

Research on the Evaluation of the Quality of End-to-End Logistics and Distribution Services of Cai Niao Station

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Abstract: Citizens in Chengdu City were selected as the research object to investigate their satisfaction with the delivery service of local Rookie Stations, and the questionnaire data were analysed for reliability, validity and correlation using SPSS, and service quality was evaluated from the dimensions of reliability and empathy using the SERVQUAL model. In Chengdu City, there are mainly differences in satisfaction levels, and Chengdu citizens value the professionalism, reliability and empathy of the delivery service, and finally, corresponding countermeasures are proposed.

Keywords: SERVQUAL Model; Cai Niao Station; Service Quality Evaluation.

1. Introduction

The logistics industry has become a new point of economic growth, China's express delivery industry has entered thousands of households, to promote the transformation of the circulation model and consumption upgrading has played an increasingly large role. At present, China has become the world's largest express delivery country, and the "14th Five-Year Plan" pointed out that we should accelerate the construction of "internal and external links, safe and efficient" modern logistics network, therefore, there is an urgent need to establish a set of modern logistics system in line with China's national conditions.

Logistics is an important, strategic and pioneering industry, which plays an important role in supporting the development of the national economy. Logistics in China has been rapid development, its overall scale is constantly expanding the degree of station is constantly improving, has become an important industry in the modern service industry. In the development process of modern logistics industry, reduce the cost of logistics industry, build intelligence, the ability to adapt to the market is still the "signpost", "bull nose". It can be predicted that in the next period of time, with the market, technology, factors, policies and other aspects of the adjustment, in the government, enterprises, associations and other stakeholders in the joint efforts of China's logistics will move towards a transformation and upgrading of the road. As a distribution terminal, the Cai Niao station is the most direct link between the logistics industry and consumers, so its stable development is very important.

2. Literature Review

2.1. Literature Review of Cai Niao Stages

Zhang Cheng Long (2022), in view of the current status of the logistics development industry, elaborated on the many problems arising from the rapid development of the college Cai Niao station, analysed that the new generation of college teachers and students have a strong sense of rights, when they are dissatisfied with the service of the station, they will choose to file a complaint or a bad review, which leads to low satisfaction and low loyalty [1]. The result is low satisfaction and low loyalty. Based on the background of the spurt growth of campus express points, Xu Wen (2022), in response to the

heavy workload of courier staff, resulting in a decline in service efficiency, and a certain queuing phenomenon in the pickup of Cai Niao Stage business outlets, the queuing theory is used to analyse the pickup queuing system of Cai Niao Stage to describe the specific process of the pickup queuing system of Cai Niao Stage; and secondly, Any Logic is used to explore the feasibility of adding self-service to the original manual service based on the Any Logic modelling and simulation. Secondly, Any Logic modelling simulation is used to investigate the work intensity of the staff after adding the self-service pickup terminal on the basis of the original manual service. Secondly, using Any Logic modelling and simulation, we propose to add self-service pickup terminals on top of the manual service to improve the high workload of the staff [2]. In order to improve the staff's high workload. Tan Rushi (2016) in the spatial study of express self-pickup behaviour of urban residents, that the establishment of express self-pickup points for urban residents, still require residents to self-pickup actually from the customer's point of view does not improve the efficiency of distribution, the satisfaction of distribution by its impact [3]. Liu Hui (2017), in the study of "Cai Niao" network business model innovation, put forward the business model of "Cai Niao", which is based on the transaction efficiency of the Internet and logistics and distribution costs, in the form of "logistics alliance". It improves the efficiency and quality of distribution in the form of "logistics alliance" in terms of both transaction efficiency and logistics and distribution costs on the Internet [4]. Yin Hui (2019), in a social network-based satisfaction analysis of university Cai Niao Stations, the results showed that in the operation services of Cai Niao Stations on university campuses, there are problems such as lower delivery efficiency and poorer service quality for the college student group, which is due to the fact that in the operation process, no attention is paid to the special needs of the student group [5]. This is due to the fact that the special needs of the student group are not paid attention to during the operation.

