

FOOD SERVICES AND STUDENT LIFE: A BUSINESS ANTHROPOLOGICAL CASE STUDY

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ABSTRACT

The quality of foodservices is a hot topic on college campuses across the globe. It has a substantial influence on student retention. Positive campus dining experiences can enhance campus foodservice as an integrated part of student life and contribute to overall student retention efforts. However, up to now, there is little literature with reference to the linkage between the quality of foodservice and the happiness and satisfaction of campus life in China. We assume the largest reason is that the quality of foodservice is not a component of the annual university evaluation system. In this paper, we are employing an anthropological approach designed to test our assumptions about the potential relationship between the quality of Shantou University foodservice and Shantou University Students' happiness and satisfaction.

Keywords: foodservice, student life, happiness, satisfaction

INTRODUCTION

As we all know, food is of vital significance to the human being because it can satisfy hunger and provide nourishment for us. Besides, when group members eat together, it can be used to boost unity and to denote ethnic, regional and national identity (Boyce, Henry, Shrivastava and Tian, 2002). Moreover, food can be utilized to show friendship, express hospitality, and show social status or prestige. It can even be used as a potentially powerful tool dominating the behaviors of others (Asp, 1998; Chang, 1977). Naturally, school foodservice facilities, are highly frequented places students and faculty members use to choose when they want to take food, also play a crucial role in the study of students' campus life.

Consumer behavior refers to consumers' responses to products and services and to how those products and services are presented (DeJesus and Tian, 2004). The conception of the college foodservice industry was conceived in the nineteenth century (Schuster and Karolyn, 1997), but now it has undergone a revolutionary transformation. The option of cafeteria style dining has emerged and has created more diversified choices. And students have more options to taste a variety of food and snacks offered by restaurants nearby campus, posing a challenge to the school dining hall, where students are no longer a captive audience. Most importantly, third-party contract management companies have replaced self-operated dining services on many campuses. As to the operating model of school dining halls, the contracting model has an efficiency advantage over the self-administered operation, but it also has a greater risk (Xiang, 2009). The contracting model is the fruit of the socialization of logistic services. Nowadays, an increasing number of higher education institutions contract with third-party contract management companies to operate school dining halls. It is

argued that the school foodservices facilities operated by the non-school formal employees can meet the requirement of the socialization of logistic services under a socialist market economy such as China (Zhuang, 2009). College foodservice today is in the business of providing tasty and economic food in a bid to appeal to students, improving their competitive edge to compete with the restaurants off-campus. In order to do best, one had better be an expert in the listening business. The reason is that students want to take part in the process: they want to be surveyed, they want to participate in focus groups, and they want to know that they can become concerned (Lawn and Schuster, 1998).

A healthy diet is an indispensable component to good health and can help stem various adverse health conditions (Willett, 1994). However, at present in China, education administrators place small emphasis on the issue about healthy diet at higher education institutions. The introduction of individualized dietary feedback, such as is found in the present study resulted in a reduction in the amount of calories and fat purchased by college undergraduates eating in university dining establishments (Normand and Osborne, 2010). In improving students' food intake, we need a good understanding of what kinds of food they appreciate and what factors influence their choices. In this way, schools will be able to provide better services. For example, cultural differences are a significant contributor in creating diverse food options. The importance of food in understanding human culture lies precisely in its infinite variability. People having a different culture share diverse sets of food variables (Asp, 1998; Chang, 1977). Furthermore, different types of food choices imply other important meanings. Observing the types and patterns of foods people consume is the best approach to understanding the real meaning of all sorts of culture (Asp, 1999; Kittler and Sucher, 1995; Schau and Gilly, 1997). Of course, gender is characterized as one of the most influential variables to the food choices of students (Schiffman and Kanuk, 2000). A case study in the Erskine College Cafeteria (USA) demonstrates that gender difference will feature a different consumer behavior in terms of food consumption (Boyce, Henry, Shrivastava and Tian, 2002).

The quality of foodservices has considerable influence on student retention (Hossler and Bean, 1990). Positive campus dining experiences can cement campus foodservice as an integral part of student life and contribute to overall student retention efforts. However, up to now, there is only a small body of literature with reference to the connection between the quality of foodservice and the happiness and satisfaction of student campus life in China. With regard to a higher education institution, the annual university evaluation, an index closely connected to the college's reputation and advancement in the future, plays a crucial role in determining what the school's focus of investment is. The quality of foodservice, however, is not a component of the annual university evaluation system, according to the announcement released by the Chinese Ministry of Education (MOE, 2004). Put in another way, the quality of foodservices is uncorrelated to the rating system. So the Shantou University official who is in charge of the school's daily life will have no incentive to elevate the quality of the dining hall, even though currently the overwhelming majority of colleges and universities across the nation do their utmost to climb the ranks and strive for the best

in providing student services. The best strategy for the college is to focus on raising the level of other aspects required for the assessment mechanism. Therefore, based on our literature review few scholars have a willingness to examine this issue because Chinese society almost ignores this drawback of the existing rating system.

