Research Article

Adaptive Model of Discrete Real-Time Linear Dynamic Logic for the Optimization of Big Data Game Education Mode

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With the advent of the era of big data and mobile Internet, the traditional teaching model of colleges and universities has been hit unprecedentedly. In the current big data and artificial intelligence network environment, new teaching concepts, characteristics, and model applications should be analyzed, and an education model based on artificial intelligence adaptive control and negative feedback adjustment mechanisms under the big data environment should be explored. The study of this model can provide practical experience and reference value for the application, popularization, and innovation of teaching information technology in the future. Combining the characteristics of big data games, this paper proposes a college student education model based on discrete dynamic model big data game. The scores of college students represent comprehensive information such as their qualifications to provide big data university education, the credit of historical records, and the degree of reliable data transmission. Based on the general model of the adaptive learning system, we have perfected the functions of each module in the overall structure of the domain-based special subject system and designed the overall workflow of the system. Computerized evaluation is introduced into the learner module, and an adaptive evaluation system structure based on cognitive diagnosis theory is designed to achieve a personalized topic selection model for different learners and enrich learners' experience through more detailed and specialized evaluation results. The model lays the foundation for adaptive course path recommendation. This paper proposes a discrete real-time linear dynamic logic that can express discrete real-time characteristics and all regular characteristics. It can easily describe the behavior of some complex real-time systems. Experiments show that the discrete dynamic model big data game efficiency is improved by 35.71%, which can better optimize the education model of college students. In addition, it can be concluded that the research on the effectiveness of college student education in the era of big data not only determines the safety of the ideological field of colleges and universities but also affects the thinking orientation of college students.

1. Introduction

Data is active in all corners of the campus, both in the teaching process and in the daily life of students, and how to filter and use this data becomes an important part of our educational effectiveness. The development of Internet technology makes active college students swim in the network, and, through various social platforms, students are exposed to various information in the network. At the same time, college students are also the main body of publishing information, and they can publish all kinds of words, videos, audio, and pictures anytime and anywhere on the social platform. Behind these pictures and other information is a large amount of data resources, which can be used to find out the behavior laws behind the data through this daily information and apply these laws to the teaching practice, which becomes an important teaching resource for educators. It is worth noting that the application of big data can bring many opportunities for college students and educators, but there are also many challenges [1, 2]. Because the information on the Internet is mixed, good and bad, and the values of college students have not been fully established, they are easily influenced by foreign information, plus there is a risk of leakage in the process of data and information collection, which will affect students' psychology. With the popularization of big data and other technologies, the system becomes larger and more complex; many processes run concurrently and communicate and collaborate in real time.

In different testing processes, the execution order of different processes may be quite different, which will further affect the operation of the entire system, which means a considerable number of tests for traditional manual testing. Some subtle defects are almost impossible to detect, and these subtle errors are often very dangerous, and even fatal [3].

College students have the characteristics of active thinking and being active and innovative; therefore, it is more difficult for college educators to grasp the dynamics of their thoughts and behaviors and more difficult to predict the possible thoughts and behaviors of college students in the future, while colleges and universities can change new educational methods and adopt new technical means to carry out educational work in the storm of technological revolution brought by the era of big data. Big data technology can transform irrational phenomena such as human thoughts, behaviors, preferences, and emotions into data, thus bringing far-reaching significance to the research and development of college students' education. Therefore, it is especially important to fully adopt big data to enhance the effectiveness and timeliness of college students' education. This is both a new field and of far-reaching research significance [4]. Scattered real-time linear dynamic logic combines regular operators and temporal operators in LDL with quantized regular operators and temporal operators and is therefore capable of expressing the complex real-time interaction behavior of computer systems. By implementing the model game of this logic, it can realize the correctness verification of complex real-time systems, which is important for ensuring the reliability of complex real-time systems and greatly facilitates developers to design and implement trusted complex real-time systems [5].

