

# *Establishment and Practice of Teaching Evaluation System of Gerontology Introduction Course from the Perspective of Big Data*

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**Keywords:** Big Data; Introduction to Gerontology; Courses; Teaching Evaluation System

**Abstract:** The development of Internet technology has led to profound changes in the field of education, but also brought about a new development of the subject curriculum evaluation system. In the era of big data, the curriculum assessment system can deepen the curriculum practice, effectively combine student habits, learning characteristics, off class performance, professional ethics and comprehensive quality and other evaluation indicators, and achieve the authenticity and effectiveness of student and teaching evaluation through the induction, integration and collection of massive teaching practice data. For this reason, this paper takes Introduction to Gerontology as the starting point, analyzes the main problems of curriculum evaluation in the era of big data, and puts forward strategies for establishing the curriculum teaching evaluation system of Introduction to Gerontology.

## **1. Introduction**

Introduction to Gerontology is a professional basic course with elderly service and management as its main content. It clarifies the nature of the discipline between social aging and gerontology, and is based on biological aging knowledge and aging problems at home and abroad. It discusses economic, political, cultural, service and values related to aging phenomenon with scientific research methods, and integrates sociology, medicine and economics.[1] It is a subject with wide coverage. With the integration and development of "Internet+" and education and teaching, the establishment of an effective curriculum evaluation system plays an important role in the teaching effectiveness of the elderly specialty. Therefore, in the new era, it is of great practical significance to discuss the establishment and practice of the teaching evaluation system of the geriatric introduction course from the perspective of big data.

## **2. Problems in teaching evaluation system of Introduction to Gerontology**

### **2.1. Single form of curriculum evaluation**

At present, the evaluation of the curriculum Introduction to Gerontology in higher vocational education mainly adopts written examination as the main way, and the evaluation form is single. The curriculum evaluation only pays attention to the students' final learning achievements, and the written examination examination questions are repeated. Many teachers only focus on picking examination

questions from the textbook itself at will, without flexibility and comprehensive deformation of the examination questions, resulting in the students' curriculum learning still stays on the basis of rote learning and coping with the examination.

## **2.2. Single subject of course evaluation**

The subject of the curriculum evaluation of Introduction to Gerontology is a curriculum teacher, which does not meet the requirements of the pluralistic evaluation subject of modern education. The traditional curriculum teaching does not pay attention to the evaluation of the scope of student evaluation, parents' evaluation and social evaluation, which leads to the evaluation of students only focusing on the examination ability, not focusing on social practice, interpersonal skills and project research ability.

## **2.3. Low modernity of curriculum evaluation**

In order to develop effectively, Introduction to Gerontology must fully combine modern technology and carry out information reform on the teaching evaluation system.[2] At present, the course evaluation still stays in the form of traditional examination papers. The assessment of students mainly depends on the teaching experience and teaching intuition of teachers. It is mainly qualitative analysis, lacking scientific data integration, and lacking in quantitative. Some teachers even actively lower the standards to implement the evaluation, which makes the course evaluation subjective and arbitrary.

# **3. The construction of teaching evaluation system of geriatric introduction based on big data**

## **3.1. Establishing course assessment data resource library**

The establishment of the curriculum teaching evaluation system in the age of big data must be based on massive teaching data, which requires the establishment of a curriculum based data resource library, the collection of relevant curriculum resources, curriculum evaluation indicators, student learning performance and other data related to the Introduction to Gerontology on the online platform, and the use of big data technology to achieve data integration and induction.

First of all, the curriculum assessment data resource database should focus on the establishment of evaluation indicators. The evaluation of students' curriculum teaching should not only include mid-term and final scores, but also extend to students' daily attendance rate, single assignment assessment, project completion, classroom performance, learning habits and comprehensive morality. The evaluation indicators should guide teachers' daily teaching plans, and link students' overall learning evaluation and graduation results, so as to build a huge data resource base in multiple dimensions; Secondly, the data assessment resource library covers all aspects of network assessment content resources, assessment support software and big data related software. It is far from enough to rely on the school's own faculty and personnel matching.[3] We should actively hire professional technicians and experts in related fields to discuss the establishment of the data assessment resource library with the school's discipline teachers. Or we can seek project cooperation with higher vocational colleges and undergraduate colleges, and use the high-quality resources of other universities to promote the establishment of the data assessment resource library of the university, so as to ensure the high-quality and high development of the operation and effectiveness of the assessment resource library; Finally, we should ensure the openness of the data assessment resource library, strictly abide by the principle of "student centered", and regard students as development people. In view of the cognitive limitations and technical limitations of personnel, the data assessment resource library will have certain

