Original Research Article

Analysis on Evaluation Index System of Network Teaching Quality Based on Analytic Hierarchy Process

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Abstract: In recent years, in order to meet the needs of education, the rapid development of information teaching, the construction of network teaching platform is becoming more and more perfect, but there are still problems in the evaluation index system of network teaching quality. In order to make the network teaching can get better development, we must promote the construction of the evaluation index system of the network teaching quality. This paper analyzes the evaluation index system of network teaching quality based on AHP.
Keywords: Analytic Hierarchy Process; Network Teaching; Evaluation Index System

1. Introduction

The rapid development of network education brings opportunities but also challenges. In order to promote the development of network education and perfect the evaluation system of teaching quality, we can use the evaluation index system of network teaching quality based on analytic hierarchy process to improve the level of education modernization, improve the quality of network teaching, and promote the construction of evaluation index system of network teaching quality.

2. AHP

Analytic hierarchy process (AHP) is an effective method to solve complex problems. Through the decomposition of the relevant elements of the problem, respectively for the goal, criteria, schemes and other levels, on the basis of this analysis, so that we can use a variety of elements for a reasonable decision-making method. This method is widely used in network system theory and multi-objective comprehensive evaluation. Analytic hierarchy process (AHP) is a kind of hierarchical weight decision analysis method, which can make scientific and reasonable decision, so as to achieve the purpose of decision-making and promote the development of things.

In the real world, the problem of decision-making should be what everyone will encounter, such as what the problem of eating today or which of two clothes looks good, which puzzles countless people. In order to make the right decision, the decision maker must consider all factors synthetically, combine the opportunity cost, find the judgment criterion to make the final decision. For example, on the choice of food, you can choose one from Spicy Hot Pot, hot pot, barbecue, Spicy crayfish and home dishes as today's food. When choosing these foods, you should consider a combination of factors such as the cost of meals, the environment of the restaurant, the time and sanitation of the trip, and traffic conditions. These factors are interrelated and they restrict each other and influence each other. To this end, they must be taken into account in decision-making. Such an ordinary problem constitutes a decision-making system. The relationship between many factors in these decision-making systems is complex and often can not be described in a quantitative way. Analytic hierarchy process (AHP) is an effective method to simplify complex problems and make people make correct judgments, make accurate choices and achieve the purpose of decision-making. Analytic hierarchy process (AHP) splits the complex decision system to improve the decision level and efficiency.

3. Application of network teaching quality evaluation index system based on analytic hierarchy process

With the development of science and technology and the progress of education, the process of educational modernization is speeding up, and the online classroom has been developing continuously. However, the evaluation index system of network teaching quality has not been developed accordingly, which leads to the quality of network teaching can not be guaranteed, which affects the development of network teaching. In order to perfect the evaluation index system of network teaching quality and realize the final evaluation of teachers' classroom teaching quality, we must take corresponding measures to improve the level of network teaching and improve the quality of network teaching quality evaluation.

In order to improve the quality of network teaching quality evaluation and improve the network teaching quality evaluation index system, we can adopt the analytic hierarchy process to systematize and hierarchical the original complex network teaching quality evaluation index system, so that the network teaching quality evaluation index system can be fully developed, promote the construction of network teaching quality evaluation index system and promote the development of network education. Analytic Hierarchy Process (AHP) is a new and effective method for decision making. This method can take all factors into account, make the relevant departments make the correct decision in accordance with the actual situation and obtain the maximum income, and it is widely used in the fields of government decision-making, enterprise management, resource allocation, plan management and so on. It can be seen that the evaluation index system of network teaching quality based on AHP is an important measure to improve the development level of network teaching[1].

It is a complex problem to construct the evaluation index system of network teaching quality, which involves many factors. For network teaching, different subjects and specialties and the nature of curriculum are very different, different types of schools, different majors and courses have different views on the construction of evaluation system. Before the rise of online courses, many colleges and universities have built their own teaching evaluation system. In the face of these complicated systems, the analytic hierarchy process (AHP) can be used to make concrete analysis, so that the evaluation system can correctly reflect the students' evaluation of teachers' teaching level and quality. The evaluation index system of network teaching quality based on AHP can comprehensively consider various factors and realize the development of education modernization.

The construction of evaluation index system of network teaching quality based on AHP can be divided into three levels: target layer, benchmark layer and scheme layer. These three levels include the factors of constructing the evaluation index system of network teaching quality based on AHP. So that the network teaching quality evaluation index system based on AHP can be carried out smoothly.