This paper mainly analyzes the advantages and dilemmas of education work in the era of big data by comparing the existing education methods, education carriers, and traditional education work, finding out the shortcomings and the need for improvement of traditional education thinking and education methods, and combining them with the actual situation to explore how to give full play to the advantages of big data and promote the innovative development of education work [6]. The paper is organized as follows: Section 1, Introduction, mainly introduces the research background of college student education and the significance of this paper and also explains the research framework of this paper. In Section 2, Related Work, the literature review session mainly introduces the status of domestic and international research on big data gaming technology and discrete dynamic model and the research value of this paper. In Section 3, Research on the Optimization of College Student Education Model Based on Discrete Dynamic Model Big Data Game, the discrete real-time linear dynamic logic (RTLDL) is proposed, and the integer interval constraint is given on the dynamic operator of LDL with strong expressive ability to realize discrete real-time property inscription, which enables users to efficiently and conveniently inscribe the complex behavior of the real-time system in a limited time interval. In Section 4, Results Analysis, the impact on the education model of college students under the introduction of scoring mechanism is analyzed, and the simulation analysis is

carried out using Matlab simulation tool to verify the positive contribution to the optimization of college students' education model based on the discrete dynamic model big data game. Based on the discrete dynamic model, the education model of college students based on big data games is proposed, and, based on the above study, specific suggestions are proposed for three levels of data demand side, data provider, and data trading platform. Section 5, Conclusion, summarizes the work of the whole paper and gives the prospect of future work.

2. Related Work

In the era of big data, the accumulation of massive data has led scholars to study big data and apply it for decision-making and research, which will have an unprecedented impact on people. Scholars at home and abroad have successively entered the wave of research on big data [7, 8]. Theoretical research on big data, combined with research on big data and other fields, has brought new ways to change people's thinking and provided methodological guidelines for research in various fields; Chen et al. used data as an important resource in civic education, and big data has become an important force for the development of education [9]. By using big data technology in education, they created a learning analytics system that provides educators with more accurate information about students and a more comprehensive understanding of the state of mind and the dynamics of college students. Hooshyar et al. combine big data with education as an innovation of traditional college education models and methods, which plays an important role in guiding the effectiveness of civic education [10]. Simonetto et al. propose a memetic algorithm to optimize the number of times the unstructured balanced symbolic network evolves to the structured balanced dynamic [11]. Since, in practice, the network connection relation weights are difficult to measure accurately and it is generally impossible to control them directly, only a very few pieces of literature have explored the characteristics of structural equilibrium through the role of control to make the population of connection relations emerge [12, 13].

Menon et al. extended the cognitive modality on LDL to reason about the knowledge states of the intelligence in the system to obtain a new cognitive logic, which can be used to characterize and analyze complex behavioral norms of multi-intelligent systems, and proposed a model game algorithm based on LDLK for constructing alternating automata [14]. Xu and Duan used a finite path version of linear dynamic in Markov decision logistic LDLf to specify non-Markovian reward functions, extending previous work and making the model more expressive [15]. According to Mu and Zeng, big data is used to focus on key populations and grasp the dynamics of students' thoughts and behaviors promptly to better understand students' needs to strengthen communication with them and to have a comprehensive grasp of students through big data [16]. It can be seen that although big data appeared earlier in foreign countries and received more attention, the research and application in the field of education are still not deep enough, and there are still

gaps in some specific contents [17]. Therefore, the development of making full use of big data to complete teaching and learning is still in the embryonic stage, and the technology of big data is not mature enough to solve all the problems in the field of education; it only provides educators with a way of thinking and methods to analyze and solve educational problems [18]. To sum up, the above-mentioned domestic and foreign developments can be used as a reference for the research of this paper, but the reason analysis and measure research are not very specific and sufficient. Moreover, the research on the combination of big data and education has played a leading role, but it is still immature and does not involve the combination of college students' education model and discrete dynamic model, so it is not targeted.

