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Retraction

Retracted: Exploring Intelligent Teaching for Teachers of Ideology and Politics in the Context of Artificial Intelligence

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope
(2) Discrepancies in the description of the research reported
(3) Discrepancies between the availability of data and the research described
(4) Inappropriate citations
(5) Incoherent, meaningless and/or irrelevant content included in the article
(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] X. Tian, "Exploring Intelligent Teaching for Teachers of Ideology and Politics in the Context of Artificial Intelligence," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 7423038, 8 pages, 2022.

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Research Article

Exploring Intelligent Teaching for Teachers of Ideology and Politics in the Context of Artificial Intelligence

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MooTools (MOOC) is an emerging teaching mode in higher education in recent years, which is rapidly developing and expanding into the traditional teaching field. Based on the characteristics of MOOC platform, this paper explores the intelligent teaching of ideology and politics in the context of artificial intelligence and selects the Internet of Things (IoT) technology course as the research object to combine the MOOC hybrid teaching method with the teaching of IoT technology course. In this paper, a two-level dynamic student model is proposed, which has the following characteristics: (1) comprehensive characteristics of learners are obtained through a combination of tracking and comprehensive evaluation, (2) secondary characteristics of learners are maintained to the instructor in an open and dynamic way, and (3) information of secondary characteristics is organized in the form of running accounts. Based on the two-level dynamic student model, the generalized fuzzy integrated evaluation method is used to evaluate the secondary characteristics of the learners. Through this project, effective improvement of students' course learning performance and recognition of the course was achieved.

1. Introduction

In 2020, the Ministry of Education began to deploy online teaching in schools and universities in the face of the epidemic that delayed the start of large-scale schooling, becoming the first country in the world to practice online teaching on a large scale, which will surely go down in the history of human education [1, 2]. However, changes in all aspects of education forms, such as teacher teaching, student learning, and school-level management, can partly be transferred from "wartime" to peacetime mechanisms and partly cannot simply be drawn but need to be modified and changed according to the actual situation [3]. Therefore, how to seamlessly connect MOOC teaching in the popular period with offline teaching in the future has become the key to the current research on MOOC teaching and delivery [4].

The change of "things" of ideological and political education points to the level of tools and instruments of ideological and political education [5]. With the continuous development of society, the writing carrier of ideological and political education has been optimized, and the time of information transmission has been extended [6]. In recent times, both the media such as television, telephone and radio in the information age and the arithmetic, algorithms, and big data in the intelligent age have greatly expanded the sources and scope of people's access to knowledge, and the preservation and dissemination of information have become faster and more efficient [7]. Especially with the advent of the intelligent era, artificial intelligence, with its powerful data computing and deep learning capabilities, has more profoundly influenced and changed the state of existence in all fields of society [8]. This is not only a comprehensive test of human intelligence level but also triggers an in-depth consideration of ideological and political education [5]. As far as ideological and political education is concerned, smart thinking promotes a new integration of ideological and political education tools, carriers, and means, making ideological and political education break the limitations of physical time and space and enhance at the level of openness, extension, and communication, becoming a new "thing" of ideological and political education [9, 10].

The "ecological" atmosphere of ideological and political education points to the social environment of ideological and political education. This can be grasped from two aspects [11]. On the one hand, AI constitutes the main mode of ideological and political education ecology, thus further expanding the activity space and resource supply of ideological and political education [12]. The school education ecology with classroom teaching as the main mode gradually takes shape and is further consolidated in the information age [13, 14]. On the other hand, artificial intelligence optimizes the ecology of ideological and political education. Artificial intelligence "continuously expands the scope or type of simulation of human intelligence or cognitive activities, thus improving the simulation capability," and has gradually developed from the field of data and algorithms to the field of applications and services after several iterations of upgrading [15, 16].