In the following sections, we are employing an anthropological approach designed to test our assumptions about the potential relationship between the quality of Shantou University foodservice and Shantou University students' happiness and satisfaction. We will begin with a short introduction, followed by a discussion of the Shantou University and the methods employed, including a description of the Shantou University dining hall and restaurants off-campus chosen for Shantou University. Then the paper will present the main findings in terms of the impact of the foodservice on Shantou University student life, further giving several managerial implications as well as suggestions, and ends with a summary of the findings and concluding remarks.

THE FOODSERVICE AND THE UNIVERSITY

The location of the Shantou University is in the east part of Guangdong province, and it is a comprehensive university with a history of over 30 years and a current enrollment of nearly 10,000 students who come from different provinces, as such the students have a wide diversity in tastes of food. It is clear that the background of various food cultures generates effects in food consumption choices on the campus.

Dining hall 2 and /Dining hall 3 under investigation are located in front of the main living area of both the undergraduate and the graduate dormitories. This location is a prime area for attracting almost all residential and commuting diners. Most commuting diners are professors, administrative staff at Shantou University and their relatives, friends and colleagues.

Each dining hall features several areas providing meals or snacks. Food takers swipe their smart cards as they get what they order. Customers also have the option of paying by cash when eating in the dining hall. There are also two service staff persons taking charge of distributing chopsticks and spoons to the food users. Based on our observations, there are no professional cleaners but all staff become cleaners after they get their own work done. A large proportion of these workers are locals with an easily recognized accent.

Combo and self-selection are two major ways for food users to get their foodservices. A combo meal costs ¥2.5, which is preferred by the great majority of students. The price of self-selected food depends on different sorts of cooking and distinct optional dishes ordered by individuals. Take-out meals packaged in plastic snack boxes are also very popular among students.

METHODOLOGIES AND STUDY PROCESS

The researchers incorporated an anthropological approach in this study to explore the relations between foodservices and student life on the campus via descriptive examinations. Most of the data collected were qualitative and investigated the considerable influence of dining services on student health, student satisfaction, student happiness, etc. Several main research questions were developed: do the dining hall and restaurants' services have any effect on student's health, learning effectiveness, mental attitude, satisfaction and happiness? What is the key factor for students' satisfaction? Further, two problems were investigated. The first was how to enhance the foodservice of the dining halls to meet the students' requirements and the halls' profits at the same time; the other was whether the quality of campus foodservice should be considered as an aspect of the performance evaluation administered by the university.

In seeking answers to these questions, the researchers have applied three traditional anthropological methods, including direct systematic participant-observation, formal and informal interviews, and questionnaires investigation. By direct systematic observation we can get abundant information about students' eating habits and give anthropological interpretations of their dining phenomenon; thus we can gain a general understanding of the relationship between foodservices and students' lives. The intensive interview can help us get a good notion of individual's opinions about the foodservice at the university and their hopes for improvement. In addition, the questionnaire investigation can deliver extensive information to support our research results produced by the first two methods.

Direct systematic participant-observation of behavior is one of most used ethnographic field research methods. By direct systematic observation, we mean those ethnographic methods that primarily rely on the researchers first hand observations and that are seriously attentive to problems of sampling and measurement (Baksh 1989; Johnson and Sackett 1998). From early October to the end of December, we took a period of approximately 14 weeks to carry out participant-observation at the dining halls of No.2, No.3 and No.4 when students were eating their meals. During our observations, we visited different halls at different times, such as at lunch, dinner and nighttime snacks. The observations took place on both weekdays and weekends. We focused on two types of people. On the one hand, students at the dining hall were observed and their behaviors, such as to which area they chose for getting their food, with whom they sat, where and how long they stayed, their interactions with the service staff, etc. so on, were recorded for analysis. On the other hand, we also paid attention to the attitudes and regular patterns of the working staff, such as the number of workers wearing a mouth mask and the opening hours of the areas. In our observation, we realized that both students' eating habits and workers' working styles could give important explanations to the dining phenomena of a school dining hall

We designed a questionnaire survey to elicit the factors that affect students' use and their enjoyment of the dining hall, including their overall satisfaction and their advice concerning the dining halls. The questionnaire contained 20 closing questions as well

as 3 open-ended questions, and was divided into three sections. The first section collected basic information about the students, such as gender, grade, hometown, family incomes, etc. The second section asked 20 questions on a five-point Likert scale, with responses ranging from "Strongly Agree" to "Strongly Disagree". In this section, 7 questions were asked about the relations between the foodservice and its influences on students' health, learning effectiveness, inspiration, satisfaction, happiness and the school's reputation; 6 questions asked the students' evaluation of foodservice, and the remaining questions were asked about their awareness of the importance of foodservice. In addition, the last section consisted of 3 open-ended questions. For example, what are the three things satisfying you the most about our foodservice and what advice would you like to give to Dining Services? All of the questions were essential for gaining deeper information concerning Students' attitudes towards school foodservice, and they elicited concrete advice which allowed us to as we make some suggestions to Shantou University for improving the school's foodservice.