Research on improving the effectiveness of education in the era of big data is a research hotspot, and research on improving the effectiveness of college student education in the era of big data needs to give full play to the characteristics and functions of big data, use the accurate prediction and research function of big data to achieve effective prediction of college students' thought dynamics, and continuously improve the research on the effectiveness of college student education, to optimize the research on collaborative education mechanism in the era of big data. In this paper, we propose a new idea of using the method of constructing temporal testers to solve the discrete dynamic model game problem [19, 20]. First of all, referring to the idea of program control flow markers, define start and end markers for each dynamic operator in the college student education model, and construct a temporal tester of the college student education model formula according to the transition changes between markers, to solve the verification problem of the college student education model. Improve the verification efficiency of college students' education model. Then, an integer clock variable is added based on the temporal tester of college students' educational mode, and the modeling and verification of the complete formula of college students' educational model are realized. Because the environment that students are exposed to outside the campus also affects their learning, it is even more important to collect and mine [21]. Collecting this data requires the cooperation of the students' parents. Occasional communication with them and recording of the information exchanged will keep track of their lives outside of school. This information will improve the teacher's understanding of the student and provide a comprehensive view of all student dynamics. At the same time, they can also make some rationalized suggestions and arrangements for students' out-of-school life and provide them to their parents, so that the students will also have a more reasonable and standardized life after school [22].

3. Research on the Optimization of College Student Education Model Based on Discrete Dynamic Model Big Data Game

3.1. Big Data Game to Build Discrete Dynamic Models. Under the assumption of risk neutrality, each college student needs to find the best education strategy by making a trade-off between the amount of education he or she deserves and the expected benefits. Although each college student does not know the learning situation of other college students, he or she knows that the learning situation is a random variable that follows a certain probability distribution within a certain interval and can analyze the best education strategy accordingly.

Describe the discrete dynamic model under the big data game: The valuation of education data by the ith college student is C_i, and the education valuation is offer $B_i(C_i)$ of the ith college student; the offer will not be higher than the valuation of the college student, and whether each college student wins the education depends not only on his offer but also on offer $B_j(C_j)$ of all other m-1 individuals participating in the study, $j = 1, 2..., m(j \neq i)$, and, for the ith college student, the expected gain from winning education data is

$$G(C_i, B_i(C_i)) = (B_i(C_i) - C_i)^* M; B_j \geq B_i, i \neq j. \tag{1}$$

There is an asymmetric Bayesian Nash equilibrium strategy in the game model; the same bidding strategy is used by other college students. Usually the greater the valuation of educational data by a particular college student is, the higher his offer will be; then $M(B_j \geq B_i)$ is reasonable, and if a college student values educational data as C, then the optimal educational strategy becomes the benefit when equation (2) achieves its maximum value.

$$G(C, B(C)) = (B(C) - C)(1 - H(C))^{m-1}. \tag{2}$$

Whether the highest education model wins under the traditional auction model or the lowest benefit wins under the discrete dynamic model of big data game construction under the demand-side platform proposed in this paper, it is essentially the same, and the two models can be transformed into each other by the coordinate transformation $B'(C) = B(-C)$, so equation (2) can be converted into

$$\begin{cases} G(C', B'(C')) = (C' - B'(C'))^* H(C')^{m-1} \\ C' \subseteq [A, M]. \end{cases} \tag{3}$$

After timely and accurate processing of data, it is necessary to be able to guide and correct the sudden thoughts and behaviors of college students. While capturing the information of students quickly, it is necessary to solve their problems promptly. Big data provides a good platform for sharing data resources in university education, and educators should achieve the purpose of sharing information resources through top-down or bottom-up communication of data and information, especially within the same level, so that all college students in the whole network system can share information resources through network sharing. Consider a discrete-time directed complex dynamic network with dynamic connections; the number of nodes is N, and the isolated node dynamic equation is (4), where $M_i(j) \subseteq HM$ is the state vector of node i, the real constant matrix $K_i \subseteq C^{m*n}$, the gain matrix $L_i \subseteq C^{m*n}$, and $H_i(M_i(j)) \subseteq C^m$ is a nonlinear vector function.