deficiencies, so we must ensure the openness of the system to make real-time adjustment according to the curriculum practice. In addition, a resource collection database based on individual differences of students should be established to ensure that the curriculum assessment database fully respects the unique development of students and makes targeted evaluation.

### **3.2. Establishing a data platform for course assessment**

If the teaching evaluation of Introduction to Gerontology under the perspective of big data is to be comprehensively developed, it is necessary to establish a corresponding information platform, integrate curriculum resources, teaching videos, students' homework, related activities and final results and other information materials, and publicize and share them on the platform, so as to ensure that students' curriculum assessment can be followed and that multiple subjects can participate in the platform construction.

First of all, we should establish a data platform based on the assessment of the course Introduction to Gerontology. The platform construction should include the introduction of the introduction to gerontology, the subject objectives and requirements, and the campus assessment indicators. We should establish an assessment platform that is independent of the class system. Teachers should timely upload the teaching plan, student activities and assessment results in the course implementation, and display, share and publicize the entire assessment process of students in the form of video, pictures, text materials or tables, so that the entire course participants can supervise each other's assessment process through the platform, and improve the preciseness and seriousness of the course assessment; Secondly, we should establish personal growth files for students, and ensure the openness, flexibility and adjustability of file evaluation. Students are not immutable, but people in the process of development. The evaluation of students cannot be fixed in the traditional way, but must be flexible based on the changing situation of students, so as to stimulate students' enthusiasm for progress and give them continuous motivation for progress; Finally, the platform construction should ensure the open function. The platform construction will be subject to various shackles such as the current educational cognitive limitations and technical defects. The platform construction should be able to update in real time, endow the platform with the most advanced educational concepts and information technology, serve the curriculum evaluation and assessment work well, and achieve real-time tracking and processing of relevant data based on the principles of convenience, scientificity and efficiency.

### **3.3. Scientific data mining and analysis**

Data mining and analysis is the core of the establishment of the curriculum evaluation system of Introduction to Gerontology. If relevant work cannot be carried out, then all platforms and systems based on data will be meaningless. The learning process of learners is a dynamic process, the key factors must be excavated from the massive data, and the software is used for accurate analysis to harvest scientific evaluation results.

First of all, we should carry out multi-channel data mining, and design "data mining" in all aspects of the curriculum assessment system. For example, on the course assessment and teaching platform, through the personal account login design, learners can fill in questionnaires or subject self-assessment forms on the basis of course learning, learning difficulty or learning experience when logging into the system, and set up a personal information system to enable students to improve their learning habits, comprehensive moral character, learning ability, course focus and other information in the system. In this way, we can collect various appraisal information by default in the login system; Secondly, we can also share course teaching videos, teachers' teaching design, discipline research projects or social practice activities by establishing WeChat groups and WeChat official accounts for

courses, set up extracurricular student performance indicators, encourage students to find their own course topics in the introduction of gerontology through mobile devices, and actively participate in relevant project activities, in order to obtain social practice scores and establish a project-based evaluation system that breaks the traditional class space and time constraints; Finally, the construction of modern information platform has been able to realize the synchronization of data mining and analysis, so in the early stage of design, the school must establish a data analysis team based on subject teachers, technicians and experts, and design software algorithms that meet the needs of the three parties by combining the learning indicators that teachers pay attention to and the teaching programs suggested by experts with the characteristics of modern technology, so as to ensure the feasibility and advancement of the index weight value, data algorithm and data analysis software of the platform construction and the preliminary work of data mining.

### **3.4. Establish a good teaching quality monitoring system**

To ensure the introduction to gerontology course evaluation system, we must pay attention to the establishment of good teaching quality monitoring system, through a variety of data mining technology. We can use advanced statistical model to determine the monitoring system assessment weights, and combine with the course teaching objectives and standards of professional quality indicators into the monitoring system to establish a good teaching quality monitoring system.