2. MOOC and Hybrid Teaching Model

MOOC can be translated as "Massive Open Online Course." Based on the purpose and meaning of MOOC, the MOOC teaching method has the following outstanding features. First, MOOC is a large-scale course, which is an online learning method for tens of thousands or even hundreds of thousands of students at the same time. Second, it has the characteristic of openness [17]. It is possible to select and learn online with quality teaching resources under the condition of connected network. Third, personalized, MOOC online learners can make their own learning plan and learning process according to their own knowledge level and actual needs, and the advantages of the MOOC online learning method are very obvious, but there are still some disadvantages [18]. For example, for students who lack autonomy and initiative in learning, they may have low efficiency in completing the class, difficulty in evaluating the learning effect and lack of learning experience. In addition, for some of the professional and technical courses with high practical requirements, the learning effect is not very satisfactory when relying mainly on online learning video resources of basic theoretical knowledge. Therefore, the current MOOC courses do not fully meet the traditional teaching needs and need to be further improved [19].

3. Design of Two-Layer Dynamic Student Model

The two-level dynamic student model overcomes the shortcomings of the traditional student model with a one-level tree structure and presents a mesh structure. In the two-level dynamic student model, we call the basic attributes of students as the first-level characteristics of the student model, the second-level characteristics are the comprehensive evaluation results of the first-level characteristics, and one first-level characteristic can be used as the comprehensive evaluation factor of several second-level characteristics.

In the two-level dynamic student model, the second-level features can be created and deleted dynamically during the execution of the system, as shown in Figure 1.

The two-tier dynamic student model is based on the single-tier student model with the addition of a second-level feature table and a second-level student feature evaluation table. This improvement allows the student model to store students' second-level characteristics and supports the feature editor in the teacher interface, so that teachers can define their own personalized second-level characteristics according to their teaching philosophy, i.e., the system has a semiopen comprehensive evaluation mechanism of second-level characteristics for teachers. The working principle of this mechanism is shown in Figure 2.

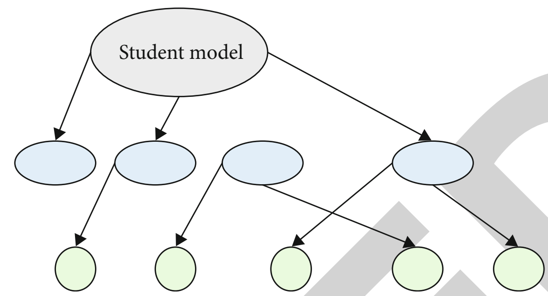

Figure 1: Two-tier dynamic student model. Note: circle represents primary characteristics; ellipse representative level feature.

It is a comprehensive evaluation method based on fuzzy mathematics, which converts qualitative evaluation into quantitative evaluation according to the affiliation theory of fuzzy mathematics; that is, using fuzzy mathematics to make an overall evaluation of things or objects subject to multiple factors, with clear results and strong systematic features, which can better solve fuzzy and difficult to quantify problems, and is suitable for solving various nondeterministic problems And course evaluation is multievaluation factors, multievaluation methods of operation, and cannot be distinguished by good or bad only; so, use the fuzzy comprehensive evaluation method to quantitative evaluation.

Teachers can define secondary features through the feature editor and specify the evaluation index system of the secondary features from the primary features of the student model, and the defined secondary features will be added to the secondary features table of the student model. The table of secondary features is shown in Table 1.

Based on the characteristic index system specified in the secondary characteristics table, the data in the student model is cleaned regularly through the information extraction and transformation module in the data mining module, and the complete, correct, and consistent historical data is stored in the data warehouse. The evaluation results are stored in the student secondary characteristics evaluation table, as shown in Table 2.

The records in the secondary characteristic table and the student secondary characteristic evaluation table are stored in the form of a running book to facilitate the addition and deletion of secondary characteristics at any time. The evaluation factors in the second-level feature table are taken from the attributes of the first-level features in the student model and numbered in the form of "table number - attribute name in table," and teachers can specify the weights of the evaluation factors because the evaluation factors in the second-level feature evaluation index have different degrees of influence on the evaluation results of the second-level features.