We administrated these questionnaires in the dining hall by randomly selecting dining tables at lunch and dinnertime on a weekday and on a weekend. We delivered 350 questionnaires to the foodservice users who occupied those selected tables for food consumption. Most students responded in a very friendly fashion to complete our questionnaire and thus a large proportion of questionnaires were identified as valid, indicating that the students were interested in our survey and hoped for some changes in foodservice.

In addition, in order to get extensive information about the relationship between foodservice and students' life, we interviewed 112 students chosen from those who had completed our questionnaires. The interviews consisted of eight questions that all related to the foodservice management at the university and the relationship between foodservice and the students' lives. The questions were straightforward and six of them contained extended questions to help us make further inquiries concerning improvement of the foodservice, such as: If you are the president of Shantou University, what measures would you like to take to improve foodservice?

All the data was collected using the three above-mentioned mainstream methods of business anthropology analysis. The results of the researchers' findings have been given in the discussion section of the article. Additionally, the findings determined from the ethnographic data were used to give suggestions that could be used by foodservice management to improve its overall effectiveness and to positively affect mass campus operations. These recommendations are presented in the "Conclusions and Managerial Implementations" section.

FINDINGS AND DISCUSSION

Findings from Participant Observation

Participatory observation is one of the classical anthropology research methods. The result of this kind of qualitative analysis provides a wealth of empirical material. In the study, the authors employed participation observation methods to research the school dining halls for as long as five weeks, collecting more than 100 observation

records. Observation locations were concentrated on the second, third and fourth dining halls; the observation objects included undergraduate, graduate students, teachers and service personnel of the dining hall. To sort out the observed data, the authors divided them into three categories: physical health, learning effectiveness, mental attitude and satisfaction, all of which have significant impacts on students' campus life.

The authors observed that food quality was the issue with which students were most concerned. The students expressed their requirements on the food quality through their responses to the investigators. The study found that students were able to discover through trial and error or through communicating with one another which dining room featured better quality food. For example, the best noodles were cooked in the fourth dining hall, while the second dining hall offered comparatively more food, and one dining hall served food that was monotonous and of poor quantity. Students' health is closely tied with the food quality of the dining halls. Therefore students will opt for those foods and meals with an abundance of nutrition and consisting of reasonable variety. The combo, a fixed combination of several sorts of dishes, is the most popular choice of students because of its reasonable price and quality. Generally, students have the option to select three courses, two meat dishes and one vegetable. There are other areas supplying the *Lucai* Series, or pickled food, pasta and soup. Usually these foods are not cheap, but there is always a long queue in front of these areas, indicating that students have a strong willingness to take these foods in order to increase nutrition or in order to just change tastes.

Campus foodservice directly affects students' physical health, and a healthy body is the precondition for students pursuing knowledge (See table 1 for detailed information about the relation between students' physical health, learning effectiveness and the food quality)

TABLE 1. STUDENTS' PHYSICAL HEALTH, LEARNING EFFECTIVENESS AND THE FOOD QUALITY

Date/time/situation	Observed contents	Academic interpretation	Managerial suggestion
11/8/2011 Tuesday 18:00 in the fourth dining hall at supper time. About 90% seats were taken	The area cooked noodles has the longest queue, followed by the steamed bread and porridge, and then the self-selected dishes, combo and <i>Lucai</i> (a kind of pickled food).	is the cooked noodles is the most delicious food; every time the combo windows offered a limited variety of food that was almost cold; the price of <i>Lucai</i> is far over the average budget of Students.	Add some noodle areas, and at the same time reduce porridge and steamed bread areas. Increase food types in the Combo dish and cover the dish to prevent it from becoming cold. The number of <i>Lucai</i> windows can be reduced.
11/15/2011 Wednesday 7:35	Most people are alone when they	Due to the morning class, Students have	Supply a sealed cup which can keep

in the third dining hall. At breakfast time about 70% of the seats were taken	have breakfast. Most choose porridge and soya-bean milk, also adding a kind of pickle in the porridge. Students who opt for soya-bean milk mostly drink it in the dining hall.	no sufficient time to chat during breakfast. Plus, because the plastic cup hasn't the sealing, so students have no choice but to sit down in order to drink. Porridge taste is bland, so a lot of people like to add some pickles.	drinks warm and are easy to carry. The pickle's brand and supply can be varied according to the demand of students.
11/20/2011 Sunday 22:10 in the second dining hall at snack time, dining hall was half filled	Four boys order five side dishes and five bottles of beer; a couple and three boys choose rice noodles; two boys and a girl chose side dishes and orange juice.	Students often choose side dishes plus beer or soft drinks when they dine together, and opt for rice noodles when they are stay alone.	Add some other desserts and snacks, such as peanut, barbecue and sticky tofu, will cause more students to tend to dine together in the dining hall.
11/21/2011 Monday 12:10 at Supermarket doorway behind the second dining hall. Weekday lunch time. Dining hall was completely full.	A boy is paying for a bottle of mineral water, a tin of beverage and a box of instant noodles; A girl who holds a packet of paper towel and a piece of bread waits in line; three boys stay in the area of instant noodles, and four girls linger in the area of bread.	The dining room is crowded with people, and the queue time is too long. So, some Students switch to the supermarket, buying instant noodles or other foods that fill their stomachs.	Add seats and food-providing windows; repair the damaged seat and other facilities in time.