2.2. Literature Review on Customer Satisfaction and Influencing Factors

Yuan Xing (2011) investigated the distribution of sales marketplaces on the Internet and concluded that the efficiency of distribution has an impact on customer satisfaction, especially since Internet transactions are relatively efficient,

but the efficiency of distribution is significantly lower than that of Internet transactions, which creates a certain discrepancy for the users [6]. Jari Juga (2010) in the level of satisfaction with the quality of service, he believes that the management of distribution points should be based on the needs of the customer, and after having a good understanding of the needs of the customer, then provide the customer with the service of delivery, which can improve customer satisfaction [7]. Ramakrishnan (2011) studied delivery quality from the perspective of perception and expectation of service. He argues that users will express their satisfaction through delivery comparison by using equivalent online transaction delivery as a reference. Therefore, when improving the quality of delivery service, we should focus on the efficiency advantage compared to the delivery of the same industry [8]. Barbara Ocicka (2016) in the development of e-commerce, the user's satisfaction launched a survey, he believes that the quality of logistics and distribution services on the satisfaction of the factors include the following parts: the time of logistics and distribution, the time to notify the user and the efficiency of the delivery, the delivery personnel's attitude to service aspects [9]. Tao Dai (2019) believes that the logistics distribution operation point is responsible for the last kilometre delivery service, also directly facing the customer delivery, should try to let the user know the information of logistics distribution, and improve the quality of service in order to improve the satisfaction of the user [10]. Yan Hong (2014) in the study of railway logistics distribution based on e-commerce that e-commerce logistics distribution efficiency is an important factor affecting customer satisfaction, so in the development of e-commerce should be fast and efficient delivery to the distribution point, and improve the efficiency of the distribution point to improve customer satisfaction [11]. Zhang Kun (2021) and others found that the factors affecting customer satisfaction are mainly reflected in the uneven distribution of the number of courier lockers; overtime charges are not reasonable enough; operation and maintenance personnel cannot deal with failures in a timely manner. It is pointed out that customer satisfaction can be improved through rational planning of the number of placements, improve the relevant regulations and improve the technology, and put forward suggestions for its future optimisation and development. It is also suggested for its future optimisation and development [12]. Generally speaking, the discrepancy between service perception and expectation makes the satisfaction of logistics service relatively low, and the service quality that reflects the change of customer demand is the main influencing factor that affects the satisfaction of consumers, among which the distribution efficiency shows the importance of this influencing factor in many studies.

2.3. Literature Review of Research Methodology

Research on logistics service quality is mainly divided into conceptual and measurement levels. in the 1980s and 1990s, University of Michigan professor Smecky proposed the 7Rs theory of logistics based on the seven elements of quality, quantity, price, commodity, time, place, and customer. Banomyong R (2011) and others suggested that logistics service quality plays an important role in determining customer satisfaction, loyalty, and long-term relationships. plays an important role in determining customer satisfaction,

loyalty, and long-term relationships [13]. Fan Nana (2015) established the logistics service quality index system in B2B and C2C modes, and compared and analyzed the logistics service quality index system of the two modes in four dimensions: convenience, responsiveness, reliability, and care [14]. Jiang Xiaohong (2021) and others take the quality of rural logistics terminal distribution service as the research object, and construct the rural e-commerce logistics service quality evaluation system from five dimensions of service convenience, responsiveness, caring, quality, value-addedness [15]. Wei Minghao (2022) and others established a satisfaction impact evaluation system by taking colleges and universities as an example, conducted multiple linear regression analysis, AHP hierarchical analysis and grey correlation analysis to determine the degree of correlation of the impact of each indicator on satisfaction, and put forward reasonable suggestions on how to improve customer satisfaction in Cai Niao Stations based on the results of the analysis. [16] Based on the results of the analysis, reasonable suggestions are proposed on how to improve customer satisfaction at the RBPS.

Hierarchical analysis method, according to the nature of the problem and the overall goal to be achieved, the problem is decomposed into different constituent factors, and according to the interrelated impact of the factors as well as the affiliation of the factors according to the different levels of aggregation and combination, to form a multi-level analysis of the structural model, as shown in Figure 1.

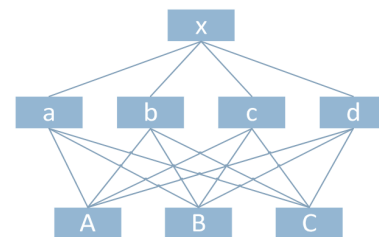


Figure 1. AHP hierarchical analysis

2.4. Brief Comments

To sum up, the main research in the field of solving end-to-end logistics and distribution focuses on the efficiency of logistics and distribution, the operation and management of logistics and distribution points, the quality of logistics and distribution services, and the related research on the service of the Post. It can be learned that the rapid development of the rookie station, but also faces many problems, customer satisfaction is not optimistic, customer demand is difficult to be effectively met.