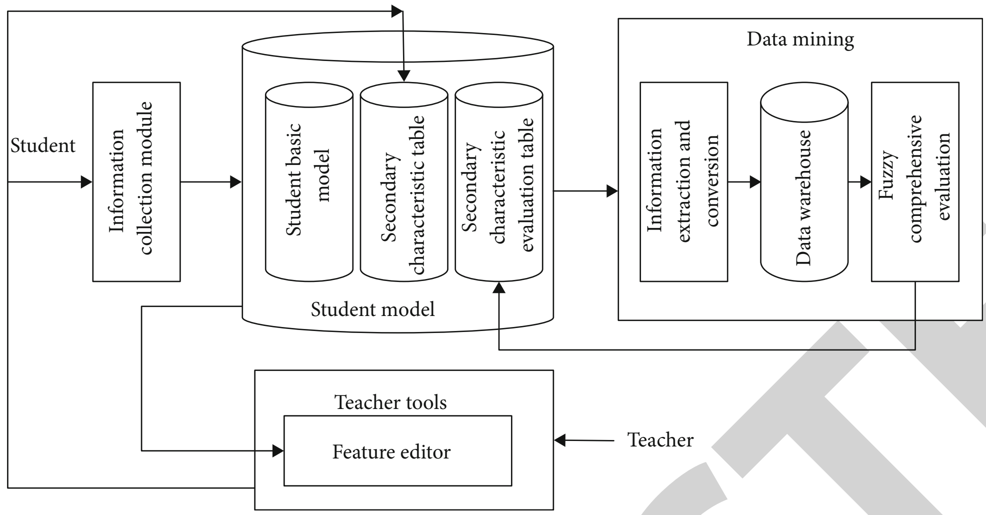

Figure 2: How the comprehensive evaluation mechanism of secondary features works.

Table 1: Table of secondary features.

Secondary feature/name	Evaluation factors	Evaluation factor weight
Secondary feature 1	1.2	0.4
Secondary feature 1	1.6	0.3
...	...	...
Secondary feature 2	1.0	0.5
Secondary feature 2	1.4	0.3
...	...	...

Table 2: Secondary characteristic evaluation table.

Student number	Secondary feature/name	Evaluation results
0001	Secondary feature 1	4
0001	Secondary feature 1	3
...	...	...
0002	Secondary feature 2	5
0002	Secondary feature 2	3
...	...	...

In summary, the proposed two-tier dynamic student model has the following characteristics: (1) students' learning characteristics are acquired by a combination of tracking and comprehensive evaluation, (2) the teacher-oriented semiopen dynamic maintenance method is used for the second-level characteristics, and (3) the information of the second-level characteristics is organized in the form of a running account.

4. Fuzzy Comprehensive Evaluation Algorithm Based on Two-Level Dynamic Student Model

As shown in Figure 3, the system's second-level feature evaluation mechanism, after determining the comprehensive evaluation system of the second-level features, eventually needs to obtain the evaluation results of the second-level features through the comprehensive evaluation algorithm. Since the secondary characteristics are influenced by a variety of attributes, i.e., evaluation indexes, and the evaluation indexes of secondary characteristics are either quantitative or qualitative, it is difficult to establish an accurate and practical comprehensive evaluation model by traditional mathematical methods; so, the fuzzy comprehensive evaluation algorithm can be applied to obtain objective and comprehensive evaluation results of secondary characteristics. The process is shown in Figure 3.

Let us take "stage knowledge evaluation" as an example to further explain the fuzzy comprehensive evaluation algorithm. The "stage knowledge evaluation" is a set of evaluation indexes consisting of the average score of online tests, the average score of experiments, the relative scores of tests, and the learning time, which reflects the learning level of students at a certain learning stage.

4.1. Establishing a Secondary Characteristic Evaluation System in the Student Model. The secondary characteristic evaluation system is a set $U = \{u1, u2, \cdots, un\}$ composed of several primary characteristic evaluation factors, and the secondary characteristic evaluation system should comprehensively and comprehensively reflect the corresponding secondary characteristics of learners, as shown in Figure 4.

