

Teaching Evaluation of Marketing Specialty in Higher Vocational Colleges Based on Fuzzy Delphi Method

Haixuan Wang

Jinan Engineering Polytechnic, Jinan, Shandong, China
krain2004@163.com

Abstract: University is an important channel for the growth of talent resources and plays a huge role in the professional development of students. With the steady development of contemporary social economy and the rapid progress of science and technology, the demand for marketing professionals is even greater for the market, which means that higher vocational colleges (HVC) should find and establish more suitable marketing models and marketing education methods for market development in combination with the current actual situation of the market, and cultivate more comprehensive talents that can meet the needs of more different positions. Schools should also change the former school-centered teaching idea. Establish the concept of student-centered vocational education and create professional talents in line with social needs. According to the characteristics of marketing specialty in HVC, this paper uses the fuzzy Delphi method to explore and analyze the teaching of marketing specialty. It shows the accuracy and reliability of the application of fuzzy Delphi method in the evaluation field. The research results show that the questionnaire of students and relevant teachers who have participated in the teaching of marketing major in HVC can explain that the current teaching methods of marketing major need to be further improved. Finally, the conclusions drawn from the method can be used to put forward problems and suggestions for the current marketing major.

Keywords: Fuzzy Delphi Method, HVC, Marketing, Fuzzy Evaluation Method

1. Introduction

Marketing major has always been a hot major in HVC [1] Due to the continuous development of the economy and the increasing strength of social reform in the current era, the concept of time cost investment is becoming more and more strict, and the demand and requirements for marketing professionals are also becoming higher and higher [2-3]. However, the employment pressure on marketing students has not been alleviated, but has become increasingly serious, which further increases the difficulty of marketing. How to develop an accurate description of professional theory and an accurate expression of practical operation in a short time requires testing the talents' abilities in all aspects. In the context of modern fierce competition, it is more necessary to consider how to position the professional education and human resources development objectives of high-level universities under both reasonable and accurate conditions [4]. How can we break through the shackles of traditional concepts, build a high-level and high-quality teacher team, pay attention to improving the level of teachers, teaching practice, and strengthen school-enterprise cooperation.

At present, the reform and innovation of the teaching of marketing specialty in HVC is imminent. In response to this problem, Reynaldo analyzed the experience of inclusive marketing innovation seminar based on social learning theory in his research, and developed the learning potential of inclusive marketing strategies and strategies through role-playing exercises and case studies [5-6]. Although there are a lot of work involving marketing education in China, the enthusiasm of the staff and students themselves is not high, so JM Crick uses the Bloom classification to explore how scholars teach marketing to non-marketing undergraduate majors, so as to improve their professionalism [7]. In this case, M Li used the digital flipped classroom teaching method to study the integrated learning model, learning motivation and learning results. The research data shows in detail that the digital flipped classroom teaching method has a significant effect on promoting learning motivation and learning effect [8]. However, the actual analysis of the above research on the teaching of marketing majors is not in-depth, and there is a lack of practical solutions, which need to be improved.

This paper first defines the current situation and risk management of marketing major teaching in HVC, discusses the relevant problems of marketing major in depth, analyzes and summarizes the

marketing major in HVC using the existing data, and puts forward reference plans for the existing problems, thus laying a theoretical foundation for improving the teaching quality of marketing major.

2. Teaching Evaluation Method of Marketing Specialty in HVC

2.1 Fuzzy Delphi Method

Fuzzy Delphi is the application of fuzzy theory in Delphi method, which transforms the subjective suggestions of experts into quasi-objective data [9, 10]. The fuzzy Delphi method is used to screen the overall factors, and the uncertainty and fuzziness of the experts' subjective thinking are comprehensively considered to achieve the objectives set during the research.

2.2 Delphi Method

Delphi method is an expert personal judgment method and expert investigation method developed by experts based on law, which has been widely used in many fields such as technology foresight and society. It is a method that takes experts as the object of information request, relies on experts' knowledge and experience, judges, evaluates and predicts problems through investigation and research, and is a method of collecting non-face-to-face expert opinions.

The implementation process of Delphi method is generally divided into team formation, expert selection, questionnaire design and investigation implementation. The specific implementation process is shown in Figure 1.