3.1 Target level

At this level, it is mainly to clarify the current situation of network teaching development and evaluate the quality of teachers' classroom teaching based on the current situation, to clarify the purpose of constructing the evaluation index system of network teaching quality based on analytic hierarchy process, to achieve the goal of constructing the evaluation index system of network teaching quality based on analytic hierarchy process, and to promote the development of network teaching.

3.2 Baseline level

This level mainly considers the factors of the evaluation index system of network teaching quality based on AHP. Such as teaching attitude, teaching content, teaching methods and teaching effect, through the comprehensive consideration of these factors, we can make a correct evaluation of the quality of network teaching, and can achieve the purpose of constructing the evaluation index system of network teaching quality based on analytic hierarchy process.

3.3 Programme layer

The factors such as teaching attitude, teaching content, teaching method and teaching effect are divided again, and various factors are considered synthetically, so as to achieve the purpose of constructing the evaluation index system of network teaching quality based on analytic hierarchy process.

3.4 Calculation of weights

This paper takes the four indexes of the base layer as an example, and uses the analytic hierarchy process to carry on the detailed calculation and the analysis, thus achieves the goal of constructing the evaluation index system of the network teaching quality based on the analytic hierarchy process. The third level can take the same way to calculate, realize the effective conversion of variables and quantitative, and realize the construction of the evaluation index system of network teaching quality based on AHP.

When we calculate the index weight, we can use the analytic hierarchy process to evaluate the scale, that is 1-9 scale, so that the accuracy of the calculation can be improved effectively. Conduct effective research on researchers and management experts in the field, master primary materials, conduct research and discussion according to the criteria, and rate the benchmark indicators. The smaller the score, it proves that it has a great relationship with the construction of the evaluation index system of network teaching quality based on AHP. For testing the accuracy of the calculation results, that is, whether the relevant researchers and experts judge the importance of each index correctly and logically, the values are compared with the average random index RI (Random index), and the reasonable judgment is made by comparing the results. When the comparison value is less than 0.1, it is usually considered that the judgment matrix passes the consistency test, which is an important index to affect the evaluation index system of network teaching quality based on analytic hierarchy process; if the value is greater than 0.1, the index should be readjusted, the judgment matrix and calculated until the value is less than 0.1.In this way, we can effectively construct the evaluation index system of network teaching quality based on AHP. And the third level index can also be constructed in this way, so that the evaluation index system of network teaching quality based on analytic hierarchy process can be reasonably perfected, and the informationization and scientization of network teaching quality evaluation can be realized, and the development of education informatization can be promoted

Through this calculation result, we can calculate the total weight of the total evaluation system corresponding to the secondary index, so that the decision makers can grasp the importance of these four factors. This coefficient can effectively transform momentum into quantitative, we can reasonably use the calculation results to analyze the coefficient, so as to grasp the impact of the second index on the evaluation of teaching quality, which is the application of analytic hierarchy process in the field of teaching, can promote the construction of network evaluation index system of teaching quality based on analytic hierarchy process,

improve the level of education and teaching, promote the development of education modernization, so that education can play an effective role in the new period.

4. Significance of evaluation index system of network teaching quality based on analytic hierarchy process

The rapid development of web-based teaching brings challenges to education while providing convenience. At present, many schools have carried out online education, but there is no evaluation system of online teaching quality, which creates obstacles for the development of education. Teachers can not receive feedback from students, can not adjust the teaching content according to the needs of students, optimize the teaching structure, and make the development of education into a dilemma. However, because of the characteristics of network teaching, the construction of educational evaluation system can not take the traditional form, because of the complexity of education, it is necessary to realize scientific and reasonable application and build a new evaluation system. Therefore, it is necessary to construct the evaluation index system of network teaching quality based on AHP.

The evaluation index system of network teaching quality based on analytic hierarchy process (AHP) can use the characteristics of AHP to transform complex momentum into variables, cut all the factors that affect teaching evaluation reasonably, and make teaching evaluation have scientific and reasonable indicators. Realize the construction of network teaching quality evaluation index system. The comprehensive consideration of complex factors, the combination of various subjects and the different understanding of the curriculum in each school, and the reasonable teaching evaluation and analysis will help to promote the development of education modernization and meet the needs of modern teaching, and provide a new system for modern teaching to meet the needs of students in learning, improve the level of education and teaching in schools, and promote the individualized and comprehensive development of students[3].

5. Conclusion

The construction of evaluation index system of network teaching quality based on AHP is a necessary way to carry out modern education. Taking reasonable measures and means to construct the evaluation index system of network teaching quality based on analytic hierarchy process, so that the function of the evaluation index system of network teaching quality based on AHP has been effectively brought into play to improve the level of education modernization and teaching efficiency.

Acknowledgements

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