Because different teachers have different teaching concepts, the set of first-level feature evaluation factors U and the weights occupied by the first-level evaluation factors of the second-level feature evaluation system are different for different teachers. How to make the feature descriptions in the student model meet the teaching needs of different teachers dynamically is a difficult problem to realize the system intelligently and practically. The solution adopted in this system is to set up an open feature editor in the teacher interface shown in Figure 2, where the teacher first defines a second-level feature name, then selects the evaluation factors of the second-level feature from the first-level feature, and sets the weight for the selected first-level feature to form

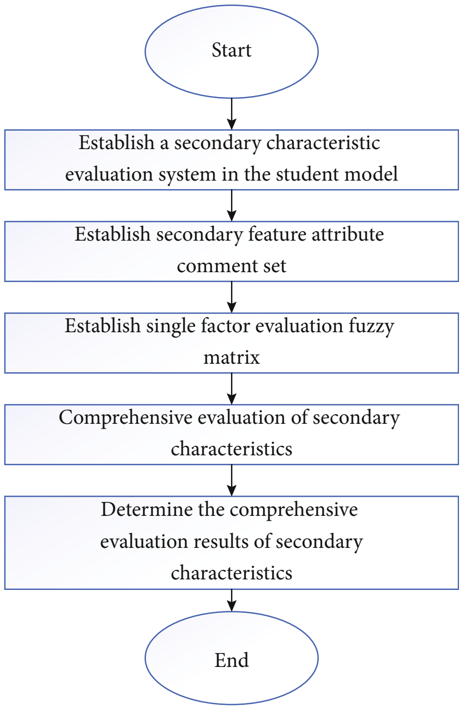

Figure 3: Fuzzy comprehensive evaluation process of secondary characteristics.

the second-level feature evaluation system. The evaluation system U of the second-level features in Figure 4 is stored in the second-level feature table of the student model, and the attribute value of each student's second-level feature is the comprehensive evaluation result generated by the fuzzy comprehensive evaluation algorithm, which is stored in the second-level feature evaluation table of the student model.

4.2. Establishing the Set of Second-Level Feature Attribute Comments. Rubric set, $V = \{v1, v2, \cdots, vm\}$, is a collection of evaluation levels. For example, a five-point scale can be chosen for the secondary attributes and quantified as {5, 4, 3, 2, 1}. The set of ratings can be specified by the teacher.

4.3. Establishing a Single-Factor Evaluation Fuzzy Matrix. The single-factor evaluation fuzzy matrix is defined as R:

$$R = \begin{bmatrix} r_{11} & r_{12} & \cdots & r_{1m} \\ r_{21} & r_{22} & \cdots & r_{2m} \\ \cdots & \cdots & \cdots & \cdots \\ r_{n1} & r_{n2} & \cdots & r_{nm} \end{bmatrix}, \tag{1}$$

where r_{ij} indicates the value of the affiliation function of the first-level feature evaluation factor R rated V_j, and we call $\{r_{i1}, r_{i2}, \cdots r_{im}\}$ a vector of affiliation. There are various ways to determine the affiliation function (value) r_{ij}, commonly (1) subjective determination of experts, (2) using the recommended affiliation function in fuzzy mathematics [20–22], and (3) in the case of a large sample size determined by statistical methods. For example, in this case, the evaluation of a student's "work grade" factor can be evaluated by both teachers and students, and the frequency of the grades given by everyone constitutes the affiliation vector. For example, Figures 5 and 6 show the affiliation function using ascending and descending trapezoidal distribution functions to assess the affiliation of the grade factor to each evaluation level. In this case, the two thresholds $sc1, sc2$ of the achievement x determine the distribution of the affiliation function $r(x)$.

When the affiliation vector $\{r_{i1}, r_{i2}, \cdots r_{im}\}$ is obtained for any one-level feature evaluation factor u_i, the single-factor evaluation fuzzy matrix R can be derived.