$$M_i(j+1) = K_i * M_i(j) + L_i * H_i(M_i(j)), i \subseteq [1, N]. \quad (4)$$

Let the connection relation weight of node i pointing to node k at moment k be $x_{ik}(j)$, and the dynamics equation of node i can be expressed as equation (5) when considering the coupling relation between the connection relation and the node, where C is a constant indicating the common coupling strength, $H_j(M_k(j)) = [H_{j1}(M_k(j)), H_{j2}(M_k(j)), ..., H_{jn}(M_k(j)) \in R^n$ is the internal coupling vector function, and $w_i(j)$ is the control input of node i.

$$M_i(j+1) = C * \sum_{k=1}^{N} x_{ik}(j) * H_j(M_k(j)) + w_i(j). \quad (5)$$

RTLDL formulas are obtained by combining regular expressions as embedded expressions of tense formulas with simultaneous tense operators, constructed inductively according to the syntax of equation (6). Here $\delta \subseteq M, a \le b, \{a, b\} \subseteq N$ is a propositional formula based on M. Two types of atomic expressions are included in the regular expressions: β; β are propositional formulas, while the test M contains δ an RTLDL formula. Note that regular expressions are not available as subformulas of RTLDL formulas. If the student education model formula contains a temporal operator or regular expression with a time interval, it contains a bounded Collin star operator, we call the formula a bounded tense formula; otherwise, it is called a basic tense formula.

$$\begin{cases} f(\beta) = \sum_{i=1}^{N} M | (\beta_i \forall \beta_{i-1}) + M^{[a,b]} * \beta \\ f(\delta) = \sum_{i=1}^{N} \beta i | (\delta_i \wedge \delta_{i-1}) + M^{[a,b]} * \delta. \end{cases} \quad (6)$$

Using the measurable node subsystem output state and the connection relation subsystem output state with $O(x)$, the node subsystem state observer and the connection relation subsystem state observer in the form of equation (7) are given, respectively, where $\vec{I}(x)$ is the estimate of the node state $I(x)$ at moment x and $\vec{O}(x)$ is the output of the node state observer at moment x.

$$\begin{cases} I(x+1) = F(\vec{I}(x)) + \sum_{k=1}^{N} (\vec{O}(x) - O(x))_k \\ \vec{O}(x) = (I_M \oplus C) \otimes I(x). \end{cases} \quad (7)$$

We chose to implement our educational symbolic model gaming algorithm on the model gaming tool, which is one of the most commonly used symbolic model checkers that supports model gaming for CTL with high speed and accuracy, and our discrete dynamic big data gaming model is shown in Figure 1. Given an RTLDL specification o and a JDS model M, first, construct a temporal tester T for it and map o to the equivalent state formula x_o. Thus, the model game problem M for discrete real-time linear dynamic logic (RTLDL) is reduced to $M \| T_o = x_o$, followed by solving the problem using the discrete dynamic model game algorithm supported. We do not need to make any modifications to the source code but only need to translate the constructed RTLDL tester and model M into a program that can accept and input it for gaming. Big data is developed on platforms such as computers, smartphones, and the Internet. It presents an objective real world in front of people through digitalization, which is convenient for people's work, production, and life. From the perspective of the field of education, in the traditional educational carrier of college students, the main forms include heart-to-heart communication, class meetings, and organizing group activities. However, in the process of the popularization of smartphones and Internet technology, college students of the educational carrier are presented in a new form. Although the educational model of online college students has achieved initial results, it still lacks certain timeliness and pertinence.

3.2. Optimization of Education Model for College Students.

Big data has a large amount of information and fast flow of data; whether the potential value can be extracted from the data for college students' education depends on whether the data can be processed in a timely and efficient manner so that it can fully reflect the dynamics of college students' thoughts and behaviors, so that corresponding measures can be taken to pay attention and give patient education and guidance in time to help them overcome difficulties and obstacles, to achieve the purpose of comprehensive development. This requires universities to establish a perfect data feedback mechanism. The feedback speed and ability of traditional data feedback mechanisms are lacking, and the lack of communication between colleges and professional classes directly leads to the phenomenon of silos, which cannot directly reflect the current real situation of college students. Based on adapting to the whole data-based environment, colleges and universities should track and pay attention to the data information of all college students, such as hot topics or hot issues, to make timely responses and preventive measures to possible events and prevent them before they happen. See Table 1 for the optimization of education mode cultivation of college students under the big data environment.