Foodservices change the living habits of students, to some extent, and have a far-reaching influence on their mental attitude. For example, most of the male students leave little leftovers on their plates and dishes, while there are a mass of leftovers on the plates and dishes of female students. When students have no choice to choose the quantity of rice, the single outcome is to bring inevitable waste. In the second dining hall, we observed that students often line up in the front of pastries and other snacks areas, making it clear that students hope to satisfy their hunger or to increase nutrition and restore energy, especially for those students who just finished their exercise or study. When this basic requirement of students is not able to be satisfied, they will feel extremely discontented, which is detrimental to the development of mind and

body.

The dining room is not merely a place for food; it also plays other roles on the campus. The dining room staff service attitude and dining environment will have a direct impact on the mood of students; the dining rooms provide a gathering place for students. They can carry out activities or eat together in the holidays. Therefore, the dining hall is a good platform for students to display themselves (See table 2 for detailed information about the relation between the service attitude and student's emotional outlook).

TABLE 2. SERVICE ATTITUDE AND STUDENTS' EMOTIONAL OUTLOOK

Date/time/situation	Observed contents	Academic interpretation	Managerial suggestions
11/15/2011 Tuesday 10:10 a.m. in the second dining hall and the third dining hall. Breakfast or lunch time dining hall is almost empty.	The second dining hall has already provided lunch, some areas also offer breakfast. While the third dining hall has not yet opened..	The second dining hall mainly aims at undergraduates and the third dining hall focuses on graduates. Generally speaking, the graduate students have a more regular schedule than undergraduate students.	The main focus of the second dining hall is undergraduates, so the service time can be flexibly adjusted according to undergraduate eating habits.
11/17/2011 Thursday 22:30 in the second dining hall Snack time dining hall is almost empty.	Groups of Students, some just now do exercise and others Study in the library, line up in front of pastries and other snacks windows	Students are more likely to feel hungry after exercise and learning, so they usually choose to take food at night.	Add areas providing food, porridge and snacks after ten o'clock at night.
11/28/2011 Monday 12:15 the second dining hall lunch time dining hall was completely full	The tables around the main roads are almost occupied, causing traffic inconvenience.	After class, students will generally dine together. A rectangular dining table is beneficial for Students gathering together, but the passage gap between the tables is too small.	Layout of the dining table again and reasonably utilize the limited space of the dining hall.

Foodservice must be closely related with consumers, to the cultural background, life habits, and dietary requirements of the diner Guangdong has a very developed food culture. There are a variety of diet styles. For example, students coming from Guangdong are fond of making soup. Under the different diet cultural backgrounds, the dining room should make a relatively appropriate business model to provide a

more considerate service, such as offering more food styles according to various tastes of regions. In our observations, students are generally discontented with the foodservice. So the managers of the dining hall should take various demands into account.

Findings from In-depth Interview

As we can see in table 3, overall, the “ordinary” evaluation on the foodservices holds the largest proportion in terms of students’ health, learning effectiveness, mental outlook, happiness and satisfaction, all of whose frequencies were above 42 percent. The “good” evaluation was relatively less, commonly below 12 percent, implying that the school foodservices in these aspects need to improve. However, foodservices get a higher evaluation level on the facet of health, illustrating the school features a comparatively healthy and nutritious diet. But they obtain a lowest evaluation in terms of students’ satisfaction, illustrating that the school foodservices in this aspect need to much further improve.

TABLE 3. THE OVERALL PERFORMANCE OF FOODSERVICES AT SHANTOU UNIVERSITY

Impact categories	Evaluation	Frequency	Frequency rate
Health	Good	13	11.4%
	Ordinary	54	47.37%
	Bad	15	13.5%
Learning Effectiveness	Ordinary	42	36.84%
	Bad	22	19.30%
	Extremely bad	10	8.77%
Mental Outlook	Good	8	7.02%
	Ordinary	58	50.88%
	Bad	23	20.18%
Happiness	Ordinary	48	42.11%
	Bad	33	28.95%
	Extremely bad	9	7.89%
Satisfaction	Good	10	8.77%
	Ordinary	51	44.74%
	Bad	13	11.40%

Foodservices have a great influence on student’s health. It can affect the students' physical health, nutrition intake and if unsatisfactory, may lead to disease. In addition, the food nutrition is also important to the students' healthy development. So schools must explore a way to improve these bad impacts of foodservices. The largest problems are sanitary conditions and the variety of foods. Relevant measures must aim at these two points, and strengthening the training of staff and management is also a necessary measure (see Table 4 for detailed information of foodservices’ influences on Student’s health).