In terms of the factors influencing it, the main viewpoints focus on the shift from an emphasis on distribution efficiency to service quality. It is believed that distribution efficiency is the basic factor affecting user satisfaction, and the operation of distribution points needs to promote user satisfaction through continuous improvement of services and enhancement of the quality of services. For the logistics distribution point operation from the objective distribution facilities development, that distribution efficiency as the first element, and ultimately to improve the quality of service and according to the user needs and satisfaction aspects of the transformation.

3. SERVQUAL Model Construction

3.1. Identification of Evaluation Indicators

This paper combines literature and network information screening results to establish 30 primary indicators, choose to set up an expert group, the 30 secondary indicators scoring. Through the five-point scoring method to let the courier industry more than 3 years of 8 managers on the importance

of the end of the logistics service quality related indicators scoring, 5 points represents very important, 1 point represents extremely unimportant.

In this paper, all index items with an importance score mean value ≥ 4.0 (important and very important) are retained, and scores lower than 4.0 are discarded to retain 25 indexes, and Table 1 Cai Niao Terminal Logistics Service Quality Evaluation Indicator System is established.

Table 1. Evaluation index system of end-to-end logistics service quality of Cai Niao station

Level 1 indicators	Secondary indicators	Tertiary indicators
Evaluation System of End-to-End Logistics Service Quality of Station	Physical characteristics	Infrastructure equipment (scanning equipment, surveillance cameras, etc.) in the Cai Niao station
		Courier parcel package sealing, intact degree
		Spatial layout (internal environment, passageway spaciousness) within the Cai Niao station
		Instruction signs such as shelf number and floor number are set up in the Cai Niao station.
		Staff image (neatness of clothing) within the Cai Niao station
	Empathic Characteristics	Cai Niao station business hours (can they meet customer demand)
		The service attitude and communication style of the employees
		Channels for customers to reflect their views
		Waiting time for signing for/sending out the courier
		Cai Niao station staff work proficiency
	Professional characteristics	Ability to handle customer complaints, cargo damage disputes
		Speed of delivery: the timeliness of the message that will be pushed when the parcel is delivered
		Regularity of the business process of sending/picking up at RBY stations
		Cai Niao Stage focuses on protecting customers' personal information
		Timeliness of door-to-door collection and delivery of goods by RB Cai Niao
	Reliability characteristics	Use the terminal to push parcel logistics information and arrival reminders in a timely manner
		No problems with pickups such as misplaced or fraudulent claims
		The way of placing and storing express parcels in the Cai Niao station
		Accuracy of cargo pick-up information provided
		The courier and logistics companies that are stationed (or co-operated with) by the post are well-known and reliable.
	Economic characteristics	Fast shipment without congestion on e-commerce promotion days such as "Double 11".
		Provision of courier services at reasonable prices and open and transparent tariffs
		High service efficiency and short waiting time for customers
		Free Home Delivery Service from Cai Niao Station
		Geographic location of the Cai Niao Station, i.e., the distance to the Station

3.2. Design of the Questionnaire

This research is designed by reviewing the literature related

to consumer satisfaction of the station, and the research is based on the SERVQUAL model and combined with the actual service process of the Cai Niao station to design the

questionnaire for 25 indicators. The questionnaire is divided into three parts, of which the first part is the basic information of consumers of the Cai Niao station, including gender, age, education level, occupation, income, frequency of picking up express delivery, and whether they meet the situation of loss, fraudulent claim, etc. The second part is the consumer's satisfaction with the Cai Niao station is divided into five dimensions: tangibles, empathy, professionalism, reliability, and economy; and the third part is the increase in the consumer's expectation of the Cai Niao station. The third part is consumers' expectations for more services from the RBPS. All five dimensions are answered by using the Likert 5-point scale in the "multiple scales" as the questionnaire. The survey respondents were given five points for very high expectations (very satisfied), four points for expectations (satisfied), three points for average, two points for low expectations (dissatisfied), and one point for no expectations (very dissatisfied), and the higher the score, the higher the consumer's perception or expectation of Cai Niao Stations.