In the process of the fuzzy comprehensive evaluation of college students' education system, after the index weights and index affiliation functions are determined, how to carry out the establishment of a fuzzy comprehensive evaluation model becomes the key to solving the practical problems. To address this issue, this section will discuss the substantive operation steps of the fuzzy comprehensive evaluation model by analyzing the basic principles of fuzzy evaluation, the determination of the set of evaluation factors weights, the establishment of the single-factor fuzzy evaluation model, and the establishment of comprehensive fuzzy evaluation model and other key steps.

The form of composing a set of evaluation criteria with language specific to the evaluation object, which we call a valence set, is shown as follows:

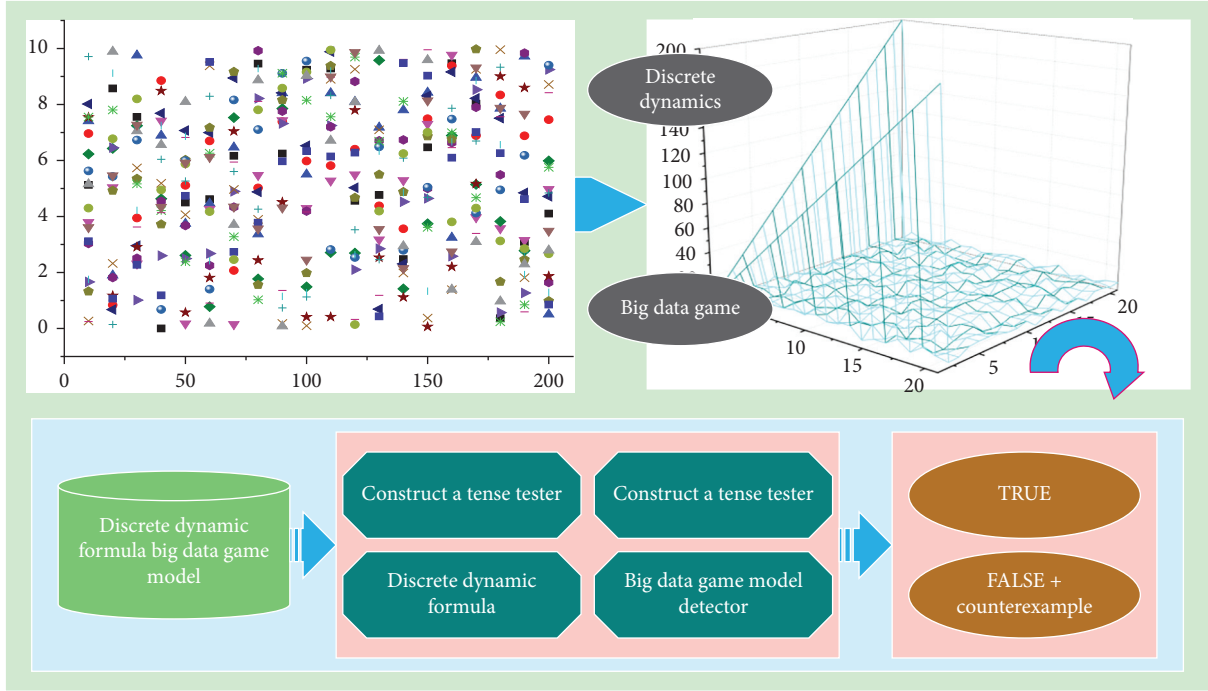$$P = (p_1, p_2 \ldots \ldots, p_n). \quad (8)$$

FIGURE 1: Discrete dynamic big data game model.

TABLE 1: Optimization of education model for college students.

