# Index system and program design for assessment on students' learning satisfaction for tourism management specialty

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**ABSTRACT**

*The assessment on students' learning satisfaction is the basic link of discipline construction and teaching reforming for tourism management specialty at colleges and universities. The students' learning satisfaction should evaluate from the angle of students' demand, expectation, perception quality and value. This paper puts forward the index system of students' learning satisfaction of tourism management specialty from professional image, students' expectation, perceived quality, perceived value, students' satisfaction, students' complain and students' loyalty, then establishes the structural equation model. In addition, the research program is designed from investigation purposes, workflow design, sampling design, survey way design, questionnaire design, and scale design. The results can provide reference for the research of students' learning satisfaction for tourism management specialty at colleges and universities.*

**Key words:** Tourism management specialty; Students' learning satisfaction; Index system; Structural equation model; Program design

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## INTRODUCTION

The concept of customer satisfaction was put forward by Cardozo in 1965. With the intensification of market competition and the change of customers' consuming attitudes, more and more scholars and managers have begun to pay attention to customer satisfaction (CS) and achieved fruitful research results. The study of students' learning satisfaction began in the United States, which was built on the basis of the consumer theory of market economy. Aldridge and Rowley [1] investigated the students in a UK university to assess their satisfaction level. Hennig et al. [2] conducted a study in German universities using a relationship quality based student loyalty model. Palacio et al. [3] conducted a study on Spanish university students. Aldemir and Gulcan[4] examined the students' satisfaction in higher education in Turkey. Navarro et al. [5] surveyed the students' satisfaction in Spanish university. Mai [6] studied the student satisfaction in higher education and its influential factors by a comparative study between UK and US. Butt and Rehman [7] examined the students' satisfaction in higher education in Pakistan. Douglasa et al. [8] carried out an interpretive study on student satisfaction and dissatisfaction in the UK higher education. In addition, American universities have adopted the college student satisfaction scale including 12 indicators, and 79 projects, which covered the undergraduate colleges and universities through the fields. The British Association of Higher Education designed the student satisfaction scale, which is composed of 6 indexes and 23 projects covering the course of college students' learning experience. Australian Education Research Board measured the student satisfaction scale by the participation degree of students' "course" and "campus life".

Along with the transformation of higher education from elitism to popularization, and with the increasing students and the enlargement of university scales, the complexity of higher education has further augmented in China. The education services provided by colleges and universities belong to the public service. Therefore, colleges and universities should attach great importance to students' satisfaction in the quality of education, so as to promote the development of their own development. Wang et al. [9] studied the student satisfaction on job in colleges and

universities. Zhong et al. [10] evaluated students' service quality satisfaction in China-foreign Cooperation Institutions by their importance expectations and its real satisfactions according to their experiences. The research on student satisfaction of tourism management specialty, Gao [11] evaluated the student satisfaction of practice teaching system of tourism management profession; Xiong [12] researched the teaching effect evaluation system of tourism management profession of colleges and universities; Tao and Shen [13] built the customer satisfaction for the tourism undergraduate teaching. Additionally, scholars carried out the analysis of job satisfaction of tourism management students [14-16].
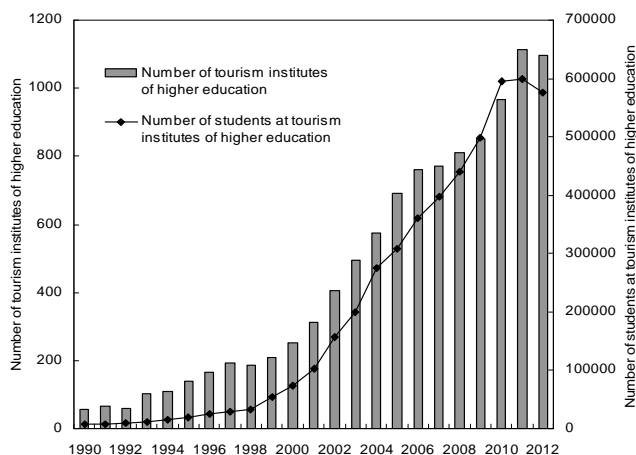


**Fig. 1 Number of tourism institutes of higher education and students at tourism institutes of higher education in China**

China's first institution of tourism, Shanghai Institute of Tourism, was founded in 1979; Nankai University set up the department of tourism in 1981. Since then, China's tourism higher education gradually formed a relatively stable and mature managerial system including the cultivation platforms of doctorate, postgraduate and undergraduate students, junior college (vocational college) students and the secondary vocational students. Accompany with the rapid development of tourism industry, the quantity of colleges and universities for tourism management specialty and the number of students increased rapidly through the past 30 years development. From 1990 to 2012, the number of tourism institutes of higher education has increased from 55 to 1097, and the number of students at tourism institutes of higher education increased from 8263 to 576217 (Fig. 1). During the rapid development of tourism higher education, students' satisfaction of tourism specialty is one of important influencing factors to keep the sustainable development of tourism higher education. Currently, the research results on students learning satisfaction of university tourism specialty evaluation is less, and the evaluation method and index system research is weak. Therefore, it is a valuable research that discusses the main influence factors of students' learning satisfaction of tourism management specialty and seeks to improve the satisfaction degree.

