An Empirical Study of Quality Evaluation in Vocational Education: Based on the Culture of Big Data

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Abstract: At present, with the rapid development of artificial intelligence big data technology, its application scope is more and more extensive. As an emerging means of modern data analysis and management, it also creates feasible conditions for all kinds of education quality assessment. Based on this, this study takes the quality evaluation of vocational education as an example, analyzes the necessity of the application of big data technology, and then explains its advantages and characteristics in the quality evaluation of vocational education, which can effectively expand the scope of data collection and improve the evaluation efficiency, as well as the three goals of improving the efficiency, improving the standardization and improving the objectivity. Based on the comprehensive understanding of the relevant situation, combined with the current vocational education practice analysis of specific technical application steps, in order to effectively improve the quality of vocational education evaluation effect, promote the high quality development of vocational education.
Keywords: Big Data; Vocational Education; Educational Quality Assessment.

1. INTRODUCTION

At present, China attaches more and more importance to vocational education, and promoting the development of vocational education has become an important task in the field of education in China. In this context, how to form a scientific and objective quantitative evaluation of the quality of vocational education and fully measure the current level of vocational education in China has become an urgent problem to be solved. Only by forming a scientific and quantifiable evaluation standard can we have a clearer grasp of the development level and ability of vocational education. Under the current situation, many higher vocational colleges in China are also making active efforts to promote the construction and development of their own vocational education quality evaluation system. After exploring in many fields, a relatively diversified teaching quality evaluation system has been initially formed. It includes four types of quantitative index evaluation, student self-evaluation, supervisory evaluation and peer evaluation (Aguirre, 2021). Among them, quantitative index evaluation mainly sets specific index contents for vocational education teaching, such as course passing rate, excellent exam rate and professional employment rate, and realizes teaching quality evaluation content based on the level of index . The self-assessment of students mainly evaluates the quality of education and teaching according to the students' own learning experience by conducting a questionnaire survey for current and graduated students (Etzel & Nagy, 2021). On the other hand, the supervision evaluation is carried out by the professional evaluation team organized within the school or by the relevant vocational education management department through the form of evaluation and inspection (Gwynne et al., 2019). Peer evaluation refers to the evaluation and communication of vocational colleges by their peers in the industry in the form of characteristic course reporting, exchange and display through open courses, centralized teaching and teaching exchange (Bolaños & Salinas, 2021). The teaching quality evaluation system of specific vocational colleges is shown in Figure 1.

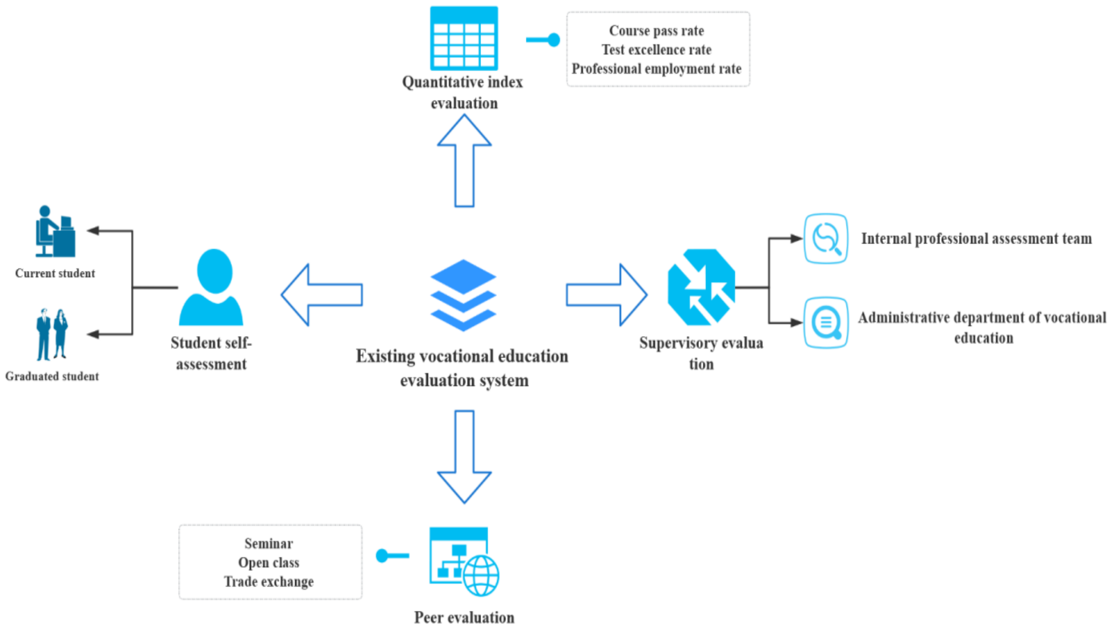

Figure 1: Contents of the Existing Vocational Education Teaching Quality Evaluation System