College student education content	College student education method	Cultivation optimization index	Cultivation optimization purpose
Educational adaptation content	Adapt to life	Correct life attitude	Responsible for your choice
	Adapt to learning	Establish a view of lifelong learning	Responsible for your choice
	Adapt to communication	Play one's interpersonal role	Identify the combination of interest and academic ability
Educational development content	Intelligent development	Strengthen the monitoring power of metacognition	Build your network
	Personality development	Establish a sense of self-esteem	Plan to improve awareness
	Social development	Establish a correct outlook on employment and job selection	Establish confidence in the creation
	Creative development	It is not good to be too ambitious about innovative ideas	Establish life ideals according to their actual conditions

The more the number of rubrics, the finer the division of the evaluation results and the more relevant the evaluation results, as shown in Table 2.

The evaluation of the next-level indicators is combined to make a comprehensive evaluation of the upper-level indicators, and, finally, the purpose of evaluating the first-level indicators (final indicators) is obtained. N single-factor evaluation vectors can be obtained through the evaluation of individual factors, and these vectors can be combined to form a comprehensive evaluation matrix for the evaluation of the upper-level indicators, as shown in the following equation:

$$Z = \begin{bmatrix} z_{11} & z_{12} & \cdots & z_{1m} \\ z_{21} & z_{22} & \cdots & z_{2m} \\ \cdots & \cdots & \cdots & \cdots \\ z_{n1} & z_{n2} & \cdots & z_{nm} \end{bmatrix} * \sum_{i=1}^{N} P(i). \tag{9}$$

The maximum eigenvalues and eigenvectors of the comparison matrix are calculated to obtain the weight coefficients of the superior evaluation index. To better validate the consistency of the evaluation matrix, the negative mean $E(P)$ of the eigenvalues other than the medium maximum eigenvalue and the randomness discriminant Z_i can be defined to validate whether the consistency of the evaluation matrix is up to standard, as shown in equation (10). Eliminate all bounded operators according to the above algorithm, and, finally, we can transform the bounded temporal formula into the equivalent basic temporal formula and then construct the converted equivalent basic temporal formula to construct the tester.

$$E(P) = \sum_{i=1}^{N} \frac{\beta_i - m}{m - 1} + (1 - \lambda) \sum_{i=1}^{N} E(Z_i). \tag{10}$$

TABLE 2: Qualitative indicators level heavy rain table.

Series type	1	2	3	4	5	6	7	8	9
Level 7	Poor	Difference	Unqualified	Qualified	Good	Good	Good	Very good	Excellent
Level 5	Poor	Poor	Unqualified	Qualified	Qualified	Good	Good	Very good	Excellent
Level 3	Poor	Poor	Poor	Qualified	Qualified	Qualified	Good	Very good	Excellent

4. Analysis of Results

4.1. Discrete Dynamic Model Analysis. Figure 2 shows a line graph of the experimental data for discrete lengths of 1 to 20, where we analyze that the large data game algorithm of the LDL model of MCMAS-LDLK is exponentially related to the size of the formula, and, in this part, it also has a verification timeout after the length of the test formula exceeds 12, but it can be seen from Figure 2 that the number of variables introduced by the testers of the test formula we constructed nested in Collin's star also grows linearly with the length of the formula, which is consistent with the analysis of the discrete dynamic model. As the number of introduced variables grows linearly, the number of peak nodes, memory, and time in our algorithm are exponentially related to the size of the formula. This causes our algorithm to time out even when the test subformula length exceeds 1300. Nevertheless, our algorithm's complexity is exponential concerning formula size, which is also significantly superior to the LDL model big data game algorithm of MCMAS-LDLK with double exponential complexity. The above experimental results show that our algorithm exponentially outperforms MCMAS-LDLK in terms of times, memory, number of peak nodes, and BDD variables when verifying LDL temporal formulas that contain test formulas nested in Collin's star.

