A Case Study on Satisfaction Evaluation of College English Elective Courses under the Cognitive Theory

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Abstract: The design of college English elective courses is an important part of teaching reformation, and studies on optional course satisfaction are helpful to improve teaching quality. Under the theories of consumer cognition and customer satisfaction, this paper firstly constructs satisfaction evaluation index system for college English optional courses. Then all the indicators are tested to ensure the validity. Based on the results of the case study, a final conclusion is reached that teaching quality and curriculum functions are two contributory elements affecting course satisfaction evaluation. This conclusion clearly demonstrates the necessity and feasibility of college English teaching reformation.
Keywords: A Case Study; English Optional Courses; Cognitive Theory; Satisfaction Evaluation

1 Introduction

China's college English teaching is entering an important historical period of transition [1]. The transformation is not only reflected in teaching approaches and teaching models, but also in teaching contents and curriculum arrangement. The design of English elective courses is one of the latest attempts in college English teaching, and it is also a necessary complement to English compulsory courses. To offer elective courses makes it possible to create a solid curriculum system, which may benefit students at different levels. Therefore the students can develop their potentials to the greatest extent, and bring their individualized learning skills into full play. However, the curriculum reformation has just started yet, and college teachers or experts focus their attention on seeking the best course system and the ideal teaching methods. In this paper, an investigation is initially conducted among the students taking college English optional courses in Wuhan University of Technology (WHUT). Then the features of teaching elective courses are analyzed under the theories of consumer cognition and customer satisfaction, and finally feasible measures are put forward based on the research results.

2 Construction of Satisfaction Evaluation Index System

The cognitive theory suggests that consumers are influenced by three factors such as information stimulus, environmental impact and their past experiences [2]. The interpretation of consumer cognition can be summarized as cognitive stimulation, which may greatly affect consumer demand. Guided by the cognitive stimulation, customers then evaluate the product. According to the assessment results, consumers can recognize the relationship between the product value and their expectations of the product. In other words, consumers are not satisfied if the perceived value of the product is not as good as expected. On the contrary, consumers are content if the value of product is better than that they anticipate [3]. During the process of learning, students may make a judgment on a variety of subjective and objective elements including learning facilities, the quality of teachers and learning environment. This kind of student judgment is equivalent to customer cognition. It can be deduced that student satisfaction refers to their comprehensive evaluation of the courses based on integrated learning experiences, which arise from consumer cognition. In order to make sure whether the students are satisfied with the arrangement of college English elective courses, satisfaction evaluation index system should be built at the very beginning.

The first 18 satisfaction indexes evaluating college English elective courses are obtained through such methodologies as literature analysis, in-depth interviews and linguistic analysis. Then the Delphi technique is employed to sieve out the indicators as shown in Table 1.

Table 1   Satisfaction Evaluation Index System for College English Optional Courses

Subjective	Factors	Sub-factors
Satisfaction Evaluation on College English Optional Courses	teaching quality	teaching methods（0.2）
		teaching attitudes（0.2）
		teaching materials（0.2）
		teaching contents（0.2）
		teachers' specialized knowledge（0.2）
	academic resources	textbooks （0.2）
		classroom facilities（0.1）
		teaching hours and credits（0.1）
		timetable（0.1）
		class size（0.3）
		course arrangement（0.2）
	curriculum functions	to lay a solid foundation in English language（0.4）
		to develop ability to use English（0.4）
		to stimulate individualized learning（0.2）

The software Lisrel8.8 is also used to test the structure and variables in the evaluation index system. The remaining 14 sub-factors are selected as observed variables, 3 factors as the latent variables, and thus construct the confirmatory model of factor analysis. According to Bentler (1990) standards, five indicators including $\chi2$, df, CFI, GFI and RMSEA should be adopted to judge the model as a whole. The value of $\chi2/df$ reflects the fitting degree of the model. A smaller value of $\chi2/df$ indicates a better fitting result. The value of CFI and GFI should be between 0~1. The closer they are to each other, the better the fitting degree is. A smaller RMSEA is preferred. In general, if $\chi2/df \leqq 3$, CFI $\geqq 0.90$, GFI $\geqq 0.85$, RMSEA $\leqq 0.05$, then the model has better fitting results.

Data analysis respectively reveals the fit indexes of the model: $\chi2/df = 2.879$; RMSEA = 0.043; CFI = 0.90; NNFI = 0.89. It proves that the model in the research has a better fitting degree. It is reasonable to create 14 sub-factors for satisfaction rating scale of college English elective courses.

3 Empirical Survey and Data Analysis

Considering the factors in satisfaction index system and students' demand, a formal questionnaire is designed. By the use of random sampling, ten classes of 300 students in WHUT who take the advanced English elective courses are invited to do the questionnaires. 300 sheets are distributed and 277 are taken back, of which 5 sheets are invalid. The remaining 272 valid questionnaires which involve all the 11 elective courses are analyzed with the aid of the software SPSS.