First, to hire relevant professionals. We can provide technical intellectual support for the establishment of the online teaching quality monitoring system of "Introduction to Gerontology" course, the joint curriculum teacher's teaching plan, and the program of the macro instructions, design the methods, steps, technologies and algorithms of data mining in the system system more in line with the course quality requirements. This is the teaching quality control system of "Introduction to Gerontology"; At the same time, the construction of the monitoring system should pay attention to the diversification of the monitoring subjects, provide convenient channels for teachers, students, schools and other monitoring subjects, let them register through a simple account, and conduct diversified monitoring and evaluation within the system; Next, to actively establish a monitoring data, off-line and offline collection system. The curriculum development is substantive, being dynamic, open, and realistic. To this end, relying solely on the online monitoring data, vulnerable to unilateral restrictions by data upload subjects, it cannot effectively reflect the actual situation of the course implementation. We should make active use of multimedia equipment, class monitoring facilities and various mobile communication equipment to record images, audio, video and other kinds of the actual teaching process of teachers and students' learning process in the course. Through the way of offline questionnaire survey, random sampling on the campus, the quality and experience questionnaire for the course "Introduction to Gerontology", and through face-to-face interviews and communication, we can collect first-hand pastoral information as an evaluation index of course quality assessment, and touch the monitoring perspective beyond the online system. We can summarize and upload the relevant information, comprehensive course quality assessment results are obtained through the advanced data analysis system; Last, the construction of teaching quality monitoring system can also actively contact third-party software development companies, data analysis professional institutions. Through corporate technical assistance and intellectual support, we can build a platform suitable for the school, the course and the course teaching quality monitoring system, in order to ensure that the relevant monitoring system system established the scientific, advanced, systematic and comprehensive development.

### **3.5. Give full play to the role of diversified evaluation subject**

Introduction to gerontology is a both theoretical and practical course, the evaluation system of the

course must focus on the evaluation subject diversity, abandon the traditional one, one-sided evaluation subject setting, using the advantages of big data technology, break the scope limit, the teachers, students, schools, social organizations and other multiple subject integration in the curriculum evaluation system.

First of all, to establish the campus multiple subject evaluation system, the students' school curriculum performance, teachers' information, teachers' teaching evaluation, students' evaluation information, grade group evaluation for horizontal and longitudinal analysis, the school each subject unified in curriculum evaluation system, and establish self-evaluation, mutual evaluation, his evaluation, evaluation of four dimensional evaluation index construction, and the thinking index into the evaluation of each subject content. Secondly, it is necessary to establish a social evaluation system of multiple subjects. "Introduction to Gerontology" is a highly practical course. In the actual teaching, it will inevitably often open a variety of after-school activities, and jointly carry out internship, research or other teaching activities. Finally, can establish campus curriculum public sharing platform, let teachers will their own teaching video, the video of students learning on the Internet, and real-time share school base and subject curriculum activities, let the school teaching process and students' curriculum learning transparent, through live, recording, establish teaching template, sharing activities process in various ways propaganda school each main body to carry out related courses adopted all kinds of innovative mode, let social groups for comprehensive and comprehensive evaluation of related courses.

#### 4. Conclusion

With the continuous emergence of cloud computing, big data, artificial intelligence and other emerging technologies, the education field must keep up with the times, dig deep into practice, and use big data technology to establish a scientific teaching evaluation system to promote the development of discipline teaching. Introduction to Gerontology is a subject with strong interdisciplinary nature. To establish a multi-dimensional teaching evaluation system from the perspective of big data, we can base on practical data and no longer blindly rely on the "teacher's feeling" for experience teaching, but use more accurate data to seek further development of teaching from both qualitative and quantitative dimensions.

#### Acknowledgement

Fund Project: This Paper is the Research Result of the Self Funded Project "Establishment and Practice of the Teaching Evaluation System of Introduction to Gerontology from the Perspective of Big Data" for the humanities and social sciences research of colleges and universities in Hebei Province in 2022 (Subject No.: SZ2022027).

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