TABLE 4. FOODSERVICES' INFLUENCES ON STUDENTS' HEALTH

	Top explanations	Frequency	Frequency rate
Foodservice influences on Student's health	Physical health	57	50.00%
	Nutritional intake and balance	22	19.30%
	Disease	21	18.42%
Why do these influences exist?	Unhealthy diet	77	67.54%
	Lack of nutrients in the food	44	38.60%
	Poor food quality	32	28.07%
What aspects need to be improved?	Sanitary conditions	90	78.95%
	The variety of foods	84	73.68%
	Service attitudes of staff	25	21.93%
How to improve?	Increase the dish styles and change taste	63	55.26%
	Train employees to improve their professionalism	38	33.33%
	Improve health conditions	45	39.47%

Catering service will affect the students' learning mood, physical strength and learning efficiency, thus affecting students' learning effectiveness. This kind of influence exists mainly because the nutritional balance is helpful to improve learning efficiency and good service attitudes can improve learning enthusiasm. The areas of foodservices need to be improved are mainly the food styles, health conditions and service attitudes. The school can make relevant improvement measures on these three aspects (see Table 5 for detailed information of foodservices' influences on student's learning effectiveness).

TABLE 5. FOODSERVICES' INFLUENCES ON STUDENTS' LEARNING EFFECTIVENESS

	Top explanations	Frequency	Frequency rate
Influences on Student's learning effectiveness	learning mood	53	46.49%
	physical strength	38	33.33%
	learning efficiency	12	10.53%
Why do these influences exist?	nutritional balance is helpful to improve the learning efficiency	52	45.61%

	good service attitudes can improve learning enthusiasm	38	33.33%
	Good dining experience has a positive impact on learning mood	30	26.32%
What aspects need to be improved?	Food style and taste	76	66.67%
	Sanitary conditions of food and tableware	57	50%
	Service attitude	33	28.95%
How to improve?	Increase the food styles and pay more attention to food nutritional balance	58	50.88%
	pay more attention to sanitary conditions	58	23.68%
	Train employees to improve their professionalism	42	36.84%

In terms of service influencing the students' mental outlook, 49.12 percent of the respondents thought the catering service will affect the Students' mental outlook and mentality, only 17.54 percent of respondents believed that the impact was not big. 70.18 percent of the informants held that the quality of the service would affect appetite and satisfaction with the school, and this would affect the students' overall mental outlooks. When asked about where foodservice needs to get improved, it was generally mentioned that the styles of food, service attitudes and dining environment etc. were important. Schools need to increase food styles, they need to strengthen staff management and they also need to lay down relevant improvement measures (see Table 6 for detailed information of foodservices' influences on Student's mental outlook).

TABLE 6. FOODSERVICES' INFLUENCES ON STUDENTS' MENTAL OUTLOOK

	Top explanations	Frequency	Frequency rate
What influences on Student's mental outlook do foodservices exist?	Mental outlook and mentality	56	49.12%
	Mood	32	28.07%
	Little	20	17.54%
Why do these influences exist?	The quality of the service influences appetite and satisfaction	80	70.18%
	Good service make students have a good mood and high satisfaction	35	30.70%
	To ensure student's physical strength and energy	26	22.81%

What aspects need to be improved?	Food style and taste	64	56.14%
	Service attitude	55	48.25%
	Dining Environment	27	23.68%
	Sanitary conditions of food and tableware	26	22.81%
How to improve?	Increase the food styles and change taste	49	42.98%
	Train employees and strengthen staff management	48	42.11%
	Promote sanitary conditions	18	15.79%

From the interview concerning the impact of foodservices on students, it was discovered that foodservices have a great influence on the degree of students' happiness, and that foodservice will affect the students' learning efficiency and vitality. Respondents thought service attitudes would affect the quality of the students' appetites and moods. Price and quality of food would also have an influence on students' satisfaction. The school needs to make improvement in service attitudes and food styles, as well as to strengthen the management of staff, etc. (see Table 7 for detailed information of foodservices' influences on Students' happiness).

TABLE 7. FOODSERVICES' INFLUENCES ON STUDENTS' HAPPINESS

	Top Explanations	Frequency	Frequency rate
Influences on Students' happiness	Mood	48	42.11%
	Learning efficiency and satisfaction	33	28.94%
	Vitality	19	16.67%
Why do these influences exist?	Service attitude affects appetite and mood	68	59.64%
	Dissatisfaction on the food price and quality	64	56.14%
	The dining environmental impacts repast mood	36	31.57%
What aspects need to be improved?	service attitudes	68	59.65%
	food styles	55	48.24%
	Sanitary conditions of food and tableware	45	39.47%
How to improve?	Train employees and strengthen staff management	66	57.89%
	Promote sanitary conditions	64	56.14%
	Increase the food styles and change taste	55	48.26%

With regard to catering service affecting the students' satisfaction with the school, 65.79 percent of the students held that catering service has an influence on the degree of satisfaction with the school; 21.93 percent of the students deemed that school

service facilities would affect students' identification with the school and the sense of belonging; 65.79 percent of the students considered that catering service has a direct impact on the satisfaction degree of school; 18.42 percent of the students thought that foodservice would influence students' learning efficiency. The school needs to make improvement on the service attitude, food style and dining environment. etc. (see Table 8 for detailed information of foodservices' influences on Students' satisfaction).

