

Based on Campus Takeout Distribution Problems and Takeout Cabinet Application Analysis

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Abstract: With the popularization of the Internet and the development of computer technology, the pace of life is accelerating, and the hidden danger of epidemic continues to exist. The convenience of online ordering makes it gradually integrate into people's life. Takeout occupies an important position in the three meals of college students. However, as a huge branch market of domestic catering, there are still many problems in the distribution of campus takeout. The "slow and messy" of taking meals makes the takeout cooler, worse taste and wrong taking emerge one after another, threatening the consumption rights and interests of college students and bringing great hidden dangers to campus safety. Therefore, this paper puts forward a series of meal taking efficiency and safety for the campus, and puts forward that the campus takeout cabinet is based on the application of College Students' dining comfort, optimizes college students' dining experience, provides personalized demand services through big data, and is committed to coordinating and solving campus management problems, so as to make the whole campus takeout more organized and standardized, so as to make the takeout behavior in the campus more organized, All subjects are more harmonious.

Keywords: Take-out counter; Campus take-out; Contactless delivery; End delivery

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1. Status Analysis

1.1 The Hidden Danger of COVID-19 Persists, and "Contactless Delivery" has not been Fully Implemented

China has controlled the epidemic well, but there is still a small rebound. Sporadic cases have occurred in many places, and clusters of outbreaks have occurred in some areas. The situation of epidemic prevention and control is once again tense, which has fulfilled the "normalization of epidemic" proposed by Professor Zhang Wenhong.

However, most delivery modes of takeout are "merchant, rider and buyer". A single rider often connects with multiple merchants and buyers, which has certain risk of epidemic transmission, making "delivery man" a "high-risk occupation" under the epidemic. "Contactless delivery" can reduce face-to-face contact and ensure the safety of food delivery. Now, the situation of the epidemic is not very serious, "contactless delivery" in campus takeout delivery appears to restore the tradi-

tional food delivery mode.

1.2 Crowded People during Peak Hours Make it Difficult for the Canteen to Serve Food

During the meal time, the canteen carries too much flow of people, and there are few catering personnel in the canteen. The supply speed can not meet the demand generation speed, resulting in serious queuing phenomenon, which also makes it difficult to serve meals.

1.3 The External Placement of Takeaway Food is Chaotic, Resulting in Low Meal Taking Efficiency

There is generally no uniform placement standard for campus take-out food, and a large number of take-out food are placed on the ground at the school gate, which leads to a very low efficiency of take-out food collection. The "dirty and messy" food not only has health and safety risks, but also affects the appearance of the campus. Students take meal time concentration, looking for food "slow messy", so that students crowded in the door, also prone to safety accidents^[1].

1.4 Takeout is Exposed to the Sun, which Reduces the Dining Experience

In the open air environment, the lack of a suitable storage environment will change the original temperature and quality of food, and even food deterioration.

1.5 The Lack of Delivery Supervision, Resulting in Frequent Loss

Some takeaways without the supervision of delivery personnel make the situation of dishonest behavior surge, and then appear the phenomenon of lost takeaways, resulting in the loss of interests of students. According to the survey data, 18.3% of students have experienced the loss of takeaway food.

2. Market and Revenue Analysis

According to the existing problems, the school can replace other forms of takeaway storage points by uniformly setting up take-away self-pick-up counters.

This survey adopted the way of online questionnaire distribution. The survey object is mainly college students, 269 valid questionnaires were collected. The survey results show that 82.16% of the consumers care about whether the food is still hot, 79.18% of the consumers care about whether they can get the food in time, which indicates that the thermal insulation performance is the great demand of consumers. 86.61% of consumers are willing to accept this way to save each other's time, which indicates that takeaway access cabinet has a good prospect in the market. In terms of whether they are willing to pay for use, 74.35% of consumers hope to use it for free, 22.30% are willing to accept the fee of 50 cents, and 3.36% are willing to pay 1 yuan or more, which indicates that the profit model of takeaway storage cabinet should be considered comprehensively [2].

The takeaway food is uniformly placed in the takeaway cabinet, which is conducive to maintaining the campus order; Different from express delivery cabinets, smart takeout cabinets have additional heating and disinfection functions (single-compartment heating and disinfection, heating and disinfection open when storing food, heating

and disinfection automatically close after taking food), ensuring consumers have a good dining experience; Sweep code open cabinet to take food, reduce the probability of wrong take phenomenon, but also greatly improve the efficiency of consumers to take food. Through the inquiry mode of "online + offline", project members learned that the main cabinet (with 10.1-inch all-in-one touch screen) is generally priced at 11,500 yuan in the market, which can be used for at least 8 years. The use cost (electricity cost) of the delivery cabinet is about 15,360 yuan per year. According to the survey, the annual takeout volume in a single region is 2000 pieces per day. Based on the data obtained from the questionnaire, the storage cost of a single piece of takeout is 0.15 yuan per piece. The annual income is calculated as 265 days per year, that is, the annual revenue is 79,500 yuan per year. At the same time, the penalty fee for overtime is set at 1 yuan, prompting users to receive takeout in time, which greatly relieves the pressure of takeout cabinets. And the advertising revenue, the electronic screen can be put on the promotional videos and print ads of businesses around the campus, estimated to earn 26,500 yuan per year; By bundling the special public account for take-out and meal collection, we can also obtain an annual income of 20,000 yuan. The average annual income can be obtained by adding the expected cost. The specific income analysis is shown in the following table.

3. Apply the Desired Effect

3.1 Guarantee the Quality and Quantity of Products

Most takeaways are exposed to the sun for a long time, which will reduce users' purchasing experience and even lead to spoiled food. The intelligent heat preservation and sterilization function of the takeaway cabinet makes the taste of the food which is easy to be used for a long time and easily damaged can not be affected.

3.2 The Campus Order has been Optimized

Takeout generally does not have a unified pick up point, scattered in garages, corridors and other crowded

Table 1. Income Analysis

Earnings			Anticipated cost		
Project	Quantities	The unit price	Annual revenue (based on 265 days)	The main tank cost	11500 yuan
Delivery charge	2000 pieces	0.15 yuan	79500 yuan	Use cost	15360 yuan
Overtime fee	20 pieces	1 yuan	5300 yuan	Use fixed number of year	8 years
Advertising revenue	26500 yuan			Annual return	
Online income	10000 yuan (The public)	10000 yuan (Online shopping mall)		114502.5 yuan	

places; and the placement is not orderly, according to the feedback of 77.63% of students campus takeout “low efficiency of taking meals”. The “dirty and messy” food not only has health and safety risks, but also affects the campus appearance; Students take meals at a concentrated time, looking for meals “slow chaos”, so that students crowded in the garage and other places, prone to safety accidents^[3].

The application of campus takeout cabinet standardizes the land and placement of campus takeout, transforming disorder into order; to a certain extent, scanning code take-out eliminates the phenomenon of “wrong take-out” in take-out, making campus take-out more orderly.

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