Although the existing vocational education teaching quality evaluation system has played a certain role, such off-line education and teaching evaluation methods also have clear defects, resulting in the actual vocational teaching evaluation content is not prominent in guiding significance and playing an insignificant role in optimizing the level and ability of vocational education. For example, the basic data source obtained by quantitative index evaluation is not real, which is difficult to reflect the real situation; Students' self-assessment lacks professional evaluation standards, and individual subjectivity is strong, so it has no scientific reference value. Even if some graduates have participated in relevant vocational education and training, they have a better understanding of the current teaching level of vocational colleges. However, differences in personal experience and attitudes will make the evaluation results less objective (Kim & Lee, 2021). Although the supervision evaluation has a certain authority, the relevant supervision organizations often lack a long and complete track of the entire vocational teaching process, but only evaluate based on written materials and extract part of the course content, which is insufficient for the real classroom teaching effect evaluation (Schweri et al., 2020). The same is true for peer evaluation. Due to peer friendliness and other factors, most peer evaluation only mentions advantages, but does not mention disadvantages or very targeted problems, and the evaluation effect is difficult to achieve. Moreover, in the application of evaluation results, many vocational colleges only pay attention to the situation of evaluation results, without too in-depth analysis of the causes of the results, and lack of thinking about whether the results are reasonable. As a result, the evaluation results of vocational education quality cannot be effectively applied. Students improve their own school effect can not play an effective guiding significance. From the point of view of deficiencies, it is mainly reflected in four stages. First, there are insufficient subjects of evaluation objects, mostly students. Vocational teaching quality is measured by students' performance, and there is a lack of evaluation of professional teachers. Second, the evaluation indicators are insufficient. The evaluation indicators of vocational teaching quality are relatively unified, lack a very clear hierarchical relationship, and the primary, secondary and importance are not obvious. Third, the evaluation process is not standardized enough(Győri & Czakó, 2020). The evaluation of vocational teaching quality in many vocational colleges is a formality with insufficient standardization. There are widespread cases of substitute evaluation or random filling in the evaluation content, and the results are not objective enough. Fourth, the evaluation results are not used enough. The evaluation of vocational teaching quality lacks follow-up application after the evaluation results are obtained, which makes many evaluation results and problems found become mere formalities, which not only goes against the original intention of teaching quality evaluation, but also goes against the improvement of teaching quality evaluation efficiency (Röhrer et al., 2021). The deficiencies of specific teaching quality evaluation are shown in Figure 2.

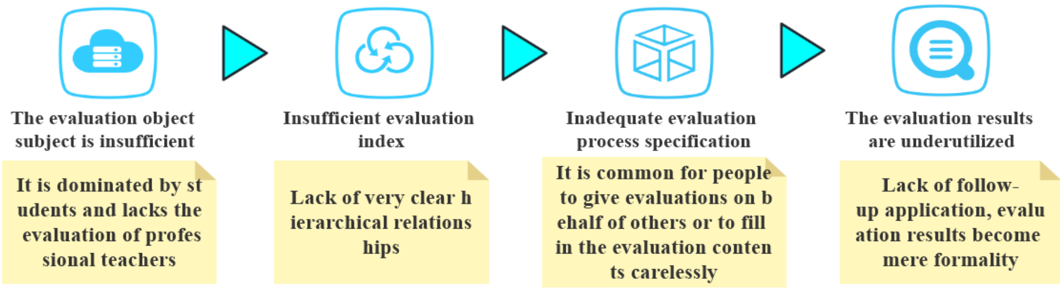

Figure 2: Deficiencies in the Four Stages of Teaching Quality Evaluation

In general, the improvement of vocational education teaching quality is the vitality and competitiveness of each vocational college to survive and develop in the long term, and is also an important key point of deepening the reform of vocational education in China. However, as can be seen from the previous analysis, in terms of improving the content and quality of vocational teaching, the traditional vocational colleges have limited ways and means, and the evaluation effect is difficult to be effectively applied. Therefore, in the context of the current high development of artificial intelligence technology, it is necessary and inevitable to explore the application of relevant artificial intelligence big data technology in the quality evaluation of vocational education. In general, the possible contribution of this study lies in three levels. At the level of education and teaching, the application of artificial intelligence and big data technology to the teaching quality assessment data is more diversified and large-scale summary, statistics and analysis, which can provide quantitative data support for vocational college teachers to adjust their own vocational teaching strategies and optimize teaching content. At the level of vocational education management, artificial intelligence big data technology can be used to evaluate the quality of vocational education, which can more objectively measure the quality of education and teaching among different vocational colleges, formulate more targeted vocational education management strategies from a global perspective, and optimize the effectiveness of vocational education management. At the theoretical research level, combining the emerging artificial intelligence and big data technology with the concept of vocational education evaluation, applying intelligent means to the evaluation process of traditional education industry, realizing the cross-field theoretical exploration, and also contributing to the further integration of the two theories, further making the vocational teaching quality evaluation content more diversified. Teaching quality assessment results have been used in more dimensions. The specific research contributions are shown in Figure 3.