TABLE 8. FOODSERVICES' INFLUENCES ON STUDENTS' SATISFACTION

	Top Explanations	Frequency	Frequency rate
Influences on Student's satisfaction	Satisfaction with school	75	65.79%
	Identification with school and the sense of belonging	25	21.93%
	The school's reputation and public praise	21	18.42%
Why do these influences exist?	Catering service has a direct impact on the satisfaction degree of school	75	65.79%
	Foodservice will influence student's learning efficiency	21	18.42%
	Foodservice is an index measuring the school's comprehensive strength	17	14.91%
What aspects need to be improved?	Service attitudes	55	48.25%
	Food styles	50	43.86%
	Sanitary conditions of food and tableware	47	41.23%
How to improve?	Promote sanitary conditions	56	49.12%
	Increase the food styles and change taste	52	45.61%
	Train employees and strengthen staff management	51	44.74%

Overall, what the school foodservices in all aspects needs to do is to improve service attitude, food style, dining environment and sanitary conditions. In the very beginning, they can strengthen staff management training, increase food styles and improve the dining environment in order to further improve the whole quality of the school's foodservices.

According to interviews, 81.58 percent of the students held that the education department should take foodservice as a gauge of the school's performance evaluation; merely 4.38 percent of the students disagreed, indicating that the overwhelming majority of students are in favor of the idea that the school should place more emphasis on school service facilities. As for the reason to use this index, 51.75 percent of the Students think catering service is an integral part of campus life; 39.47 percent of the students deem the catering service to have an influence students'

physical and mental health; 26.31 percent of the students consider that service level embodies the degree of attention schools pay to Students.

23.68 percent of the students thought that catering service affects students learning effectiveness, the number of students who hold that foodservice embodies the school's management ability and has an impact on the reputation of the school accounts for 8.77 percent. Therefore, the school needs to perform foodservices evaluations, including questionnaires and interviews, in a bid to examine the students' satisfaction with the dining halls' health environment, food quality, variety, nutrition, service attitude and cost performance and so on. The school can also irregularly do a sampling survey of employees to identify whether they are qualified, and implement a rewards and punishment system; can exploit complaints and suggestion channels, can strengthen supervision and management, etc. (see Table 9 for detailed information about whether foodservices should be regarded as a gauge of the school's performance evaluation).

TABLE 9. FOODSERVICES AND PERFORMANCE EVALUATION

	Top Explanations	Frequency	Frequency rate
Should the education department take foodservice as a gauge of the school's performance evaluation?	Should	93	81.58%
	Should not	5	4.38%
	It doesn't matter	3	2.63%
Why?	Affect Students' physical and psychological health	45	39.47%
	Lack of nutrition will lead to a low learning efficiency, thus have a negative impact on Shantou University.	27	23.68%
	Part of the school life	59	51.75%
	Reflect school management ability, thereby affecting the school reputation	10	8.77%
	Reflect on the degree of attention school pays to Students	30	26.31%
	Little influence	8	7.02%

How should the school assess the school's foodservice?	Examine the students' satisfaction with dining halls' health environment, food quality, variety, nutrition, service attitude and cost performance by using survey questionnaires and interviews	77	67.53%
	Irregularly do sampling survey of employees to identify whether they are qualified, and carry out rewards and punishment system	20	17.55%
	Internal inspection of dining hall	4	3.51%
	Exploit complaints and suggestion channels, strengthen supervision and management	12	10.52%

If students could play the role of the president, they would take the following measures to improve campus foodservice: make a public management plan, strengthen supervision of finance, health and price, as well as other aspects; they would regularly survey students' satisfaction with the dining hall and establish a problem to report dining hall processes and procedures; they would invite the school leaders to the dining hall to dine with students; they would require that the dining hall foodservice contract be submitted to a public competitive-bidding system; they would demand transparent pricing and an appropriate contracted fixed number of years; they would enhance the hardware level and improve personnel training.

The reasons of taking these measures are as follows: 26.31 percent of students think a public bidding system and rewards and punishment system can exert pressure on the dining hall, which could stimulate the contractor to do better; 21.05 percent of the students think the dining environment (such as air conditioning and television), food prices, variety, eating habits are the problems that students are very concerned about; 19.29 percent of the students held that when school leaders personally experience the dining hall, this indicates that they attach importance to foodservices. Meanwhile, checking the financial balance sheet of the dining hall table is a powerful means to prevent illegitimate operators from obtaining unfair profits. 9.66 percent of the students consider that independent operation and professional management personnel could strengthen food management efforts, make a better image of Shantou University and improve its popularity; and 9.66 percent of the students think that foodservices should put student health as the top priority, improve the food hygiene management level through staff training; 7.01 percent of the students have a sense that the present management system is out-dated. The management of school foodservices should be more transparent and the operating time should be longer. In the survey question

asking whether the school leaders pay attention to school foodservices, 3.51 percent of the respondents think they are very concerned; 38.6 percent think they are concerned; 35.09 percent think school leaders do not take the foodservices seriously; and 10.53 percent consider they don't care at all. Therefore, we can draw a conclusion that students generally think the school leaders are not very concerned about school foodservices.