**EXPERIMENTAL SECTION**

There are diversified factors to influence the evaluation of professional teaching satisfaction, and some important factors cannot be directly measured, which increases the difficulty of the evaluation. It needs to further discuss whether the factors of theoretical teaching and practical teaching impact on the students' satisfaction and loyalty. Given this, the attitude theory and structural equation model are introduced. The former provides theoretical basis, and the latter provides evaluation methods.

Attitude is a kind of action tendency for things and experience, which is composed by perception (cognition, or belief), emotion (affection, or evaluation) and action (behavior, or intention). Perception generally is expressed in the form of belief. Emotion refers to one person's overall feelings and emotions for one object. Action refers to one person's intention or behaviors for one object.

Presented by Joreskog on the basis of the factor model, structural equation model (SEM) is a linear statistical modeling technology, which has played a great role in promoting the discipline development of social science, economics, and management. There is relevant relationship among the perception of teaching product and service quality, the perception of value, satisfaction and loyalty. Therefore, a chain consisting of perceived quality, perceived value, satisfaction, and loyalty is formed, which is the research focus on structural equation model for student satisfaction evaluation.

In the literature on student satisfaction, "satisfaction" and "student satisfaction" usually refer to the same concept,

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which is the state of psychology after student's needs can be met. It is the judgment that teaching products and services meet student's demand. "Satisfaction degree" is a quantitative description of student satisfaction. From the numerical they all meet the following equation: satisfaction = perception - expectation.
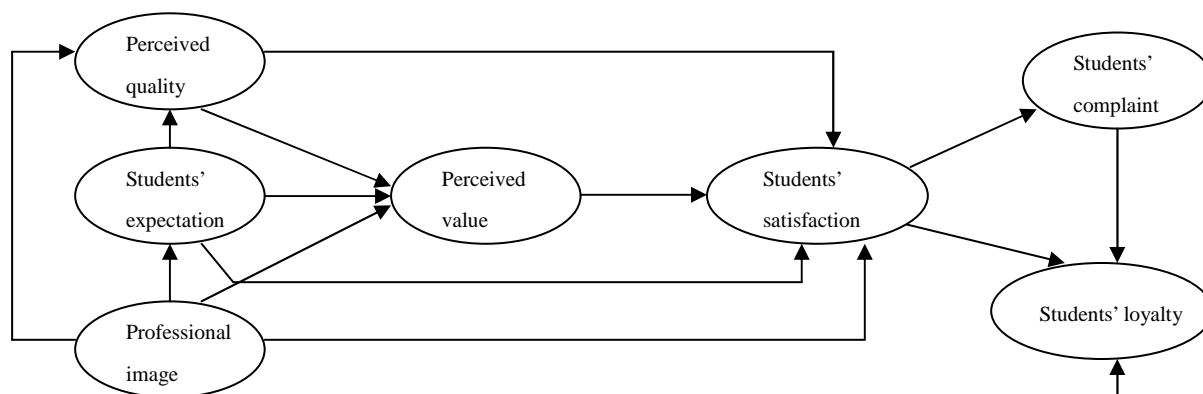
## RESULTS AND DISCUSSION

**Index system**
It is the foundation and core that establish a scientific and reasonable satisfaction evaluation index system of students' learning satisfaction for tourism management specialty, which largely determines the validity and reliability of the evaluation results. Based on the previous researches of customer satisfaction and student satisfaction [11-16], according to the present situation of tourism management specialty and the characteristics of the present college students, this paper establishes the index system of students' learning satisfaction for tourism management specialty including 7 latent variables, such as professional image, students expectation, perceived quality, perceived value, students satisfaction, students complain, and students loyalty. The concrete index system is shown in Table 1.

**Structural equation model**
There are many evaluation methods of satisfaction, among them, structural equation model (SEM) forms a chain consisting of perceived quality, perceived value, satisfaction and loyalty, and has been widely applied [11, 17-21]. On the basis of the above index system, this paper constructs the structural equation model on students' learning satisfaction for tourism management specialty (Fig. 2).

