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The Integration of Information Technology and Learning Evaluation: Exploring the Path of Accurate Evaluation

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Abstract: *This study aims to explore the integration path and method of information technology and learning evaluation to promote accurate evaluation in the educational field. Through comprehensive analysis of the application and limitations of current information technology in learning evaluation. Combined with the actual situation of the course, the implementation path and method of accurate evaluation integrating information technology are put forward, including diversified evaluation, personalized evaluation and data analysis and mining. This study provides some reference for the realization of accurate evaluation in educational teaching.*

Keywords: *Evaluation; Information Technology; Personalized Evaluation*

1. Introduction

With the continuous development of information technology, various information technology means have been introduced in the field of education, such as online teaching, online education, digital textbooks, etc. The introduction of these information technologies not only brings convenience and efficiency to education, but more importantly, makes education more intelligent and humanized. In 2020, the central committee of the communist party of China and the State Council issued the deepening the reform of the new era of education evaluation overall plan (hereinafter referred to as the overall plan), file is clear about the education evaluation objectives and key tasks, and points out to strengthen the construction of specialization, use of artificial intelligence, big data and other modern information technology innovation evaluation tools. As an important link that cannot be ignored in the complete learning closed loop, learning evaluation. How to integrate information technology to accurately and objectively evaluate students 'learning situation and progress is the key to improve students' learning effect, realize personalized education and optimize teaching quality.

Evaluation is a process of understanding and assessing students' knowledge, skills, thinking abilities, and problem-solving capabilities. Through evaluation, teachers can understand the level and problems students have reached in their learning, and summarize and reflect on their learning in order to better guide their learning. At the same time, evaluation can also help students understand their own learning situation, stimulate their learning motivation and self-reflection ability. Therefore, evaluation should be a comprehensive, objective, and fair process to ensure the accuracy and effectiveness of the evaluation results.

However, the current evaluation methods still mainly rely on standardized tests, lacking personalized evaluation criteria and timely feedback guidance, and lacking comprehensive methods and tools to evaluate students. This leads to schools and students focusing too much on test-taking skills and memorization, while neglecting comprehensive abilities and personalized development, and unable to comprehensively evaluate students' comprehensive abilities and potential. The rapid development of information technology provides a certain path for solving this problem. By using information technology, more and more accurate student learning data can be collected, helping teachers better understand students' learning process and performance. At the same time, information technology can also provide more flexible and personalized learning evaluation methods, helping teachers better guide students' learning and development. Therefore, exploring evaluation methods that deeply integrate information technology can better achieve accurate evaluation of students' academic performance, rather than simply giving a score[1-2].

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2. Application of information technology in learning evaluation

2.1 Application of information Technology in learning evaluation

At present, with the support of Internet Technology and Information Technology, Online Learning Platform and teaching assistant system have become powerful tools for learning evaluation, providing students with efficient, accurate and personalized learning evaluation methods, and actively promoting the development of students' learning effect and ability.

(1) Online testing and assignment evaluation. The online testing platform provides flexible test setting options, and teachers can set the time limit, question type and number of tests according to their needs. After the completion of the test, the system will automatically score, and show the students' grades and response details in time. The assignment evaluation platform provides a channel for students to submit assignments, and provides convenient tools for teachers to grade and evaluate them. In this way, students can get timely assignment grades and feedback, understand their own strengths and weaknesses, and improve learning methods and outcomes.

(2) Online discussion and collaborative learning. The online discussion and collaborative learning platform provide students with a space for interactive communication and cooperative learning, where students can express their opinions and share their ideas. By sharing documents and project management tools and other functions, students can cooperate with their peers to complete tasks and projects. This real-time interaction helps expand thinking, stimulate creativity, and facilitate deep learning understanding. At the same time, students can learn from different perspectives and perspectives to deepen their understanding and application of knowledge.

(3) Multimedia evaluation and feedback. Information technology supports various forms of works and evaluation and feedback methods, such as images, audio, video, etc. Students can display their creative works by recording audio and video, and teachers can also evaluate and feedback students' works through multimedia comments.