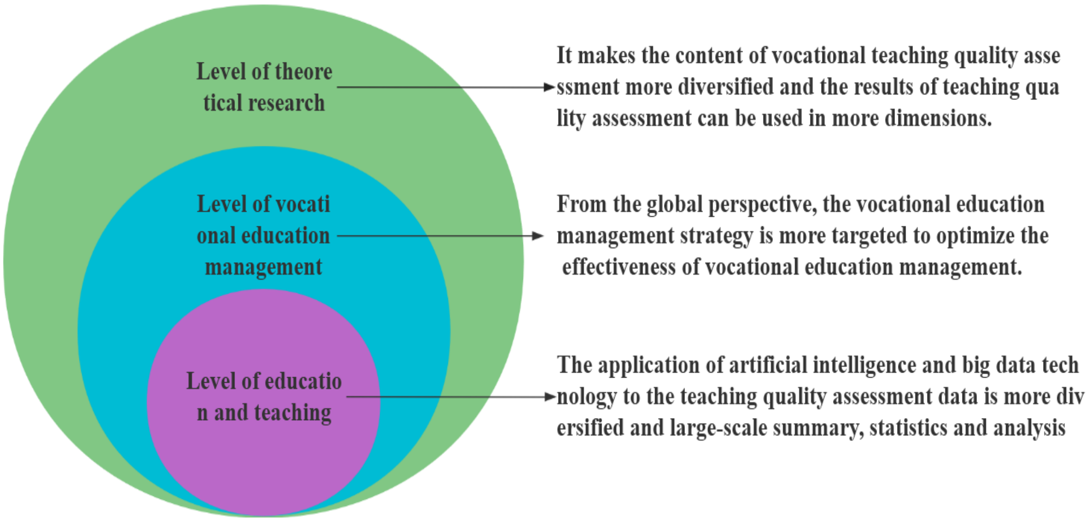

Figure 3: Research Contribution

2. ADVANTAGES AND OBJECTIVES OF APPLYING BIG DATA TECHNOLOGY IN VOCATIONAL EDUCATION EVALUATION UNDER ARTIFICIAL INTELLIGENCE

2.1 Analysis of Big Data Application Advantages

2.1.1 Advantages of Big Data in Data Collection of Vocational Teaching Quality Evaluation

In terms of function, it is based on intelligent data processing technology, which is essentially based on intelligent technology such as machine learning to collect, organize, analyze, store and apply a large amount of data, so as to realize the visualization and quantification of information for the desired purpose. Specifically for the teaching quality evaluation of vocational colleges, the application of this technology is helpful to realize the comprehensiveness and authenticity analysis of the required evaluation data, make up for the subjective errors of the results in the traditional evaluation process through the collection of a large amount of data content, and realize the comprehensive collection of evaluation results for different subjects and different periods. From the vantage point, it can be divided into four dimensions. In the classroom teaching dimension, with the assistance and support of big data technology, vocational colleges can synchronously grasp the information of the whole process of classroom teaching, such as the state of classroom teaching, the teacher's lesson preparation, the progress of teaching objectives, the completion of teaching tasks, the teaching test results, etc., and can also make horizontal comparison between their own classroom teaching data and other vocational education data of the same category(Conejero et al., 2021). Find teaching differences and deficiencies; In the training dimension of vocational application-oriented students, big data technology can more clearly obtain students' learning status, knowledge application and mastery ability, practical participation, ideological and moral cultivation, psychological state, etc., which is more conducive to the formation of more targeted vocational education and training programs based on students' comprehensive situation. In the dimension of school-enterprise integration, big data technology is helpful for vocational colleges to establish vocational education personnel training information base, vocational teaching case base and enterprise demand base, so as to realize effective docking of talent training and enterprise demand and better realize school-enterprise joint training (Pilz & Regel, 2021). In terms of industry development, relying on big data and intelligent technology, it can fully refine the content of the current quality evaluation data of various vocational education, which can not only provide comprehensive guidance for the overall development policy, education cultivation direction and policy guidance in the field of vocational education, but also provide specific data reference for specific issues such as professional development path, employment rate and vocational skill training (Sangita, 2021). In short, relying on big data and intelligent technology, it expands the coverage, accuracy and precision of vocational teaching quality evaluation, providing a strong guarantee for all kinds of vocational colleges to fully improve the quality and efficiency of vocational education. The specific advantage dimensions are shown in Figure 4.