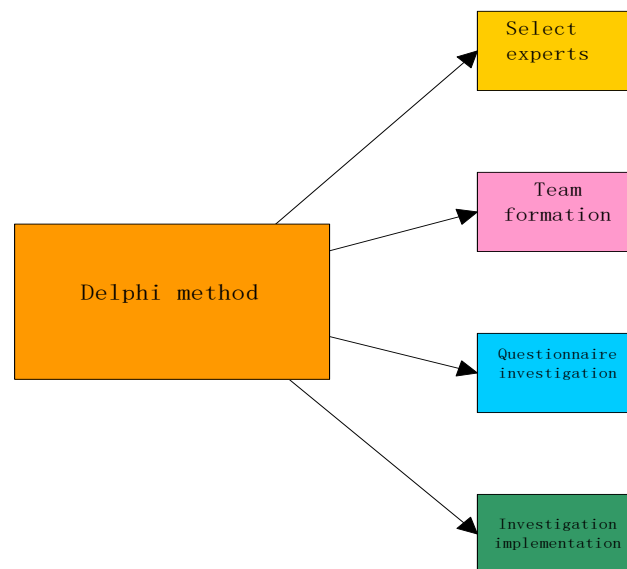


Figure 1: Specific implementation process of Delphi method

2.3 Fuzzy Comprehensive Evaluation Method

The fuzzy comprehensive evaluation method is based on fuzzy mathematics, which can evaluate things or phenomena restricted by multiple factors by using fuzzy mathematics method, and convert qualitative problems into quantitative problems [11]. In real life, objects usually have various attributes. When evaluating a specific thing, we should not only think from a single point of view, but should think about the attributes of the specific thing itself in a multifaceted and omni-directional way to understand the essence of things.

Each system cannot be evaluated without relevant elements, and the overall evaluation is often based on these relevant elements, and the fuzzy overall evaluation method is the most convenient and practical of many evaluation methods. Figure 2 shows the main process of fuzzy comprehensive evaluation method:

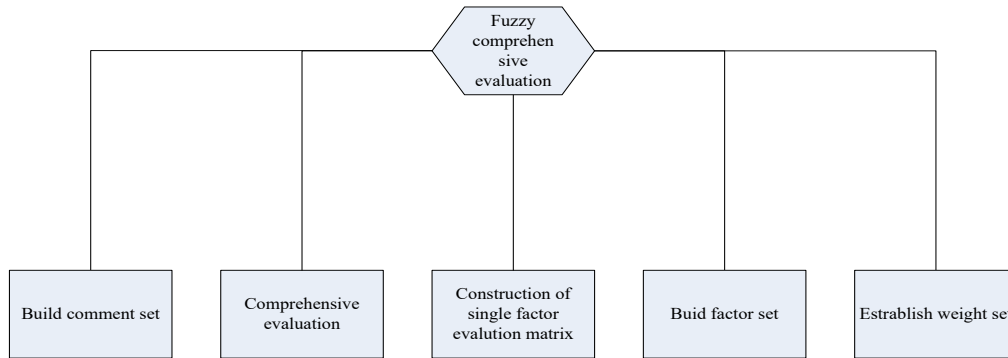


Figure 2: Main process of fuzzy comprehensive evaluation method

The algorithm steps are:

(1) First, determine the factor set and weight vector.

There are X set of evaluation factors, recorded as $X = \{x_1, x_2, \dots, x_n\}$, factor set. Because of the different roles and positions of various factors, we consider to use $M = \{m_1, m_2, \dots, m_n\}$ weight vector to measure. The set of factors for the teaching of marketing majors in HVC includes:

$$\begin{aligned} a_1 &= \text{"Price"} \\ a_2 &= \text{"Mass"} \\ a_3 &= \text{"Time"} \end{aligned} \tag{1}$$

The weight of the three factors in the evaluation process is: $A = [0.4, 0.4, 0.2]$.

(2) Determine the comment set.

Assume that there are Y possible comments, which are recorded as $Q = \{q_1, q_2, \dots, q_m\}$ and called comment sets. The collection of comments on the teaching of marketing major in HVC includes:

$$\begin{aligned} q_1 &= \text{"Good"} \\ q_2 &= \text{"Common"} \\ q_3 &= \text{"Bad"} \end{aligned} \tag{2}$$

(3) Establish the evaluation matrix.

First of all, evaluate the degree to which each factor of a thing belongs to each comment.