3.1 Descriptive Statistics

By employing the descriptive statistics and using SPSS, the basic information about the subjects is obtained and shown in Table 2. The ratios of sex and major accord with the reality of WHUT.

Table 2   Information about the Subjects Involved in the Case Study

		Number of Students	Percentage（%）
Sex	male	153	56.2
	female	119	43.8
Major	Science and Engineering	120	44.1
	Arts and Law	71	26.1
	Economics and Management	81	29.8

3.2 Credibility Analysis of the Questionnaires

The credibility of the questionnaires, which is usually used to test the reliability, helps to measure the internal consistency of the results [4].   By saying that the survey is reliable, we mean that the

researchers can obtain similar results when the subjects are asked to do the same question sheets even at different time. According to the commonly used two-step process of analysis, the credibility of the questionnaires is firstly measured. Nowadays, the most commonly used method is Cronbach's uniform coefficient alpha (Cronbach's α), which is often used to analyze the credibility. If the value of the Cronbach's α is above 0.5, then the data credibility is acceptable. When the value of α is more than 0.7, the survey will be seen as one that is internally consistent.

As is shown from Table 3, in this research, Cronbach's α is chosen to evaluate the reliability of the questionnaire. According to the results revealed in Table 3, the Cronbach's α values of three different dimensions are greater than 0.5, so the data of questionnaires is comparably reliable.

Table 3 The Measurement Results about the Credibility of the Questionnaires

Questionnaires		Cronbach's α
Dimensions	Sub-variables	Coefficient of Agreement
teaching quality	teaching methods, teaching attitudes, teaching materials, teaching contents, teachers' specialized knowledge	0.686
academic resources	textbooks, classroom facilities, teaching hours and credits, timetable, class size, course arrangement	0.6757
curriculum functions	to lay a solid foundation in English language, to develop ability to use English, to stimulate individualized learning	0.8353

3.3 Linear Regression Analysis of the Questionnaires

Regression analysis is an important statistical method. This section will apply regression analysis to discuss each influential factor of satisfaction and the overall satisfaction index. The dependent variable is the overall satisfaction index; independent variables include three parts such as teaching quality, academic resources and curriculum functions. We can define how these three factors influence satisfaction index by using SPSS15.0.

Table 4 Regression Coefficient and Significance Test

	β	R^2	Adj. R^2	F	Df	Significance Level	DW
equation		0.619	0.615	12.155	5	0.000	1.779
teaching quality	0.40						
academic resources	0.18						
curriculum functions	0.59						

Table 4 displays the results of regression coefficient and significance test. Three variables are contained in the regression equation.

DW test is a simple and effective method to analyze whether the model has autocorrelation. According to Table 4, the value of DW is 1.779, showing no autocorrelation existed among the sequence of variables. And it also shows that the 3 factors, which are teaching quality, academic resources and curriculum functions, have the ability to affect elective course satisfaction well.

From Table 4, we can also see R Square is 0.619 and the Adjusted R Square is 0.615, which indicates that the fitting degree of the model is generally accepted. In the model the value of F is 12.155, and the probability of F test is Significance Level equal to 0.000, less than the given Significance Level (α =0.05). This shows that the dependent variable has a linear relationship with independent variables, and the three satisfaction factors including teaching quality, academic resources and curriculum functions, have a direct and positive impact on elective course satisfaction. Regression analysis also suggests that the β values of teaching quality, academic resources and curriculum functions respectively are 0.40, 0.18 and 0.59. Thus it can be interpreted that satisfaction evaluation of elective courses is influenced by the three factors to different degrees. A significant positive correlation is revealed to exist between students' satisfaction assessment and teaching quality & curriculum functions. In other words, the two factors are statistically significant.

4 Conclusions

To sum up, we can draw the following conclusions and in the light of the above mentioned analyses, recommendations are put forward as follows:

(1) Considering limited teaching resources, schools should lay emphasis on factors contributive to satisfaction evaluation of college English optional courses. In this test, teaching quality and curriculum function are main contributory elements, while academic resources involving textbooks, classroom facilities, timetable, teaching hours and credits, class size are not so important. It can be concluded that universities and colleges should impel the faculty to innovate teaching approaches, take correct and proper attitudes towards their teaching tasks, and widen the scope of knowledge.

(2) In addition, special efforts should be made to offer diversified varieties of functional elective courses of English so that students may be encouraged to enhance their skills and cultivate their minds.

In short, the promotion of teaching quality and the optimum of curriculum system are the main objectives of college English teaching reformation. College English course design should ensure that students make steady progress in English proficiency throughout their undergraduate studies, and it should encourage students' individualized learning so as to meet the needs of their development in different specialties [5].

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