**Table 1 Index system of students' learning satisfaction for tourism management specialty**

| | |
|---|---|
| Professional image | overall image of tourism management specialty, reputation of tourism management specialty |
| Students' expectation | overall quality expectations, expectations for meet the individual needs |
| Perceived quality | quality of theory teaching: teaching attitude, teaching contents, teaching methods, teaching effect, teaching conditions |
| | quality of practical teaching: practical teaching contents, practical teaching methods, practical teaching conditions, practical teaching management, practical teaching effect |
| Perceived value | increase of students' study interest, increase of teamwork ability, increase of innovation and entrepreneurship ability, improvement of the ability of analysis and solution the problems, increase of social practice ability |
| Students' satisfaction | comparison with the expected, comparison with ideal tourism specialty, comparison with the other specialties, the overall satisfaction |
| Students' complaint | complaining tend, silent tend |
| Students' loyalty | continuing to complete the course in former university, continuing to studies or to join the alumni association in former university, recommending the others to attend tourism specialty , engaged in tourism work |



**Fig. 2 Structural equation model on students' learning satisfaction for tourism management specialty**

Furthermore, this paper puts forward the hypothesis of the relationship between latent variables:
Hypothesis 1: professional image has positive influence on students' expectation;
Hypothesis 2: professional image has positive influence on perceived quality;
Hypothesis 3: professional image has positive influence on perceived value;
Hypothesis 4: professional image has positive influence on students' satisfaction;
Hypothesis 5: professional image has positive influence on students' loyalty;
Hypothesis 6: students' expectation has positive influence on perceived quality;
Hypothesis 7: students' expectation has positive influence on perceived value;

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Hypothesis 8: students' expectation has positive influence on students' satisfaction;
Hypothesis 9: perceived quality has positive influence on perceived value;
Hypothesis 10: perceived quality has positive influence on students' satisfaction;
Hypothesis 11: perceived value has positive influence on students' satisfaction;
Hypothesis 12: students' satisfaction has negative influence on students' complaint;
Hypothesis 13: students' satisfaction has positive influence on students' loyalty;
Hypothesis 14: students' complaint has negative influence on students' loyalty.

**Program design of research**
Investigation purposes. 1) The evaluation of student satisfaction can understand students' learning satisfaction for tourism management specialty; 2) The student satisfaction index of each reason variables and result variables can know the students' evaluation on tourism management specialty by expectation quality, perceived quality, perceived values, and student loyalty; 3) The weight of reason variables and result variables of student satisfaction can understand the impact of each variables on student satisfaction degree; 4) Some corresponding improvement opinions can be put forward through the deep analysis of measurement data.

Workflow design. In order to ensure the successful implementation of the investigation, and acquire reliable survey results, this study established the workflow of students' learning satisfaction for tourism management specialty on the basis of customer satisfaction degree in business and service. The workflow mainly includes six aspects, such as determining survey purposes, formulating survey plan, implementing investigation, processing survey data, analyzing survey data, and composing survey report (as shown in Fig.3). The design of survey plan is divided into two parts, e.g. sampling design and questionnaire design.
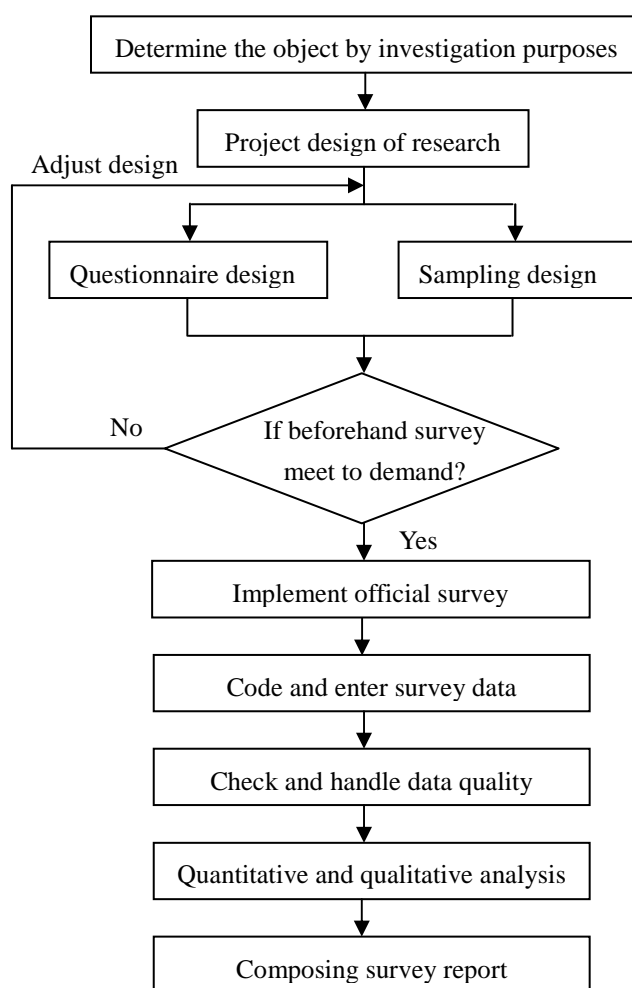