(4) Data analysis and learning analysis. The learning management system can record the various activities and behavior data of students on the learning platform, and generate students' learning reports and analysis results through the statistics and summary of the learning data. These reports and results can help teachers to comprehensively monitor and assess students' learning in order to provide individualized learning advice and guidance.

2.2 Influence of information technology on learning evaluation

(1) Improve the efficiency of the evaluation. The emergence of online testing platform and automated scoring system has realized the immediate evaluation and feedback of students' knowledge and skills, greatly reduced the time and human resources required for evaluation, and significantly improved the work efficiency of teachers.

(2) Increase the accuracy and objectivity of the evaluation. Traditional evaluation methods may be influenced by subjective factors such as teacher personal preference or subjective judgment. Information technology can provide objective evaluation criteria and quantitative data to reduce the impact of subjectivity. Students' learning activities and performance were recorded through an online learning platform, and objective evaluation results were used to obtain them using data analysis and algorithms.

Although the current online learning platform and teaching auxiliary system have been widely used in information technology, which improves the efficiency, accuracy and objectivity of evaluation to a certain extent, there are also some problems. For example, online homework and e-exams may face cheating problems, automatic scoring systems may not be able to accurately evaluate students' creativity and thinking ability, and there may be limitations in the evaluation of open questions. Therefore, when using information technology for learning evaluation, it is still necessary to combine teachers' professional judgment and auxiliary evaluation means to ensure the accuracy and comprehensiveness of the evaluation results[3-5].

2.3 Connotation and characteristics of accurate evaluation

Accurate evaluation refers to the comprehensive, accurate and objective evaluation of the learning process and learning results at a more detailed level through effective evaluation means and methods based on the advantages of learners' individual differences, learning objectives and needs[3]. It

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emphasizes providing personalized evaluation and guidance according to students 'individual characteristics to meet students' learning needs and promote their learning development.

Each student is a unique individual, and they differ in learning ability, interests, learning style and learning pace. Traditional evaluation models often ignore these individual differences, and adopting a unified standardized examination or simple qualitative evaluation cannot comprehensively and accurately evaluate students' learning status and ability level. Accurate evaluation emphasizes paying attention to students' individual characteristics, provides personalized evaluation and guidance, so that students can carry out personalized learning according to their own differences and needs, stimulate learning interest and motivation, and improve the learning effect. Through the application of information technology, accurate evaluation can collect and analyze students 'learning data in time, provide immediate evaluation results and feedback, help students adjust learning strategies and methods in time, correct problems and mistakes in learning, and promote students' ability development and learning progress. At the same time, through personalized evaluation and guidance, the evaluation deviation and unfairness can be reduced, provide more fair and accurate evaluation results, provide scientific basis for educational decision-making, and promote the improvement of the quality and effect of education.

3. Implementation path and method of accurate evaluation

3.1 Diversified evaluation methods

Diversified evaluation is a comprehensive evaluation method. Through diversified evaluation, students 'learning results can be accurately measured from different angles, considering their knowledge, skills, attitude and practical ability, reduce evaluation bias and unfairness, and better meet students' learning needs and training goals. The advantage of diversified assessment is that it can provide a more comprehensive and accurate evaluation results. Compared with single-dimensional assessment methods, diversified assessment can better reflect the overall situation of students.

For example, when evaluating a student's academic performance, there are various limitations and irrationality in the single evaluation subject and evaluation method. In addition to consider academic performance, but also can consider the students' participation, learning motivation, learning methods, and other aspects, so as to get a more accurate evaluation results, this evaluation only according to one or a few standardized test is certainly cannot meet, and adopt a variety of evaluation way to achieve a comprehensive evaluation of students.

Taking the courses taught by the author as an example, different activities, such as interactive discussion, online testing, project homework, and teaching feedback, are designed in teaching. Different evaluation methods, such as systematic scoring, student mutual evaluation, teacher evaluation, and students' self-evaluation, are adopted to synthesize the evaluation data to obtain the evaluation of students in different dimensions. In project assignments, students are assessed for their ability to apply knowledge, which examines their ability to analyze and solve problems, and online tests use uniform standards and question types to measure students' knowledge and skill level in a specific subject or field[6].