Why do students think that school leaders think little of foodservices? The reasons are basically as follows: the opinions of the students (through BBS, mail, letters, etc.) do not get much attention; leaders usually do not have meals in the dining hall; there is lack of public effective performance evaluation and results; the basic level of the service facilities in the dining hall has almost never changed; students feel that their satisfaction with the dining hall almost always is not high. (See Table 10 for detailed information about what aspects of school foodservices need to improve).

TABLE 10. FOODSERVICES NEED TO BE IMPROVED

	Top Explanation	Frequency	Frequency rate
If you are the President of Shantou University, what measures will you take to improve school foodservices?	Make a public management plan, strengthen supervision of finance, health and price and other aspects	69	60.59%
	Regularly survey students' satisfaction with the dining hall	45	39.47%
	Adopts a public competitive-bidding system for the dining hall contract	27	23.68%
	Raise price, enhance the hardware level and improve personnel training; school service facilities operated independently	42	36.84%
why?	Public bidding system and rewards and punishment system can exert pressure to the dining hall	30	26.31%
	Students are very concerned about the dining environment (such as air conditioning and television), food prices, variety and environment	24	21.05%
	Checking financial balance sheet of the dining hall table is a powerful means to prevent illegitimate operators getting unfair income.	22	19.29%
	Independent operation and professional management personnel can strengthen food management efforts, give a better image to Shantou University and improve its popularity	11	9.66%
	Foodservices should put student health as the top priority, improve the food hygiene management level through staff training	11	9.66%

	The present management system is outdated. It should be more transparent and the operating time of the dining halls should be longer.	8	7.01%
Do you think the leadership of the campus attaches importance to the school's foodservices?	Extremely valuable	4	3.51%
	valuable	44	38.6%
	I don't know	11	9.65%
	Indifferent	40	35.09%
	Extremely indifferent	12	10.53%
Why?	Leaders usually do not have meals in the dining hall	44	38.6%
	The quality of the foodservices can reflect whether school leaders pay attention to the dining halls	26	22.81%
	There are lack of public effective performance evaluation and results	18	15.79%
	The whole level of the facilities in the dining hall almost has not changed	17	14.92%

In addition to the seven aspects discussed above, there are also some other opinions or suggestions students suggest, which mainly include: 22.80 percent of the students harbor a hope that the survey will draw the attention of school leaders, and then they will establish a feedback and responsibility supervision mechanism; that they will introduce a competition system; that they will regularly do surveys on students' satisfaction; that they will develop channels students could use in order to supervise the managers of the foodservice facilities. 17.54 percent of the students think that schools should provide more channels through which students can complain. For example, the complaints of staff attitude, hardware facilities and so on. The procurement price and the source of food also need to be more transparent. 12.28 percent of the students suggest that school should take a look at supply source of food (such as from where the foodservice providers purchased their cooking oil), the disposal of leftover dishes and methods to distinguish the combo from the regular meal, etc.; and 8.77 percent of the students propose that students could set up a self-help rights protection association. The school could endow certain privileges to the members of this association, such as randomly checking the sanitary condition of the dining rooms, establishing communication mechanisms, and so on. (See table 11 for detailed information about what aspects the school foodservices need to improve).

TABLE 11. OTHER OPINIONS OR SUGGESTIONS

	Top Explanation	Frequency	Frequency rate
Do you have something else that you want to tell us we should focus on?	Hope the school leaders could pay attention to the survey, establishing a feedback and responsibility supervision mechanism	26	22.80%
	provide more channels through which Students can complain	20	17.54%
	School should check the cooking supply channel (such as from where they ordered cooking oil), the disposal of leftover dishes	14	12.28%
	set up a self-help rights protection association	10	8.77%

Findings from Questionnaire Survey

In order to improve the validity of the questionnaire, the authors weighted the questions according to the distribution of the college undergraduates. The respondents cover the college of arts, law school, business school, engineering college, school of science, medical college and school of journalism. The authors extracted 233 effective questionnaires in accordance with the ratio of the number of each institution (see table 12 for basic information of statistical chart).

TABLE 12. STATISTICAL GRAPH OF QUESTIONNAIRE SURVEY

Gender	male: 106 45.50%					female: 127 54.50%													
Academy	Business 31 13.30%	engineering 45 19.30%	Science 36 15.50%	Literature 25 10.70%	Medicine 22 9.40%	Law 29 12.40%	Art 27 11.60%	Journalism 19 8.20%											
Grade	Freshman 48 20.60%	Sophomore 58 24.90%	Junior 77 33%	Senior 17 7.30%	Graduate 1 22 9.40%	Graduate 2 8 3.40%	Graduate 3 3 1.30%												
Dining hall	The second: 108 46.45%			The third: 72 30.90%			The fourth: 65 27.90%												
Family background	3.15		Hometown category	4.04		Recommendation or not	2.36												
Evaluation questions																			
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1.	2.	2.	1.	1.	2.	1.	1.	1.	2.	2.	3.	3.	3.	1.	3.	1.	3.	2.	3.
4	2	0	7	7	0	6	8	0	0	8	3	1	4	6	6	6	4	1	2
5	4	3	5	8	5	2	5	0	0	6	5	0	2	4	9	9	8	2	8