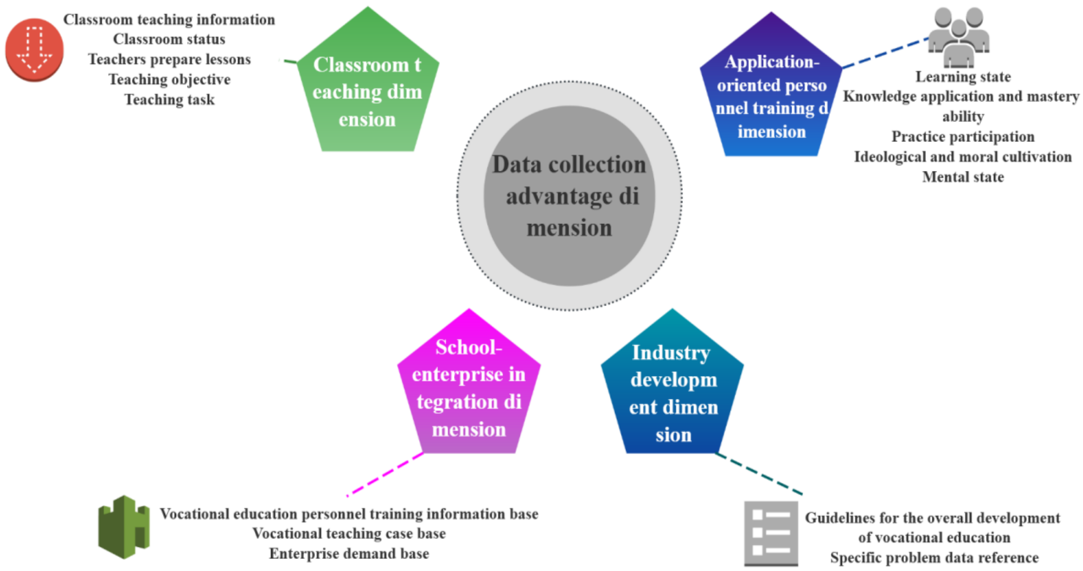

Figure 4: Advantage of Big Data in Four Dimensions in Data Collection of Vocational Teaching Quality Evaluation

2.1.2 Application Advantages of Big Data Technology in Vocational Education Quality Evaluation Results

In the context of current intellectualization, the application of big data technology not only effectively improves the total amount and accuracy of vocational education quality evaluation data, but also has unique advantages in the application of results. Because it is deeply rooted in the Internet technology type, so it often has the characteristics of fast transmission speed, wide-spread, and high spread time. Therefore, this technology can better help vocational colleges even if they find problems and immediately adopt corresponding teaching mode or state adjustment, but also can pass the evaluation and adjustment results to the corresponding objects more quickly. Specifically, the application advantage of its evaluation result feedback includes two stages. The first stage is the timely generation of vocational teaching quality evaluation results. In the traditional vocational teaching evaluation model, the results of teaching quality evaluation are generated step by step, that is, teachers set goals and conduct self-evaluation according to the content of vocational education, and vocational colleges conduct evaluation according to the teaching quality and results. Students also follow this step, and finally the university will evaluate students according to their test results and practice. Relevant teaching and training units also set the overall teaching objectives, formulate corresponding teaching plans according to the objectives, and finally conduct quality evaluation according to the course evaluation scores and students' admission and employment situation. Finally, schools or education departments summarize all kinds of evaluation results to form teaching quality evaluation results (Atorkey et al., 2021). It can be seen from the above process that the traditional model is to evaluate teachers, students and teaching and training units separately. In terms of the process, there are also multistage and complicated situations. In addition, when operated according to this process, there is a long time delay between different individual results and educational objectives, and the failure of teaching quality assessment results is weak. However, with the support of big data technology, on the one hand, synchronous integration of evaluation results of different subjects can be achieved, avoiding the time delay and mismatch caused by evaluation first and integration later in the traditional mode. On the other hand, under the guidance of artificial intelligence technology, a "one-stop evaluation" system based on a specific index system can also be built. Relevant vocational colleges only need to import relevant evaluation index data, and through self-correction and adjustment of the system, teaching quality evaluation results can be obtained, which can fully improve the timeliness of evaluation results(Tacconi et al., 2021). The second stage is to fully improve the timeliness of the delivery of relevant evaluation results.After the relevant teaching quality evaluation results are obtained, the evaluation results can be generated in time through the information big data system, and the evaluation content, evaluation basis, comparison standard, and improvement suggestions can be automatically transmitted to the evaluation object in the first time, so as to better help teachers, students, and teaching and training units to optimize and adjust in time, and fully improve the timeliness of the application of relevant results (Chen & Lu, 2022; Glerum et al., 2020). The specific results and application advantages are shown in Figure 5.