For a certain class, 70% of students think it is "Good", 15% think it is "Common", and 15% think it is "Bad". Then the "Price" a_1 of this course belongs to the evaluation set Q "Good", "Common", and "Bad". The degree of the three comments is: $c_1 = [0.7, 0.15, 0.15]$. The same analysis is made on a_2 "Mass" to get $c_2 = [0.8, 0.1, 0.1]$, and a_3 "Time" to get $c_3 = [0.4, 0.2, 0.2]$

Finally, the fuzzy comprehensive evaluation matrix is:

$$R = \begin{bmatrix} c_1 \\ c_2 \\ c_3 \end{bmatrix} = \begin{bmatrix} 0.7, 0.15, 0.15 \\ 0.8, 0.1, 0.1 \\ 0.4, 0.2, 0.2 \end{bmatrix} \tag{3}$$

(4) Finally, carry out fuzzy comprehensive evaluation

The appropriate fuzzy synthesis operator calculates the total evaluation $B = A \circ R$, generally normalizes B , and then makes a judgment according to the principle of maximum membership. Calculate $B = [0.6, 0.15, 0.15]$, because the maximum number of 0.6 in B appears in the first place,

that is, the degree to which the overall comment belongs to the first comment "Good" is 0.6, so "Good" is the final evaluation result of the course.

3. Teaching Experiment of Marketing Specialty

This time, the internal major of F college is marketing management, and the survey object is high-level students who participate in marketing education in HVC, reflecting the specific evaluation of marketing teaching in HVC. The questionnaire survey method is adopted, and there is no communication when filling in the questionnaire to ensure the fairness and openness of the results of the questionnaire.

3.1 Questionnaire Design

Questionnaire survey design this survey of marketing teaching in HVC is mainly based on questionnaire survey, supplemented by interview survey. Collect and analyze the evaluation and participation of higher vocational students in marketing teaching.

3.2 Distribution and Recovery of Questionnaires

First of all, 300 paper questionnaires were produced. This time, a total of 300 questionnaires were distributed, and 255 were recovered. After reviewing and summarizing all the questionnaires, 247 were valid.

3.3 Statistical Data Results

Make statistics on the questionnaire and interview survey on the teaching of marketing major in HVC to check the satisfaction of internal higher vocational students with the teaching of marketing major in HVC. In Table 1, A represents satisfaction, B represents relatively satisfaction, C represents average, and D represents dissatisfaction.

From the data in the questionnaire, it can be seen that the satisfaction degree of the internal students of the marketing major teaching in HVC shows that only 36.8% of the students are satisfied with the course, and 31.6% of the students are relatively satisfied. Even in the survey, there are general and dissatisfaction with the course of marketing major teaching, which shows that the effect of practical teaching is not ideal in the implementation of professional teaching [12-13]. See Table 1 for details:

Table 1: Internal higher vocational students' evaluation of teaching quality of marketing major in HVC

Sanner	Number of people	Scale
A	90	36.8%
B	78	31.6%
C	42	16.8%
D	37	14.8%

4. Marketing Results

4.1 Teaching Status of Professional Marketing in HVC

First of all, we conducted a survey and interview with the teachers in charge of teaching marketing in F University, and learned that the teachers in charge of marketing teaching focused on the professors of theoretical knowledge, but not many of them explained the marketing practice, for example, the actual marketing demonstration was not in place, and the specific results are shown in Figure 3.

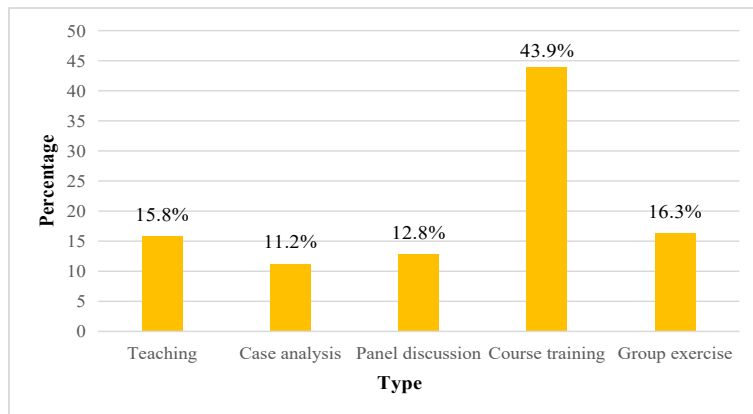


Figure 3: Students' survey on teaching methods of marketing major

It can be seen from Figure 3 that most students only know about classroom training, and have little understanding of basic methods such as case teaching and project-based teaching. It is conceivable that the teaching methods in marketing courses are too monotonous.

1) Single practical teaching mode

The traditional teaching method is still based on marketing courses and teacher lectures, with teachers as the main body and theoretical knowledge teaching as the main task.

Teaching methods such as classroom question and answer and case analysis are the methods used by teachers to stimulate students' learning enthusiasm and activity, but they still cannot help students understand the in-depth marketing practice cases within the enterprise, resulting in deviation from student marketing theory and the single teaching mode and teaching method of marketing practice under the influence of history and school resources [14]. In addition to practice, the necessary software and hardware facilities are insufficient, and the actual training is insufficient. This type of education is very different from the actual needs of marketing education, which is not conducive to the development of students' application ability and innovation ability.