4.4. Comprehensive Evaluation of Secondary Characteristics. That is, the evaluation results when all factors are considered together. The (U, V, R) comprehensive evaluation model is formed by establishing the second-level feature evaluation system U, the set of comments V, and the single-factor evaluation fuzzy matrix R in steps (1), (2), and (3) of the second-level feature comprehensive evaluation process in Figure 3. The teacher specifies the importance of each first-level feature evaluation factor to the second-level features by the feature extraction tool and assigns the corresponding number of weights, respectively, to form a weight assignment vector, $A = (a_1, a_2, \cdots, a_n)$ where a_i is the number of weights of the first-level feature evaluation factors in the second-level feature evaluation system, and the number of weights of this vector satisfies the normalization condition, i.e.,

$$\sum_{i=0}^{n} a_i = 1. \tag{2}$$

Finally, the composite operation of the fuzzy matrix is performed to obtain the initial model of fuzzy comprehensive evaluation: $B = A^\circ R = (b_1, b_2, \cdots, b_m)$, which is a fuzzy subset on the set of rubrics V, b_j, reflecting the affiliation degree of the secondary features being evaluated as V_j,

where

$$b_j = \vee_{i=0}^{n} (a_i \wedge r_{ij}) (j = 1, 2, \cdots, m). \tag{3}$$

The ∨ and ∧ in Eq. (1) are fuzzy operators:

$$\begin{aligned} (a_i \wedge r_{ij}) &= \min (a_i, r_{ij}), \\ \vee_{i=0}^{n} (a_i \wedge r_{ij}) &= \max_{i=1}^{n} (a_i \wedge r_{ij}). \end{aligned} \tag{4}$$

The evaluation result of the initial model is determined by the factor with the largest weight, and other factors have little effect on the result when they change within a certain range, which makes the information utilization rate low and the evaluation result deviates greatly. After the extension of the fuzzy composite operation, the fuzzy operator of the initial model can be extended to a generalized fuzzy operator, thus extending the initial model to a comprehensive evaluation model with generalized fuzzy operation, which is abbreviated as $M(\vee^*, \wedge^*)$. Here, "$\vee *$" and "$\wedge *$" denote generalized fuzzy operators, and there can be various

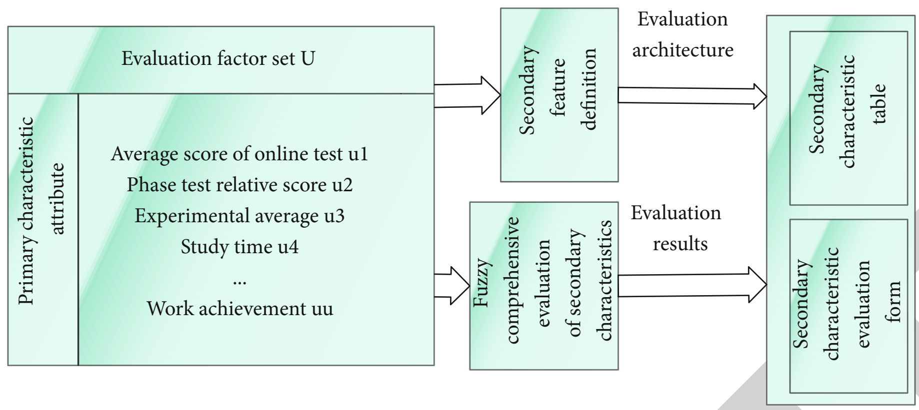

Figure 4: Secondary characteristic attribute evaluation system.

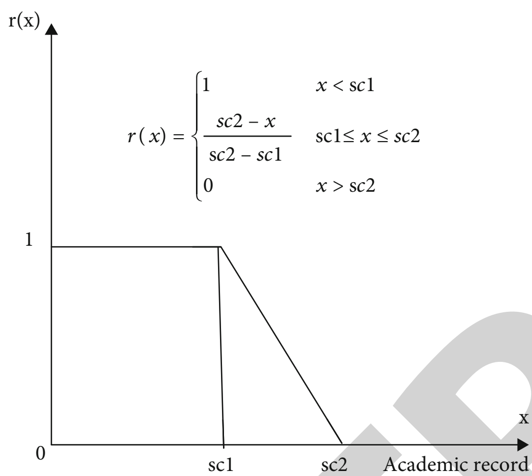

Figure 5: Affiliation function of the ascending trapezoidal distribution.