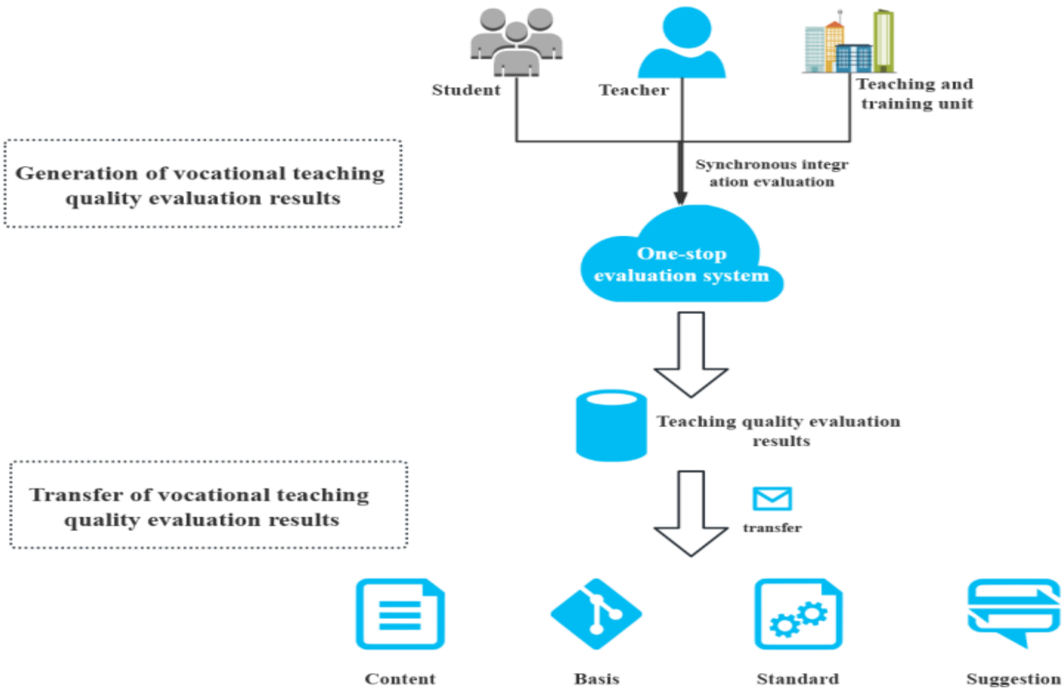

Figure 5: Two-Stage Advantages of Big Data Technology in the Application of Vocational Education Quality Evaluation Results

2.2 Analysis of Big Data Application Objectives

The fundamental reason why big data technology should be introduced into vocational education quality assessment is to solve key problems existing in traditional vocational education evaluation. The three specific application objectives are shown in Figure 6. The following will explain the application objectives of big data one by one by analyzing the problems existing in the evaluation of traditional vocational education.

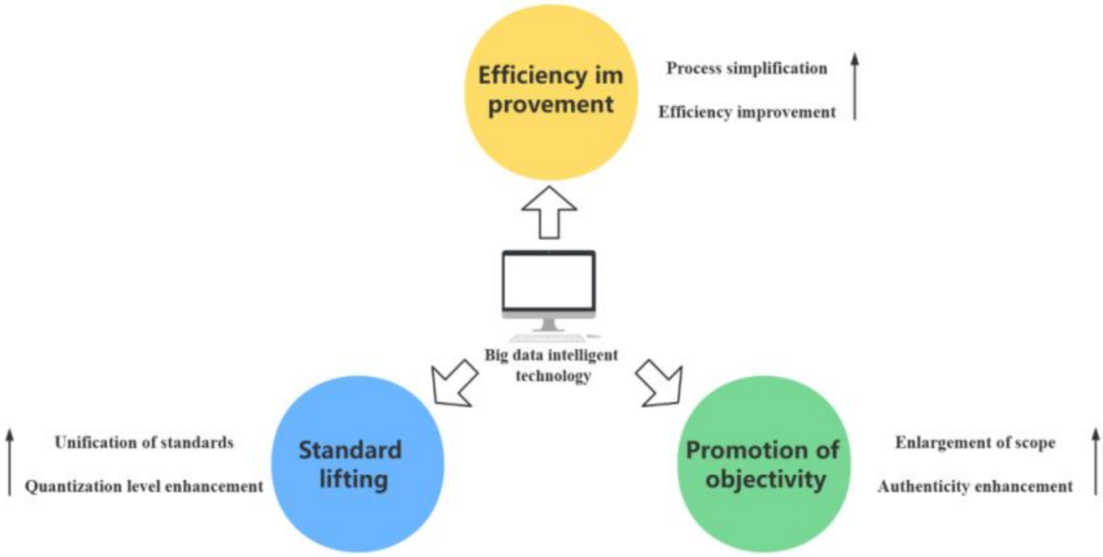

Figure 6: Three Goals of Big Data Application

2.2.1 Efficiency Improvement Target

In terms of the efficiency of the traditional education teaching quality have obvious disadvantages ways of evaluation. First of all, traditional evaluation is mainly based on the teaching quality assessment of paper questionnaires, which involves the issuance, collection and sorting of paper questionnaires. In this process, it is not only necessary to manually review the contents of questionnaires one by one, and eliminate invalid questionnaires, but also to convert the relevant information on the questionnaires into electronic data, and finally to process and analyze the contents of electronic data. From the perspective of process efficiency, this kind of evaluation process is relatively complicated, and the operation process also needs to consume a lot of time and labor costs, and the final evaluation results may not be satisfactory. Therefore, the first objective of introducing big data technology in this teaching quality assessment is to realize the improvement of operational efficiency of teaching quality assessment (Wei & Mo, 2020). By means of big data and artificial intelligence, the process of issuing, recycling and screening paper questionnaires is reduced, greatly reducing the cost of labor and time. Many extensive vocational education teaching evaluation work may only need 2-3 people to complete through automatic processing system, which effectively improves the efficiency of this work.