2) Lack of a "double qualified" teacher team

The practical teaching of marketing specialty puts forward higher requirements for teachers. The role and status of teachers will change to a certain extent. As leaders and leaders, teachers can not only teach students, but also solve students' problems. This requires teachers to not only be familiar with the theoretical knowledge of marketing, but also systematically understand the operation process of marketing practice, guide students to actively participate in marketing practice

In view of the current structure of marketing teachers, most of them are directly responsible for education after graduation from university [15]. Their theoretical knowledge is relatively comprehensive, but they lack practical experience and experience in working in enterprises. They cannot combine educational research and enterprise practice well. Some of them are engaged in marketing education from enterprises to schools. However, due to the lack of knowledge of marketing and education theory, they have no good ability to carry out practical education work.

3) Inadequate management of practice

At present, the school pays little attention to the exploration of practical education, lacks input, lacks systematic practical education plan, and lacks complete management and scientific rules in the practice process. In the process of practical education, the responsibility is not clear, it is difficult to implement, the enterprising spirit of relevant teachers is limited, and it is difficult to achieve the expected purpose.

There is a problem that the purpose and requirements of practice are not clear. Even in the practice arranged by the school, the students' active participation in practice is not high, and the effect is not high. It is mainly to complete the task, without real understanding.

In addition, the school lacks a complete practical evaluation system, and the definition of performance in practical education has not formulated a systematic plan. Many practical courses even use theoretical tests to determine performance or make it a part of general performance during evaluation, which affects the quality of practical education and the enterprising spirit of students.

4.2 Teaching Strategy Optimization Plan for Marketing Major in HVC

1) Strengthen the training of students' marketing skills.

HVC should combine in-school education with out-of-school practical education and activities, and develop necessary on-site practical education. Teachers and students are encouraged to visit the marketing website and invite outsiders to enter the classroom to interact with students on the spot, which is more effective than any simulation exercise or formal activity. In the process of marketing education, teachers can actively help students with problems and tasks enter enterprises, enter department stores, interact with customers and salesmen, and even participate in product sales as part-time salesmen.

2) Innovate the teaching method of marketing course.

Teachers should apply heuristic teaching methods in curriculum education to develop students' logical thinking ability. A qualified teacher must be able to guide students' learning and create good interactive classroom education for students through their passionate language, rich physical skills, inspiring emotions and wholehearted devotion.

Teachers should actively inspire students to ask questions through heuristic teaching methods, and solve problems through group learning, discussion, brainstorming discussion, so that students can learn both knowledge and problem-solving methods. In addition, as part of practice, teachers must enable students to better understand the geography, and cultivate students' good quality through oral teaching. Secondly, teachers must combine theoretical education with practical education by applying case education methods to curriculum education. In the course, the teacher should select several marketing cases, take students to the specific marketing negotiation site, let students discuss and analyze this, and improve students' ability to find, analyze and solve problems in the marketing process through their own independent thinking and collective discussion. Through the application of typical cases in the teaching process, students' marketing skills will be continuously improved, combining theory with practice.

3) Innovate talent training mode

First of all, vocational colleges can improve students' marketing skills through the operation of the "Cultivate practical ability while learning" training mode. Teachers encourage "integration of engineering and learning" in the process of marketing courses and student skills development.

It can effectively make up for the lack of practical education in HVC, and through the combination of work and learning, enable students to better accumulate experience in society, and also enable students to change from school thinking to social thinking. The thinking will continue to evolve, adapt to the process of marketing as soon as possible, and meet customer needs and marketing needs. Help students to understand marketing strategies more deeply and become more interested in marketing.

Secondly, HVC can provide qualified marketing talents for enterprises and society through the integration of schools and society. In particular, the customized human resources training mode allows students to enter the enterprise at the actual training stage. As part-time sales personnel of the enterprise, they can directly enter the market for sales training. It can also increase the customized human resources teaching of the enterprise. At the same time, the secondary vocational university can let students enter the enterprise to contact the enterprise's sales activities, and prepare them for better integration into the society and enter the role of marketing.

Through the above comprehensive analysis, it is found that the marketing major in HVC should adopt various forms of education to stimulate students' academic interest, and pay more attention to the combination of practice and theory in the curriculum arrangement. Long-term development needs reform and self-innovation. At the same time, taking the needs of the society as the standard, guide students' self-development, follow the changes in marketing, optimize their own concept education, and let professional marketing fully radiate its own dazzling light in the continuous evolution, so as to deliver higher quality human resources to the society.

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