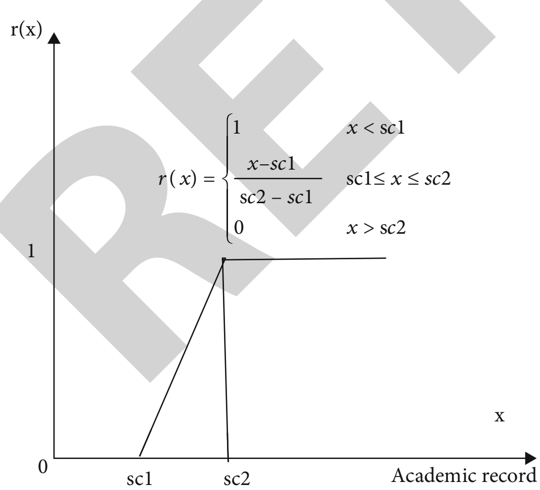

Figure 6: Affiliation function of the descending trapezoidal distribution.

combinations of different generalized operators to form different comprehensive evaluation models of generalized fuzzy operations. The weighted average type is able to balance all factors according to their weights; so, it is suitable for the comprehensive evaluation of the second-level characteristics, taking into account the influence of each first-level characteristic evaluation factors. The weighted average type $M(\cdot, \oplus)$ is as follows:

$$b_j = \oplus_{i=1}^{n}\left(a_i \cdot r_{ij}\right)(j = 1, 2, \cdots, m), \qquad (5)$$

where " $\oplus$ "is the generalized fuzzy operator, $a \oplus b = \min(1, a + b)$, and "·" denotes the ordinary product [23–25].

5. Result Analysis

According to the background data, the student sign-in rate for the class was almost 100%. Students were also active in the in-class questioning sessions. It can be concluded that the students are not just coping with the online self-learning method. After adding the practical video lessons and offline practice, students generally report that they have a deeper understanding of the knowledge points, and their interest in learning has increased. The data platform information shows that students can also submit their assignments on time. By adopting this new theory and teaching mode, students' evaluation of the course and the instructor has been improved to a certain extent. As shown in Figure 7, the lecturer's satisfaction with the lecture results shows that students are more receptive to this mode and accept it more satisfactorily and are more satisfied with the learning initiative. Compared with the traditional mode, students' satisfaction with the lecturer's lecture effect also exists to a certain extent. This model allows students to have more autonomy, and the addition of practical sessions makes some students think that not only do they improve their interest in learning but also improve their teamwork skills and have a closer relationship with their teachers.

As we can see, because the traditional student model treats the relationship between attributes as unrelated, independent, and discrete, the traditional student model cannot make an objective and comprehensive evaluation of learners' learning characteristics, which affects the effectiveness of teaching decisions. In order to overcome the shortcomings of the traditional student model, we need to consider the influence of multiple factors on the learning characteristics

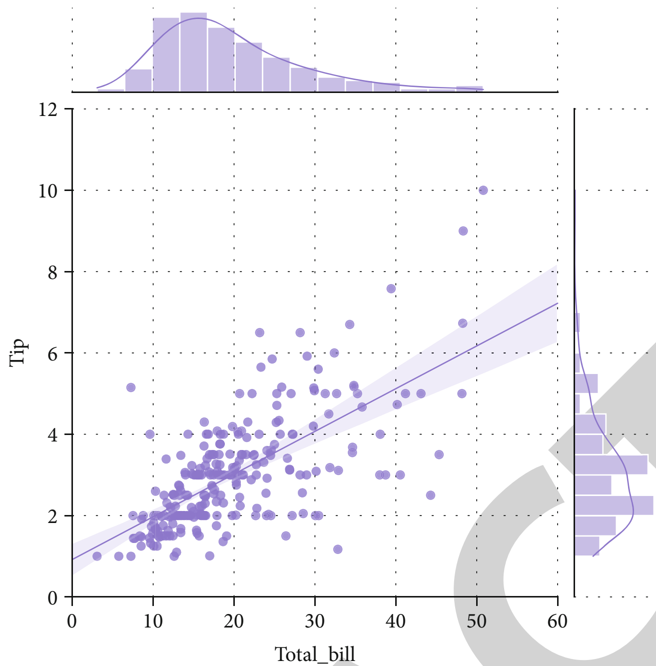

Figure 7: Satisfaction with the effectiveness of the lecturer.

