and has slowed down the shelving speed. In terms of de-warehousing, the limited number of high-speed cameras used for de-warehousing results in crowded de-warehousing queues during peak times. This not only severely affects the de-warehousing efficiency but also exacerbates the congestion of people to a certain extent, having a negative impact on the entire package handling process.

6.3 The Service Quality of the Station is Relatively Low

Due to the large volume of packages and high foot traffic at the station, customer service staff are needed to provide package consultation services for teachers and students. However, the Cainiao Station at Guangzhou Huashang College currently has a severe shortage of customer service personnel. With only 1 – 2 customer service staff members available, the pressure on them to handle issues such as lost packages is immense. This often results in long queues for customer service consultations, which not only affects the efficiency of package handling but also exacerbates the congestion within the station. At the same time, customer service staff are also required to promptly contact recipients regarding damaged or lost packages and handle claims in a timely

manner. This adds to the already heavy workload of the customer service personnel, significantly impacting their efficiency in dealing with package-related issues. Moreover, some staff members have a poor service attitude towards teachers and students. Both of these factors negatively affect the service quality of the station and lower the service evaluation of the station by the campus community.

6.4 The Courier Service Leads to Environmental Problems

Currently, the main type of courier waybill is paper-based, which generally cannot be recycled. In addition, to reduce costs, courier companies usually use low-quality black plastic bags to package couriers. These bags not only emit a pungent odor but are also non-biodegradable. Once the courier bag is opened, it completely loses its value and becomes waste that is difficult to recycle. This is undoubtedly unfavorable for the recycling and utilization of resources. Moreover, the Cainiao Station of Guangzhou Huashang College has not set up a special area for courier resource recycling. Outside the station, there are only a few trash bins to deal with the courier packaging discarded by teachers and students after they collect their packages. These bins are not sufficient to hold the large amount of waste generated by couriers. Relying on garbage disposal once a day is far from effectively solving the waste problem. Over time, a large amount of waste has piled up outside the station. When encountering windy and rainy weather, cardboard scatters on the ground and is trampled into a muddy mess, while packaging bags are full of dirty water, which seriously affects the campus environment.

7. Suggestions for Solving the Problem

In light of the above-mentioned issues, the following improvement suggestions are hereby proposed for the Cainiao Station of Guangzhou Huashang College.

7.1 Optimize the Spatial Layout

The main issues with the current layout of the Cainiao Station at Guangzhou Huashang College are the insufficient space for passages and the overly dense placement of shelves. Considering that, on the one hand, the demand

for online shopping among teachers and students has shown a declining trend compared to before after the end of the pandemic, and on the other hand, the completion of the new campus has reduced the number of students at the Zengcheng campus, both of which have led to a decrease in campus courier volume compared to the past. Therefore, optimizing the layout within the station is a feasible measure to alleviate the congestion of people. The following are suggestions for optimizing the spatial layout:

7.1.1 Reduce the number of shelves and increase the spacing between them.

The Cainiao Station at Guangzhou Huashang College has too many shelves, which leaves little space for people to move around. To address this, the number of shelves can be reduced and the spacing between them can be increased. The space between each shelf should be maintained at around 1.2 meters, which can accommodate 2 – 3 people passing through at the same time. By expanding the space for people to move around, the congestion and difficulties in collecting packages during peak hours can be alleviated.

7.1.2 Utilize idle space to add more de-warehousing exits.

It has been found through actual surveys that there is some idle space at the college's Cainiao Station that has not been utilized. In addition to the space shown in (Figure 1), there are still some idle areas within the station that can be put to use. Based on this, the station can reasonably arrange the idle space within its premises. To address the problem of long queues and congestion during peak hours, 1-2 additional de-warehousing exits can be added in the idle space to increase the de-warehousing speed and relieve the congestion of people during peak times.