3.3. Data Analysis

3.3.1. Sample and Data Collection

(1) Questionnaire screening

Among the recovered questionnaires, the author eliminated the following questionnaires as invalid questionnaires: 25 questionnaires with many unanswered questions and no reference value; and 5 questionnaires that were filled in randomly, blindly and with no change in the answers. After eliminating the above questionnaires, the author obtained 446 valid questionnaires, considering that the valid questionnaires not only meet the theoretical needs and the larger the sample size, the more credible its conclusions, so the author followed up on the 446 valid questionnaires to analyse the data.

(2) Data coding and entry

Numerical coding refers to the use of a specific number for each possible answer to each question, this analysis uses three types of coding: numerical, non-numerical and multiple choice, numerical: according to the scoring criteria for the variable to assign a score, this coding were assigned "completely disagree, agree, neutral, agree, completely agree" 1, 2, 3, 4, 5; non-numerical: determine the coding rules according to the rules to assign a score to the variable, this coding were assigned a score of 1, 2, 3, 4, 5. In this coding,

"completely disagree, agree, neutral, agree, completely agree" were assigned 1, 2, 3, 4 and 5 points respectively; non-numerical: coding rules were identified and variables were assigned points according to the rules.

(3) Missing value processing

The author eliminated the questionnaires with little or no reference value, and filled in those whose missing values were not too severe and still had value to be utilized. A random forest regression algorithm was used to fill in the missing values of each field one by one until it was completely filled.

3.3.2. Reliability and Validity Tests

As shown in Table 2, the reliability of the five scales and the KMO values of the 25-item Cronbach's alpha and validity were all greater than 0.8, which indicated that the data of the questionnaire had good reliability and high validity.

Table 2. Sum of reliability and validity

meters	Number of cases	Number of Items	Cronbach's Alpha	KMO
materiality	446	5	0.839	0.875
empathy	446	5	0.931	0.896
expertise	446	5	0.930	0.897
dependability	446	5	0.923	0.898
economics	446	5	0.911	0.882
25 projects	446	25	0.967	0.967

3.3.3. Correlation Test

From the Pearson correlation, tangibility, empathy, professionalism, reliability, and economy are significantly related to overall satisfaction as shown in Table 3.

3.3.4. Quality of Service Evaluation

(1) Five-dimensional characterization

The overall satisfaction level of Chengdu Cai Niao is in the range of average to satisfactory, indicating that the satisfaction of Chengdu Cai Niao consumers can be further improved. The rankings of high and low satisfaction levels for each characteristic of the Cai Niao station are tangibility (3.704±0.616), professionalism (3.407±0.896), economy (3.322±0.891), reliability (3.116±0.893), and empathy (3.089±0.925) in descending order. The details are shown in Table 4.

Table 3. Pearson correlation test

		materiality	empathy	expertise	dependability	economics
Overall satisfaction	Pearson	0.797**	0.876**	0.901**	0.848**	0.891**
	Significance	.000	.000	.000	.000	.000
	N	446	446	446	446	446

Table 4. Satisfaction Score

sports event	n	Score
Physical satisfaction	446	3.704±0.616
Empathic satisfaction	446	3.089±0.925
Professional satisfaction	446	3.407±0.896
Reliability satisfaction	446	3.116±0.893
Economic satisfaction	446	3.322±0.891
Overall Satisfaction with RBP	446	3.328±0.732

(2) ANOVA

In this section, one-way ANOVA is used as a research method to review whether there is a significant difference between consumers' gender, age, etc. on consumer satisfaction. In this paper, the satisfaction of each factor as well as the overall satisfaction is the dependent variable, and consumer characteristics is the one-way variable, and when $p < 0.05$ or $p < 0.01$, it is considered that there is a significant difference between the variables. The results of ANOVA are shown in Table 5: (1) Consumer gender does not show a significant difference with all dimensions of satisfaction at the Qibao station; (2) Consumer age shows a significant difference with empathy satisfaction, reliability satisfaction, and overall satisfaction at the Qibao station; (3) Consumers' frequency of accessing expresses at the Qibao station, frequency of perceived damage to the expresses, waiting time, and frequency of misclaiming show a significant difference with satisfaction at the Qibao station in all dimensions. All dimensions showed significant differences.