Figure 8: Different learning effects.

of students in the intelligent distance learning system, and the measurement of student learning characteristics must consider multiple factors and multiple links at the same time, which is essentially a multifactor comprehensive evaluation problem. From Figure 8, we can see that the fuzzy comprehensive evaluation algorithm is used to comprehensively evaluate the intrinsically linked student attributes in the system and form a comprehensive learning characteristic attribute. The traditional single-level student model is improved into a two-level dynamic student model, and the integrated learning characteristics formed by the fuzzy comprehensive evaluation are called the secondary characteristics of the student model.

At most, the use of artificial intelligence remains at the external level of establishing technical standards, clarifying technical rules, creating technical environments, optimizing

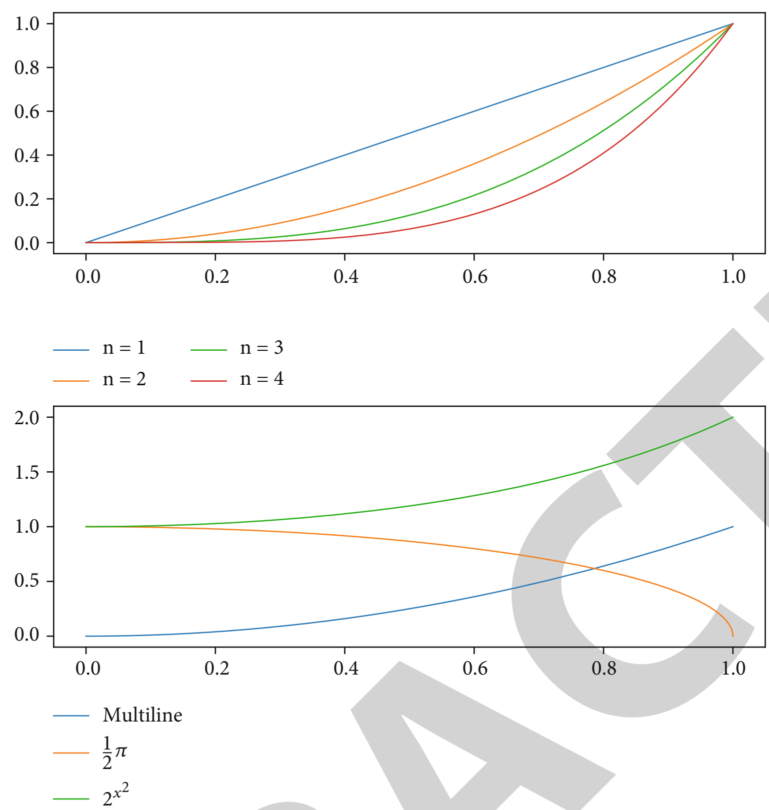

FIGURE 9: Learning effect under different devices.

technical means and upgrading technical platforms and human emotional experiences, value choices and learning meanings will only be mechanically incorporated into machine "algorithms," as shown in Figure 9, and the humanistic spirit and meaningful world embedded in ideological and political education will deviate from the right track under the drive of artificial intelligence. The humanistic spirit and meaningful world of ideological and political education will deviate from the right track of life enlightenment under the drive of artificial intelligence. In this sense, to examine intelligent thinking and government from the dimension of "clear path" is the ontological thinking of ideological and political education in cooperation with the development of artificial intelligence, it is the inevitable choice to find the place where ideological and political education "settles down," and it is also the forward-looking exploration of ideological and political education to adhere to the logic of life. It is also a forward-looking exploration for ideological and political education to adhere to the logic of life.

6. Conclusion

In this paper, a comprehensive evaluation mechanism of students' learning characteristics is realized by establishing a two-level dynamic student model and proposing a fuzzy comprehensive evaluation algorithm based on the model. This mechanism solves the drawback that the traditional student model cannot make objective and comprehensive evaluation of learners' learning characteristics, which is of great practical significance to improve the effectiveness of teaching decisions in intelligent distance learning systems. The teaching method designed in this paper can make up for the disadvantages of traditional teaching methods. Universities should further promote this new teaching method and actively respond to the current development of the information age.

Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The author declares that he/she has no conflicts of interest regarding this work.

Acknowledgments

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