7.2 Improve the Efficiency of Warehousing and De-warehousing

As previously mentioned, the insufficiency of the efficiency of warehousing and de-warehousing is also an urgent aspect that needs optimization at the college's Cainiao Station. Regarding the warehousing and de-warehousing processes, the following suggestions are hereby proposed:

7.2.1. Purchase advanced equipment

The warehousing and de-warehousing processes at Guangzhou Huashang College

have already seen the full participation of intelligent devices, and the efficiency of package handling has been significantly improved compared to before the introduction of these devices. However, due to the insufficient number of intelligent devices, there is still a phenomenon of "short supply" of intelligent devices, especially barcode scanners, when there are too many packages. To address this situation, the Cainiao Station can purchase more barcode scanners, high-speed cameras, and other intelligent facilities as a reserve to meet the demand in times of package surges.

7.2.2. Optimize the shelving process

Given that the previous method of two staff members collaborating to shelve packages has affected the actual efficiency of package service, the Cainiao Station can adopt a new approach during peak times. One staff member can be assigned to shelve a batch of packages, and only one staff member can be allowed to shelve packages between two shelves at the same time. Although this method may slightly increase the time it takes to shelve a single package, it can achieve higher overall efficiency during periods of high package volume. Additionally, during peak foot traffic times, this approach can effectively disperse the crowd and reduce congestion.

7.3 Enhance the Service Quality of the Station

The improvement measures for the service quality of the Cainiao Station are mainly divided into the following several aspects:

7.3.1. Improve staff allocation

Due to the severe shortage of customer service personnel at the station, teachers and students often cannot find customer service staff when they need courier services, or there are long queues in front of the customer service staff. To address this, the station can optimize the existing staff allocation structure and increase the number of customer service personnel to meet the consultation needs of teachers and students for courier services. At the same time, it is also necessary to strengthen the training of customer service personnel, increase the reserve of customer service staff, alleviate the work pressure of each customer service staff member, and enable each customer service staff member to have more energy to do a good job in their own work.

7.3.2. Enhance employee service quality

Since most of the employees at the Cainiao Station of Guangzhou Huashang College are student part-timers, and there is no particularly comprehensive employee training before they start work, they can start work after a period of probation. Objectively speaking, although most of the employees recruited in this way are college students, it cannot be ruled out that a small number of people may have a weak service consciousness and a poor service attitude. For this problem, the station needs to strengthen the training of employees' service consciousness, establish a corresponding reward and punishment mechanism for employees' service attitude, and force employees to establish a high-quality service consciousness. This will improve the station's service from the foundation and enhance the service quality of the station.

7.3.3. Promote and popularize unmanned courier vehicles

In the actual courier delivery process, there are cases where teachers and students do not collect their couriers in time due to reasons such as long distances and lack of time, resulting in courier retention and accumulation on the station's shelves. These retained couriers can greatly reduce the turnover speed of couriers within the station and affect the overall service efficiency of the station. The unmanned courier vehicles recently launched by Cainiao Station can effectively solve this problem. However, due to the limited number of unmanned courier vehicles at the station, currently only two, the delivery scope of the unmanned courier vehicles is still relatively small. At the same time, the cost of transporting couriers by courier vehicles is still relatively high. These two factors have led to the fact that the transportation service of unmanned courier vehicles has not been widely popularized. The station can purchase more courier vehicles to expand the delivery scope of unmanned courier vehicles. It can also offer discounts on the fees charged for unmanned courier vehicles, allowing teachers and students to enjoy the delivery service of unmanned courier vehicles at more favorable prices. This will promote and popularize the delivery of unmanned courier vehicles throughout the school, effectively solving the last-mile problem of couriers.

7.4 Promote Environmentally-Friendly

Courier Services

To address the issue of the lack of environmental friendliness in the courier service at the Cainiao Station of Guangzhou Huashang College, solutions can be approached from two aspects:

7.4.1. Properly dispose of courier waste

The most prominent environmental issue in the courier service at Guangzhou Huashang College is the inadequate recycling of courier waste, with only a few trash bins available outside the station for waste disposal. To address this, a dedicated courier waste recycling area can be established to recycle cardboard boxes, plastic bags, and other recyclable materials. At the same time, the management of courier waste should be strengthened by adding more trash bins and other facilities to collect non-recyclable packaging materials, preventing courier waste from littering the ground and severely impacting the campus environment.