2.2.2 Specification Improvement Objectives

The traditional paper evaluation mode also has obvious defects in the standardization. On the one hand, the design of the paper questionnaire may not be standardized enough, and the description of some questions or options is not standardized enough in language, which will cause certain trouble for the respondents to fill in. On the other hand, respondents generally lack professional guidance for questionnaire filling, and often fail to fill in the questionnaire properly in the evaluation process. Writing errors, non-standard evaluation and vague expression are also common. At the same time, in the absence of clear directivity, respondents tend to choose relatively neutral words to describe their own attitude. For example, when no clear options such as "excellent, good, poor" are given, respondents generally choose comments such as "OK, almost, little difference" to describe. This kind of irregularity will also make the actual measurement effect of the questionnaire greatly weakened. Under the support and guidance of standardized big data system, the evaluation of vocational education quality can be standardized from two aspects. On the one hand, the standardization of choice questions can be changed into choice questions with clear direction. On the other hand, it is the standardization of viewpoint attitude, which is quantified in the form of scores, and the final result is unified standard data entry. All the data obtained from the evaluation are within the range of standardized analyzable and applicable data, which brings obvious convenience to the standardization improvement of the whole vocational education evaluation (Calixte et al., 2020).

2.2.3 Objective of Improving Objectivity

The most obvious problem of traditional teaching quality evaluation lies in the unobjective result of evaluation. The reasons leading to the non-objective evaluation results mainly lie in two aspects. On the one hand, the scope of traditional teaching quality evaluation is limited. Due to factors such as human cost, the evaluation of vocational teaching quality in traditional vocational colleges is often analyzed in the form of sampling survey. On the other hand, although paper questionnaires are mostly anonymous, they will have a certain psychological impact on the assessed objects, making them tend not to reveal their real will, and thus reducing the objectivity of the evaluation . After the introduction of intelligent technologies such as big data, these two aspects can also be effectively improved. In terms of scope, the establishment of a standardized system can better realize a large-scale survey and improve the objectivity of evaluation by expanding the sample size. At the same time, the anonymity attribute of network questionnaire is stronger, which is more helpful for respondents to reveal their real thoughts and improve the authenticity and objectivity of evaluation(Zhao et al., 2019).

3. APPLICATION STEPS OF BIG DATA TECHNOLOGY IN QUALITY ASSESSMENT OF VOCATIONAL EDUCATION

This chapter will be combined with specific examples to analyze the specific application path and measures of technology. In terms of operation, this application step can be divided into five steps, namely, establishment of evaluation system framework, establishment of support mechanism, determination of evaluation standards, application of evaluation system, and feedback of evaluation results, as shown in the Figure 7.