3.2 Individualized assessment

Personalized evaluation refers to providing tailored evaluation methods and criteria for each student according to individual differences in their learning style, interests, and ability level. This evaluation method can better understand students 'learning needs and progress, help teachers to develop personalized teaching plans and teaching strategies, and improve students' learning effect and satisfaction.

Each student has his or her own unique learning methods and needs, and the application of personalized evaluation method can more accurately understand the students' learning progress and difficulties. Existing adaptive learning tools and systems, by using adaptive assessment techniques, can automatically adjust the assessment methods and difficulties according to the students' learning status and characteristics, and provide a tailored assessment experience for each student.

It is understood that there are still a considerable number of schools teaching management system has not achieve adaptive assessment, but teachers can also use the following methods to provide personalized support for students in teaching.

(1) Differentiated teaching strategies: In classroom teaching, differentiated teaching strategies can be adopted to flexibly adjust the teaching content, methods and task difficulty according to students'

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different learning levels and styles. In the teaching process, we divided the students into different levels according to the research results of each unit. At the same time, we set different levels of task difficulty and evaluation criteria for each case. For better students, we provide higher-level expansion activities to guide students to advanced tasks, teaching videos and additional exercises and guidance to help them fill the knowledge gaps.

(2) Group cooperation and collaborative learning: select 1-2 students from different majors or different levels to form a group cooperative learning or project cooperation group. Students can learn from each other, communicate, share their understanding and experience, from which get corresponding personalized learning guidance. According to the group cooperation, teachers should timely provide guidance and support to the needs of the group.

(3) At the same time, the list of learning tasks and goals are clearly set, and students can self-evaluate and feedback through questionnaire survey, so as to help them develop their self-learning ability and self-regulation ability.

(4) Continuous reflection and improvement of teaching practice: In the whole teaching process, teachers regularly reflect on teaching, review their own teaching practice, and look for potential problems and improvement points. Through the continuous improvement of teaching methods and strategies, as well as paying attention to students 'feedback, the teaching methods are gradually adjusted to better meet students' personalized learning needs.

3.3 Timely feedback and guidance

Students need to keep abreast of their learning progress and the direction of improvement in order to adjust their learning strategies and improve their learning outcomes. Using online learning platform or application, teachers through the design evaluation scale for students' homework instant evaluation and feedback, and through face to face or online communication, provide students with targeted feedback, help them realize their advantages and disadvantages, and guide them to make the next step of learning plan, promote learning and improve.

3.4 Data analysis and mining

Data analysis and mining can give full play to the advantages of information technology in learning evaluation. Teachers can use data analysis tools and algorithms to analyze and mine a large amount of learning data to understand students' learning situation and provide objective evaluation basis.

For example, we use the learning management system Tronclass to collect various data generated by students during the learning process. These data include the number of times students watched the course materials, the length of the videos, the number of times they participated in discussions, and unit test scores. By analyzing these data, we can derive the students' learning behavior and performance.

To comprehensively evaluate the students' learning quality, we assign different weights to different learning behaviors. The viewing of course materials is the embodiment of students 'active learning, which will be given high weight; Participation in discussion can reflect students' thinking ability and expression ability, so it is given certain weight. By considering the weights of these learning behaviors comprehensively, we can evaluate and compare the quality of students' learning.

In short, teachers can adopt effective evaluation methods and data analysis and mining to better understand students' learning status and needs. Find out the potential problems existing in the students' learning in time, and take corresponding measures to improve them. Data-based evaluation can help teachers make more accurate and personalized teaching decisions and improve student performance and learning outcomes[7-8].

4. Summary and outlook

The integration of learning assessment with information technology holds significant importance and positive impact in educational reform. By leveraging the advantages of information technology, we can better understand learners' learning status and needs, and provide personalized learning guidance and support. However, there are also some challenges in the implementation process, such as improving teachers' data analysis abilities and enhancing the reliability of learning analytics models. In the future, with the development and widespread application of new technologies like artificial intelligence and

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machine learning, the deep integration of information technology and learning assessment will further enhance the accuracy of assessment and the role of personalized guidance, bringing more opportunities and challenges to education and teaching.

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