7.4.2. Enhance environmental awareness

Environmental issues are inevitable for the long-term development and sustainable operation of the Cainiao Station at Guangzhou Huashang College. The most fundamental measure to achieve this is to provide environmental awareness training for station staff. By using promotional slogans and reward and punishment mechanisms, the awareness of environmentally-friendly courier services can be deeply rooted in the minds of every employee, internalized in their hearts and externalized in their actions, helping the station better handle environmental issues within. Additionally, environmental publicity should be increased among teachers and students on campus. Through self-media platforms and other means, proper disposal methods for courier waste can be promoted.

8. Summary and Prospect

The urgency of digital economy development can be measured from three dimensions: speed, breadth, and depth. First is speed, that is, "the fast development speed of the digital economy." The development speed of the digital economy is three times that of the overall economic development. Looking globally, although the global economy experienced negative growth last year, the global digital economy still maintained positive growth. The second is breadth, that is,

"the wide radiation range of the digital economy." From the perspective of breadth, from the high-end aerospace and space science and technology to traditional catering industries such as Meituan Waimai, all require digital support. The third is depth, that is, "the deep penetration of the digital economy into industries." From the perspective of impact depth, digital elements have penetrated into the entire process of the industry.

The impact of the digital economy permeates the entire industry. The rise of various new technologies can replace some traditional business models in an instant. For the traditional logistics industry, if it cannot keep pace with the development of the digital economy, its space for survival will be greatly compressed. On the other hand, as an important part of the modern supply chain, the development of the logistics industry is of great significance to the supply-side structural reform, the high-quality development of the national economy, and even the realization of China's second centenary goal. Therefore, whether the entire logistics industry can develop in depth not only affects our daily lives, but also has profound significance for national development.

For the logistics industry, the last-mile delivery is the "capillary" that ensures the long-term development of the industry. The deepening of last-mile delivery services can help logistics enterprises save costs and further develop. As a branch of last-mile delivery, whether campus last-mile delivery can deepen its services, improve service quality, and gain more positive feedback is a test for the deepening of last-mile logistics services. As the mainstream campus express service model at present, Campus Cainiao Post has won the support of colleges and universities for its up-to-date and convenient operation mode, and has now become an indispensable service measure for universities.

The establishment of Cainiao Post at Guangzhou Huashang College was accomplished through the joint efforts of the school's teachers and students, express companies, and the post itself. Since its establishment, the post has been developing rapidly, with continuous optimization and improvement of its service facilities and steady improvement of service efficiency. However, due to objective factors such as the pandemic,

the service feedback since its establishment has generally not been very positive. For the post, although negative feedback has a negative impact, viewing these poor reviews from the perspective of how to optimize services has very important positive value for service optimization. The establishment of Cainiao Post at Guangzhou Huashang College is rooted in express delivery and relies on the school's teachers and students. Considering how to optimize its service system is a guarantee for the post to continue operating at Guangzhou Huashang College.

Problems should be solved in a timely manner once discovered. For the post, although problems do exist, they are not unsolvable. For the operators of the post, the income from operating Cainiao Post at Guangzhou Huashang College is considerable. With a stable student body on campus, there is no need to worry about the volume of express deliveries. However, this does not mean that they can be complacent. The particularity of the campus and the large volume of campus express deliveries are challenges to the operation of the post. How to coordinate existing resources to solve current problems is what the post should be thinking about most now. By making good use of digital technology, adopting more up-to-date operation modes, and correctly achieving high-speed and high-quality development, the post can provide better services for teachers and students on campus and avoid being eliminated by the tide of the digital economy.

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