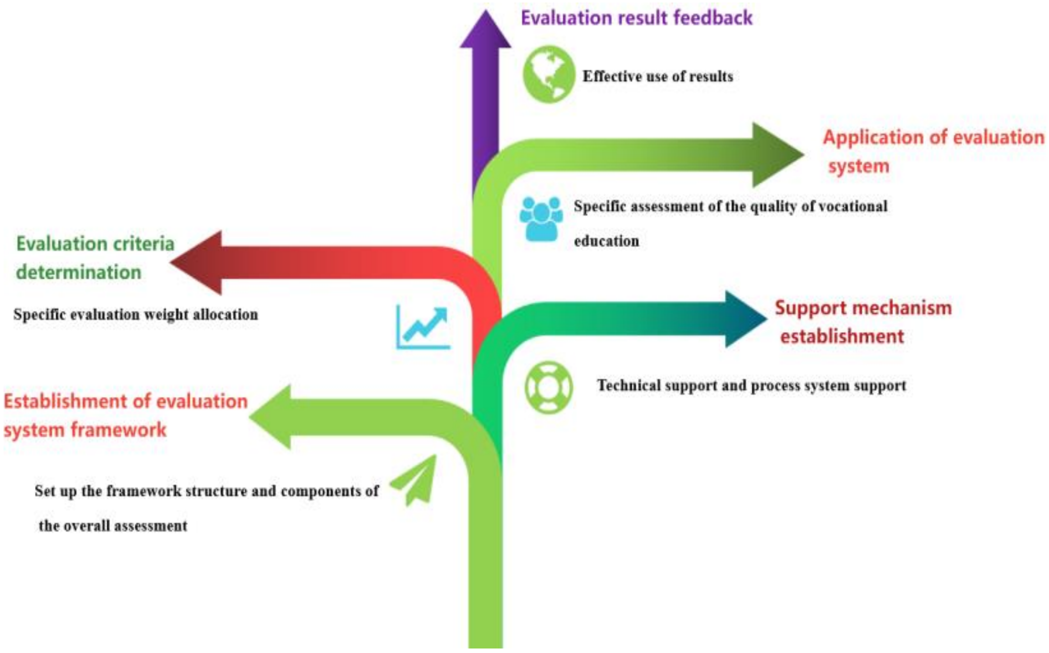

Figure 7: Technical Application Steps

3.1 Establishment of Educational Quality Evaluation System Framework

With the support of intelligent technology, the construction of the big data vocational education quality assessment system and the traditional quality assessment system are combined with the systematic management of vocational teaching quality, and the information and data obtained from students, teachers and teaching institutions from multiple perspectives are summarized and structured, and then combined with the characteristics of vocational education itself, targeted evaluation is carried out. From the perspective of big data technology application, it mainly uses information gain algorithm to process and analyze data. The logic is as follows:

$$IG = IE - CE \tag{1}$$

$$\mathrm{I}E = -\sum_{i=1}^{n} p(x_i)\log p(x_i) \tag{2}$$

$$p(X = x_i, Y = y_j) = p_{ij} \tag{3}$$

$$\mathrm{C}E = \sum_{x \in X} p(x) H(Y|X = x) \tag{4}$$

The variation of conditional entropy can be obtained by combining the above 2, 3 and 4 formulas:

$$\mathrm{C}E = -\sum_{x \in X}\sum_{y \in Y} p(x, y)\log p(y|x) \tag{5}$$

Among them, the IG as the information gain levels, IE to information entropy, IG conditional entropy, said overall information filtering variable x, y, said the choice of corresponding variables, conditions of p (x), p (x, y), p (y | x) as the conditional probability value of the different conditions, H (y | x) on behalf of the joint probability distribution. Through this information gain algorithm, the existing data can be processed, screened and analyzed in large batches. In addition, based on this kind of information data analysis technology, education quality assessment system framework can also achieve more diversified development goals. First, the evaluation subject is more diversified. For the evaluation subject involved in vocational education activities, it jumps out of the original evaluation framework of teachers and students, and puts the management department, teachers' peers, and even students' parents into the evaluation category of educational activities. Second, the evaluation index system is more diversified. Different teaching quality evaluation indexes are set for different vocational education teaching contents, such as theoretical courses, practical courses, ideological and political ethics courses, and differentiated evaluation. The introduction of intelligent information technology also makes the evaluation methods more diversified. In addition to the traditional result evaluation, dynamic evaluation methods such as process evaluation and phased evaluation can also be carried out, making the evaluation of teaching quality more diversified and whole-process.

3.2 Support Mechanism Establishment

The good use of evaluation system is inseparable from the establishment of relevant support system. From the technical point of view, the technical support system needs to combine the new requirements of the aforementioned multi-evaluation system, improve and upgrade the functional modules of evaluation management from multiple perspectives, so as to better adapt to the diversified evaluation needs. In addition, diversified input and output channels of terminal information devices can also be established, such as mobile phones, tablet computers, information audio-educational equipment, etc., to provide raw data support for various process evaluation or phased evaluation. At the same time, it is also helpful for timely feedback of evaluation results, helping to establish an information dynamic mechanism of "evaluation - feedback - improvement", effectively promoting the overall improvement of teaching quality and realizing the realization of promoting construction by evaluation. From the perspective of system, it is necessary to establish a good evaluation and implementation mechanism, comprehensively analyze the key problems of each implementation link, and establish targeted management mechanism measures, such as the standardization mechanism of evaluation subjects, the application mechanism of evaluation results, and the feedback and improvement mechanism of evaluation results. At the same time, the supervision and management of the evaluation process should be strengthened to ensure that the evaluation process is well-regulated and standard.

3.3 Determination of Evaluation Criteria

Evaluation criteria is another important factor after the establishment of the relevant system and support mechanism. Reasonable evaluation criteria should be set to fully reflect the attitude of the evaluation subject and the evaluation object towards the evaluation results, and the applicability of the evaluation system should be fully analyzed. Therefore, this study puts forward evaluation standards based on student evaluation, teacher evaluation, teaching unit evaluation and education administration department evaluation, and sets corresponding evaluation weights, as shown in Table 1.

Table 1: Weight Composition of Vocational Teaching Quality Evaluation System

Evaluation Subject	**Student Evaluation**	**Teacher Evaluation**	**Teaching Unit Evaluation**	**Educational Administration Department Evaluation**
Corresponding Weight	25%	20%	30%	25%

In terms of specific index design, combined with the current education and teaching reality of vocational colleges in China and considering the difficulty of obtaining part of the evaluation results, the evaluation result indexes of different evaluation objects are shown in Table 2.