Table 5. Analysis of variance results

sports event	gender	age	access	Damage	waiting time	wrong collars
Physical	0.591	0.299	26.260	23.317	57.103	22.050
	0.442	0.878	0.000**	0.000**	0.000	0.000**
Empathic	0.054	14.047	25.733	35.024	52.653	26.733
	0.816	0.000	0.000**	0.000**	0.000**	0.000**
Profession	3.054	1.227	35.964	36.216	118.588	37.747
	0.081	0.298	0.000**	0.000**	0.000**	0.000**
Reliability	0.422	22.593	16.847	32.186	36.749	24.397
	0.516	0.000	0.000**	0.000**	0.000**	0.000**
Economic	1.052	0.580	26.172	29.407	99.685	34.654
	0.306	0.677	0.000**	0.000**	0.000**	0.000**
Overall	0.498	5.983	35.476	43.427	99.324	39.854
	0.481	0.000	0.000**	0.000**	0.000**	0.000**

(3) Hierarchical Analysis of Factors Influencing the Satisfaction of Cai Niao Stations

Through the questionnaire research on two post station staff and eight consumers, such as factor A is obviously important relative to factor B, at this time scoring 5 points, then factor B is 0.2 points relative to factor A. Factor A is slightly important relative to factor B, at this time scoring 3 points; through the calculation of the average and comparing the size of the following judgement matrix is obtained, see Table 6.

Table 6. Judgement matrix

	m	e	e	d	e
materiality	1	1	1/7	1/5	3
empathy	1	1	1/5	1/3	5
expertise	7	5	1	3	7
dependability	5	3	1/3	1	9
economics	1/3	1/5	1/7	1/9	1

A five-order judgement matrix was constructed for the five items of tangibility, empathy, professionalism, reliability and economy for the hierarchical analysis study, and the analysis yielded the eigenvectors of 0.409, 0.550, 2.454, 1.402, and 0.185, and the corresponding weight values of 8.188%, 10.990%, 49.085%, 28.030%, and 3.706%, respectively. Combining the eigenvectors, the maximum eigenroot (5.283) can be calculated, which in turn yields the CI value (0.071), details of which are given in Table 7.

Table 7. Hierarchical analysis results

sports event	eigenvector	weighting	eigenvalue	CI
materiality	0.409	8.188%	5.283	0.071
empathy	0.550	10.990%		
expertise	2.454	49.085%		
dependability	1.402	28.030%		
economics	0.185	3.706%		

The consistency test was analyzed using the CR value, where a CR value of less than 0.1 indicates that the consistency test was passed, and vice versa, that the consistency test was not passed. The consistency test results are shown in Table 8. From the table, it can be seen that the consistency indicator CR value is less than 0.1, which passes the consistency test, indicating that the hierarchical analysis judgement matrix is scientific.

Table 8. Consistency test results

eigenvalue	CI	RI	CR	results
5.283	0.071	1.120	0.063	pass

The results of the comprehensive hierarchical analysis show that the professionalism of the Cai Niao Station is more concerned by consumers, and its weight value is already close to 50%. Reliability is the next most popular feature dimension, with a weight value of 28.030%. Empathy is also a feature dimension that receives more attention, with a weight value of 10.990%. It can be seen that in the future direction of development planning, RBP should focus on improving the quality of professionalism, reliability and empathy, and targeting to improve the level of consumer satisfaction.

4. Conclusion and Recommendations

4.1. Conclusion

4.1.1. Chengdu Citizens' Overall Satisfaction with the Cai Niao Stage is at the General Satisfaction Level, But There are Differences in the Level of Characteristic Satisfaction

Statistically, it was found that there were differences in the satisfaction levels of different characteristics, which were, in descending order, tangibility (3.704 ± 0.616), professionalism (3.407 ± 0.896), economy (3.322 ± 0.891), reliability (3.116 ± 0.893), and empathy (3.089 ± 0.925). Consumers had the highest level of satisfaction with the tangible characteristics dimension, with a mean value of 3.704, but were the least satisfied with the empathy characteristics dimension, with a mean value of 3.089. Further data analysis found that Chengdu citizens were relatively satisfied with the infrastructure, spatial layout, cargo number settings, sealing of express parcel packages, and image of the staff in the Cai Niao Station, accounting for age of between 40%-55%, and very satisfied with age of between 40%-55%, and very satisfied with age of between 40%-55%. 55%, and the proportion of very satisfied is relatively small. Therefore, the public is most satisfied with the dimension of tangible characteristics of the Cai Niao Station, but there is still room for optimisation.

4.1.2. Individual Consumer Differences and Differences in Previous Experiences with the Cai Niao are Correlated with the Level of Satisfaction with the Cai Niao.