To address the problem that state variables in discrete-time complex dynamic networks cannot be accurately measured, asymptotic state observers are designed to estimate the inaccurately measurable state information, and controllers are designed based on the estimated state information. Firstly, on the premise that the node states can be measured, the state observer is designed for the connected relational subsystem described by matrix equations, and the controller is constructed to realize the tracking control of the connected relational population, but the specific dynamic behavior of the node population is special. Secondly, under the consideration that both the state of the node subsystem and the state of the connection relation subsystem are not accurately measured at the same time, the state observer is designed separately for the two subsystems, and the controller is designed based on the estimated state information, and the asymptotic tracking of the given reference target is achieved for the connection relation subsystem and the asymptotic state synchronization is achieved for the node subsystem under the control action. Figure 3 shows the comparison of the response curves of the node state estimation error of the discrete dynamic model in this paper. The node state estimation error system is asymptotically stable, which means that the state observer is effective. It is dynamically allocated from 0 to 20 s, the range is from −10 to

10, and the data after 20 s is distributed in a straight line, approaching 0.

For RTLDL formulas containing bounded test formulas nested in combinations of Collin's star operators, we use a translation of the bounded test formula into an LDL formula and then construct a temporal tester for that equivalent LDL formula using the second part of the tester construction method, which makes this form of RTLDL formula require the introduction of variables that are exponentially related to the size of the formula, as shown in Figure 4, resulting in a double exponential memory and runtime. This translation leads to an exponential increase in formula size, but since the complexity of our proposed big data gaming algorithm based on constructing testers for LDL is exponentially better than that of MCMAS-LDLK based on alternating automata, this part of our algorithm's complexity is also exponential due to MCMAS-LDLK. Experimental results show that when verifying that the test contains tests nested in the Collin star Experimental, our algorithm also outperforms MCMAS_LDLK exponentially in terms of time, memory, number of peak nodes, and BDD variables.

4.2. Evaluation Analysis of College Students' Education Model. The results of the evaluation of 100 college students were clustered to determine the compensation evaluation based on the central node, and the cluster centroids are shown in Figure 5. It can be seen that most of the samples fall into categories C and D, which means that consumers with moderate marginal load adjustment costs account for the highest proportion of market operating participants. College student education has a low marginal cost and high elasticity, and therefore there is less evaluation compensation for these college students in our evaluation mechanism. Evaluation compensation is more focused on college students with high marginal cost and low elasticity, and these users are not easily selected in the bidding selection, but motivating them to participate in the demand response education market is also an important direction, which can be achieved by using a fair mechanism based on the evaluation system.