Table 2: Content of Vocational Education Teaching Evaluation Index

Evaluation Subject	Concrete Index
Student Evaluation	Quality Content Method Attitude
Teacher Evaluation	Quality Content Method Attitude
Teaching Unit Evaluation	Teaching quality Management Teaching norm
Educational Administration Department Evaluation	Supervise the class Material inspection Student discussion

3.4 Application of Evaluation System

In terms of application, firstly, vocational teaching quality assessment information is collected from multiple channels and means based on the aforementioned evaluation standards, and the evaluation is carried out according to the content. Table 3 shows part of classroom vocational teaching evaluation results of vocational teachers obtained through the big data vocational teaching quality assessment system.

Table 3: Teachers' Situation and Scores of Vocational Education Quality Evaluation

Teacher Number	Name	Gender	Age	Professional Title	Educational Background	Evaluation Score
0001	A	Male	33	Master's Degree	Associate Professor	83
0002	B	Female	28	Doctor	Lecturer	85
0003	C	Female	45	Master's Degree	Professor	82
0004	D	Male	29	Doctor	Lecturer	91
0005	E	Male	55	Doctor	Professor	87
0006	F	Female	52	Undergraduate Degree	Associate Professor	90

In order to make the relevant statistical results can be analyzed by intelligent data analysis technology, the original data is assigned. In gender, G1 indicates male and G2 indicates female. In professional titles, P1 is used by lecturers, P2 is used by associate professors, and P3 is used by professors. E1 for bachelor's degree, E2 for master's degree, and E3 for doctor's degree. For age and evaluation scores, corresponding quantitative standards are used respectively. Table 4 is the quantitative standard of age, Table 5 is the quantitative standard of vocational teaching quality, as shown in Table 4 and Table 5.

Table 4: Age Quantification Standards

Age	Age<30	30-40	40-50	Age>50
Standard	A1	A2	A3	A4

Table 5: Quantitative Standards of Vocational Teaching Quality Scoring

Evaluation Score	Score<80	80-85	86-90	Score>90
Standard	S1	S2	S3	S4

According to the above standards, the basic situation of the original vocational teachers and the corresponding vocational education quality evaluation score are quantified, as shown in Table 6.

Table 6: Teachers' Situation and Quantitative Expression of Vocational Education Quality Evaluation Scores

Teacher Number	Name	Gender	Age	Professional Title	Educational Background	Evaluation Score
0001	A	G1	A2	P2	E2	S2
0002	B	G2	A1	P3	E1	S2
0003	C	G2	A3	P2	E3	S2
0004	D	G1	A1	P3	E1	S4
0005	E	G1	A4	P3	E3	S3
0006	F	G2	A4	P1	E2	S3

3.5 Feedback of Evaluation Results

Further, big data models can be used to analyze large samples to explore the correlation between different factors and the score results of vocational education quality. Specifically, association rules algorithm can be used for testing, and association rules between different factors can be obtained according to the minimum confidence level set. If the vocational education quality score is S3, it can be regarded as good teaching quality; if the vocational education quality score is S4, it can be seen that the teaching quality is excellent. The corresponding association rules of the two vocational teaching quality can be obtained respectively, as shown in Table 7 ,Table 8.

Table 7(A): Association Rules Corresponding to "Good" Vocational Teaching Quality

Correlation Condition	Support Degree	Confidence Degree
Y2-S3	0.231	0.701
E2-S3	0.203	0.552
E3-S3	0.122	0.612

Table 7 (B): Association Rules Corresponding to "Good" Vocational Teaching Quality

Correlation Condition	Support Degree	Confidence Degree
[Y2,P2]-S3	0.209	0.918
[Y2,E2]-S3	0.104	1.039
[Y2,P1]-S3	0.112	0.921

Table 8: Association Rules Corresponding to "Excellent" Vocational Teaching Quality

Correlation Condition	Support Degree	Confidence Degree
Y3-S4	0.113	0.447
P2-S4	0.102	0.402
E3-S4	0.121	0.411
[Y3,P2]-S4	0.101	0.544

It can be seen that the quality of vocational teaching is closely related to the title, educational background and age of the teachers who are the subject of education and teaching. Among them, middle-aged and highly educated teachers with the title of associate professor and professor tend to have better vocational education quality. At the same time, with the increase of teaching experience, the teaching quality of vocational education of young teachers also presents a steady improvement trend. The above analysis content presents the analysis process from the perspective of teaching subject combined with the results of vocational teaching quality assessment. In addition, relevant vocational teaching quality assessment models can also explore the correlation between vocational education teaching quality and other contents through the analysis of other subject perspective factors. It is helpful for vocational colleges to fully grasp the relevant education and teaching content and provide sufficient decision-making information support and scientific reference for the optimization and improvement of the subsequent vocational education and teaching work.

4. CONCLUSION

As an important means to measure the quality of teaching level in vocational colleges, scientific, objective and systematic evaluation of vocational education quality is of great significance. Combined with intelligent big data technology, this study elaborated the new ideas and methods of vocational education quality assessment under the background of new technology from the logical route of technology application and the advantage target, and combined with specific evaluation examples, analyzed the application way of the constructed big data vocational education evaluation system combined with the data content. It is helpful to effectively improve the professional skills and teaching level of vocational colleges in the future.

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