**Fig. 3 Workflow design of students' learning satisfaction for tourism management specialty**

Sampling design. In this paper, the research is mainly assessment on students' learning satisfaction for tourism management specialty at colleges and universities. Therefore, taking full-time undergraduates as a whole studying, this paper selects samples by the method of sampling survey and the questionnaire survey. It is important to note that

some survey questions, such as teaching contents, teaching methods, teaching management and security, get reflection through a few years of learning time. Consequently, the survey objects of questionnaire and interview should give priority to sophomore, junior, and senior students, which can reflect the overall situation of tourism management professional system [11].

Survey way design. Choosing investigation way need to consider the following factors: investigation object, investigation cost, questionnaire length, client information, investigation aging, and so on. Commonly way of customer satisfaction investigation include household interview, designated intercept survey, the traditional telephone survey, computer assisted survey, lien questionnaires, and mail or email questionnaires. This paper adopted the way of household interview and lien questionnaires. In here, household interview is face-to-face direct interview with sampling students according to the requirements and the content of the questionnaire. Lien questionnaire is to find the respondents by household or designated intercept, after explaining investigation purpose and fill in request, will leave questionnaire to the respondents, and retrieve the questionnaires in accordance with the promissory time. The two methods is suitable for the survey questionnaire that is longer, more in-depth, the characteristics of strong confidentiality and high retrieve rate.

Questionnaire design. Questionnaire design is a critical link to evaluate students' learning satisfaction. In order to design the questionnaire, this study abides by the following principles: 1) the questionnaire is the embodiment of assessment model. Only grasping the implication of every index of evaluation model, and converting them to investigation problems, to realize the target of evaluation; 2) the respondents are undergraduates, the questionnaire questions must be easy to understand and answer for undergraduates. Therefore, the description of questions should be as far as possible concise and straightforward, and avoid long sentences and fuzzy concept; 3) the arrangement of survey questions should consider students' interests and logical thinking habit. The reason variables of student satisfaction can be arranged in front of the questionnaire, and the result variables can be arranged in behind of the questionnaire; 4) the questionnaire should add the control variables of students' personal information, such as university, major, grade, gender, source place of students. However, the students may refuse to answer above information. Hence the investigators need to make a promise to all students that the individual information only be used for statistical analysis and will be strictly confidential; 5) the questionnaire should use the fixed questions as far as possible, so that the statistical analysis is easy. At the same time, in order to seek the opinions and suggestions for specialty education of tourism management, the final question can be unconstrained; 6) after the main content of the questionnaire are determined, some teachers, experts and scholars can be invited to discuss the questionnaire, which can modify and perfect the questionnaire on the basis of widely listen. In addition, the evaluation should be arranged beforehand in a small scale, which can make inspection in advance for the reliability and validity of the questionnaire. Then based on the practical encountered problems in the process of experimental questionnaire survey and evaluation results as well as good suggestion, the questionnaire make be appropriately adjusted and corrected, so as to determine the final questionnaire.

Scale design. This study adopts Five-point Likert Scale with 1-5 points to show satisfaction level (Table 2). The higher is score, the higher is the evaluation value. For example, 1 point means strongly dissatisfied, 5 point expresses strongly satisfied. Five-point Likert Scale is familiar for the respondent, which provides enough room to scale for similar satisfaction, also facilitate statistical analysis and description of the results.

**Table 2 Five-point Likert Scale**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| strongly dissatisfied | dissatisfied | compromise | satisfied | strongly satisfied |

**CONCLUSION**

The assessment on students' learning satisfaction is the basic link of discipline construction and teaching reforming for tourism management specialty at colleges and universities. The students' learning satisfaction should evaluate from the angle of students' demand, expectation, perception quality and value. Reasonably using structural equation model, establishing the proper evaluation index system, on the basis of the questionnaire and interview, students' learning satisfaction for tourism management specialty can be qualitative or quantitative evaluation, which can find and improve the major existing problems in the discipline development at the colleges and universities.

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