After the survey, it was found that the existence of individual differences in consumers and the differences in their previous experiences in the Cai Niao Stage will also have an impact on the satisfaction level of the Cai Niao Stage. Through the analysis of variance, it was found that: 1) Consumers' individual differences will have a significant effect on the satisfaction level of the Cai Niao Stage. Consumers' age showed a significant difference in the ANOVA on overall satisfaction, empathy and reliability satisfaction of Cai Niao Stage. 2) Differences in consumers' previous experiences with the Cai Niao Stage also significantly affect the level of satisfaction with the Cai Niao Stage. The ANOVA results of consumers' frequency of accessing express delivery, frequency of perceived express delivery damage, waiting time, and frequency of misclaiming in the overall satisfaction of the Cai Niao Station showed significant differences with P-values less than 0.01.

4.1.3. Chengdu Citizens Value the Professionalism, Reliability and Empathy Characteristics of the Cai Niao Stations More

A five-order judgement matrix is constructed for the five items of tangibility, empathy, professionalism, reliability and economy to conduct hierarchical analysis research, and the analysis obtains the eigenvectors of 0.409, 0.550, 2.454, 1.402, 0.185, and the corresponding weight values are 8.188%, 10.990%, 49.085%, 28.030%, and 3.706%, respectively. The results of the hierarchical analysis show that in the view of the consumers of the Cai Niao station, the professionalism of the Cai Niao station is more concerned by the consumers, and its weight value is already close to 50%. The next dimension of the characteristics of the RBPS that received consumers' attention was reliability, with a weight value of 28.030%. Chengdu citizens place more importance on professionalism, reliability and empathy in terms of these five dimensions. Therefore, in the future development planning direction of RBPS, it should focus on improving the quality of professionalism, reliability and empathy, and targeting to improve the level of consumer satisfaction.

4.2. Recommendations

4.2.1. Attention to Reliability Influencing Factors, Efficiently Improve the Satisfaction of Express Logistics Service Quality

Start with the reliability aspect first, optimise the quality of service of the work of the Cai Niao station, avoid the phenomenon of wrongly taking and fraudulently claiming the courier, and regulate the location of the courier parcel storage. While emphasising reliability, it is also important to pay attention to the speed of delivery of orders to ensure that express parcels are delivered to the pick-up location within the specified timeframe.

4.2.2. Starting at the Source, Strictly Reviewing Operating Qualifications and Strengthening Hardware Facilities

In addition to "software" factors, "hardware" factors cannot be ignored, such as infrastructure factors. On the platform of Cai Niao, there is a lack of review and supervision of the operating qualifications of offline post stations. Therefore, the most intuitive solution is to expand the storage area, the area

of the main business area and station service area for reasonable distribution, to prevent excessive backlog of express delivery and the phenomenon of mixed placement. In addition, the promotion of new types of warehouse shelves, monitoring equipment and systems for entering and exiting warehouses is also closely related to the service quality of post offices. Upgrading the warehouse shelves can significantly increase the capacity of express delivery, monitoring equipment can effectively protect the rights and interests of customers, and the use of in and out of the warehouse system can effectively solve the problem of large single volume and dense flow of people.

4.2.3. Create Diversified Services to Broaden the Market of End-to-End Logistics

In order to express the determination of Cai Niao Stations to build a socialised public service platform for end-of-life logistics at multiple levels for the community, more independently operated Cai Niao Stations should be promoted, especially in communities and colleges and universities with a large flow of couriers, and a variety of services can also be provided. For example, the printing of "privacy leaflets" for customers to meet the customer's need for personal data protection; for the collection of large or heavy items, provide free carts to reduce the user's manpower and material resources, to enhance the convenience of pickup and customer satisfaction. Courier industry to the community as the main body, but there are also some office buildings and commercial neighbourhoods, reflecting the characteristics of the service to the settlement as the main body, to the work area as a supplementary service, the two in the post - residential separation of the case of comparative research is of great practical significance.

4.2.4. Promote the Combination of Warehouse Management System and Intelligent System to Speed up the Time Efficiency of Picking up the Goods

It can be seen from the questionnaire that people are still relatively dissatisfied with the way express delivery is stored, so problems such as insufficient space in the post station and confusing numbers for placing express delivery should be solved. This can be done by setting up an electronic display that shows the layout of the express with a three-dimensional map and combines it with the pickup code of the mobile phone to make it easy to find the items; with the continuous updating and improvement of artificial intelligence, the face recognition system is becoming more and more intelligent, and the courier station should also keep up with the trend and promote the application of smart shelves, such as the face swipe to pick up and send the items.

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