Open-ended questions								
Q2-1	Q2-2	Q2-3	Q2-1	Q2-2	Q2-3	Q3-1	Q3-2	Q3-3
2.73	1.02	0.26	2.07	2.17	1.39	2.69	2.58	2.10

Basic information: the proportions of the groups within the college in the sample are close to the actual distributed proportions of the population, and the sex ratio is also approximate. So the sample truly reflects some effective information we wanted to obtain. The respondents are mainly freshmen, sophomores and junior students. Senior and graduate students are less prominent in our survey, which fits nicely with the fact that the number of senior and graduate students in the school is small. The second dining hall has the biggest degree of concentration, which means it has the largest number of students who are in favor of this dining hall. The family condition index is 3.15, indicating that the student households mainly have a middle-income level; the index of student hometown location is 4.04; students from Guangdong province account for nearly half of the surveyed; and a small proportion came from the southwest areas, so the average concentration degree is around 4; most of the students are very satisfied with the campus life of Shantou University, and they are willing to recommend this school to their classmates.

Evaluation scheme: There are two main issues concerning this. One is whether the school catering services have a great influence on campus life; the second is whether students are satisfied with the school foodservices. As to the first issue, it is generally recognized that foodservice has an impact on students' campus life, especially in the aspects of physical health, happiness and satisfaction. Students often talk about the catering services of the campus. With regard to the satisfaction of the catering services of Shantou University, students have a neutral attitude to the food price, sanitary condition, quantity of food and service attitude, and they strongly agree with the idea that regards foodservice as one of the gauges of university performance evaluation because foodservice is as significant as teaching.

Open-ended questions: Students are very satisfied with the service time of the dining halls and food prices. But to the service attitude of staff and food styles, they express their dissatisfaction and recommend the school leaders keep a watchful eye on the management of dining halls.

In short, foodservices do have a great influence on students' campus life. The overall school foodservices of Shantou University are recognized to be satisfactory, to some degree, but they need to be further improved in some facets.

CONCLUSIONS AND SUGGESTIONS

The literature referring to foodservice at higher education institutions mostly concentrates on the discussion of universities' inner foodservice (such as cost control and supervision mechanism, etc.). Social catering cost is the combined costs of the process of production and supply of all kinds of food products. At present, the logistics catering service entity in most of China's colleges execute in an entrepreneurial mode. The operating cost includes the basic elements of social

catering industry cost. Due to the particularity of the catering service entity at higher education institutions, its cost structure has different aspects compared to the social catering industry.

The cost structure of the foodservice at higher education institutions mainly includes: direct costs, part of the indirect expenses and period costs (Gong, 2011). In order to reduce the cost of college's food and beverage management, the universities across the nation cooperate with the social enterprise in succession by introducing the third party cooperation mechanism. With the deepening of the reform of foodservice socialization, the composition of the food and beverage service change strikingly, from the school's authorized personnel to contracted personnel as the main body.

The status and function of contracted staff in universities' catering systems profoundly changes when a contracted staff is hired. They gradually become the main force of the development of the food industry at higher education institutions. In this situation, setting up a set of new employment mechanisms not only can play a role in contracting personnel, but can effectively reduce the labor employment risk. This is also an important topic in the management of contract personnel in the college foodservice industry (Li and Yu, 2011). In addition, owing to food safety accidents which have frequently happened in recent years, such as Sudan red, poisonous rice and oil, Melamine, etc., the food security of society and also of universities also draws the attention of average citizens. The catering service of universities is not only related to the health and life of college teachers and Students, but also related to the campus's harmonious life, and even the stability and development of society.

As to the catering service of universities, many scholars suggest that enhancing supervision can effectively curb universities' evil behaviors, such as providing low quality food, or even toxic food. For example, Jin (2009) proposes that it is important to establish a normative college catering market and a practical and feasible access mechanism and restriction mechanism. Strengthening the operator and the staff's social responsibility, legal consciousness, moral character and basic food hygiene and safety regulations of education are the guarantee of the high efficiency and justice of supervision.

In comparison, research of Chinese scholars about the foodservice's influence on the student's body and spirit is rare. In this paper, we apply the methods of classical anthropology, performing a qualitative analysis on the relation between the foodservices at Shantou University and student's physical health, learning effectiveness, mental attitude, happiness and overall satisfaction and so on. The results show that universities' catering services are not only highly related with students' physical health, but with the Students' individual quality development and satisfaction.

In the previous discussion, most respondents said the campus foodservice has a big impact on the physical and the mental aspects of students. At the same time, they are generally not very satisfied with the campus foodservices. So, the school should take effective measures to strengthen the management of the dining room in order to meet the needs of students. In addition, one of the main reasons causing this problem is that the education department does not take college foodservices into the annual

assessment index system of the university.

The current evaluation mechanism focuses on the school's hardware, software and academic research level (The Chinese Ministry of Education, 2004). The result is that higher education institutions have no incentive to improve foodservice conditions. So, the education department should take school foodservices into the university evaluation system. Only in this way can we fundamentally settle the present situation: a low level of foodservice at higher education institutions. This is also the main purpose of the paper.

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