Design simulation data to simulate the simulation pass rate by the fluctuation rate of the real value of the pass rate for each of the original participation of college students in the demand response pilot and the set of college students participating in each of the pilots as the set of users in each of the simulation experiments as a way to simulate the actual situation of 8 times to select the response of college students with our increased evaluation index. Calculate the actual probability of being selected in the pilot and the probability of being selected after using the simulation experiment simulation for
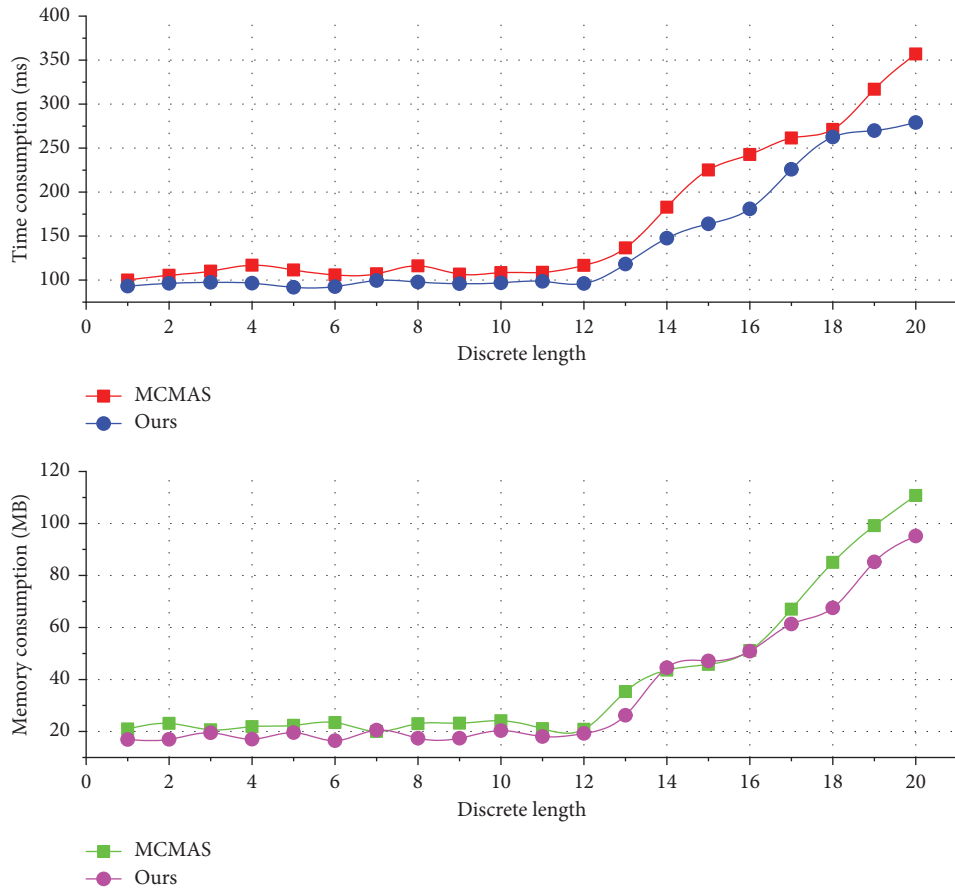
FIGURE 2: Experimental results for discrete lengths of 1 to 20.
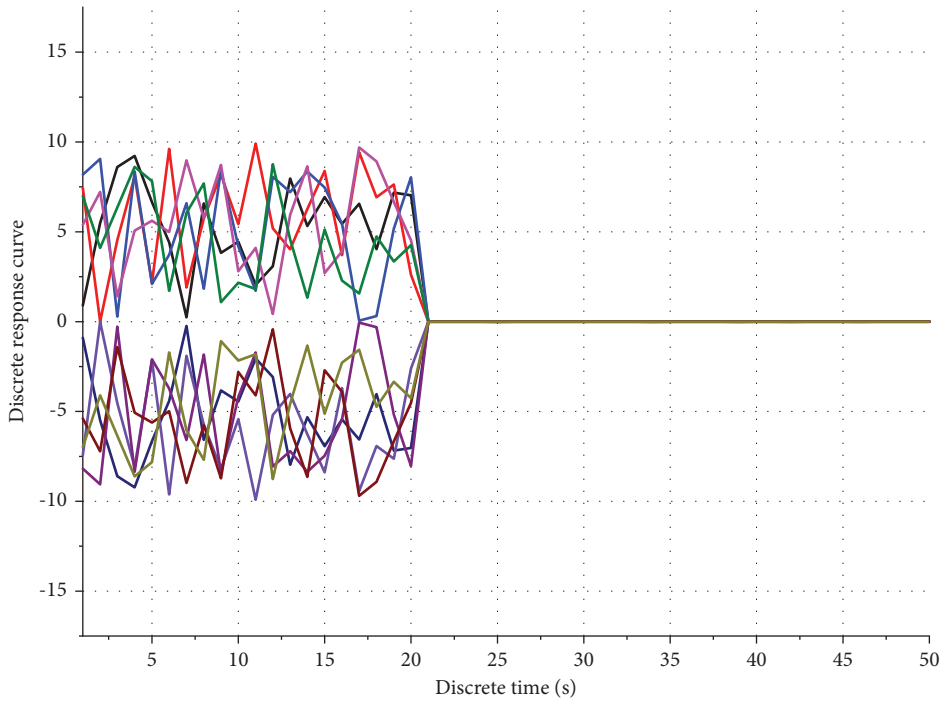
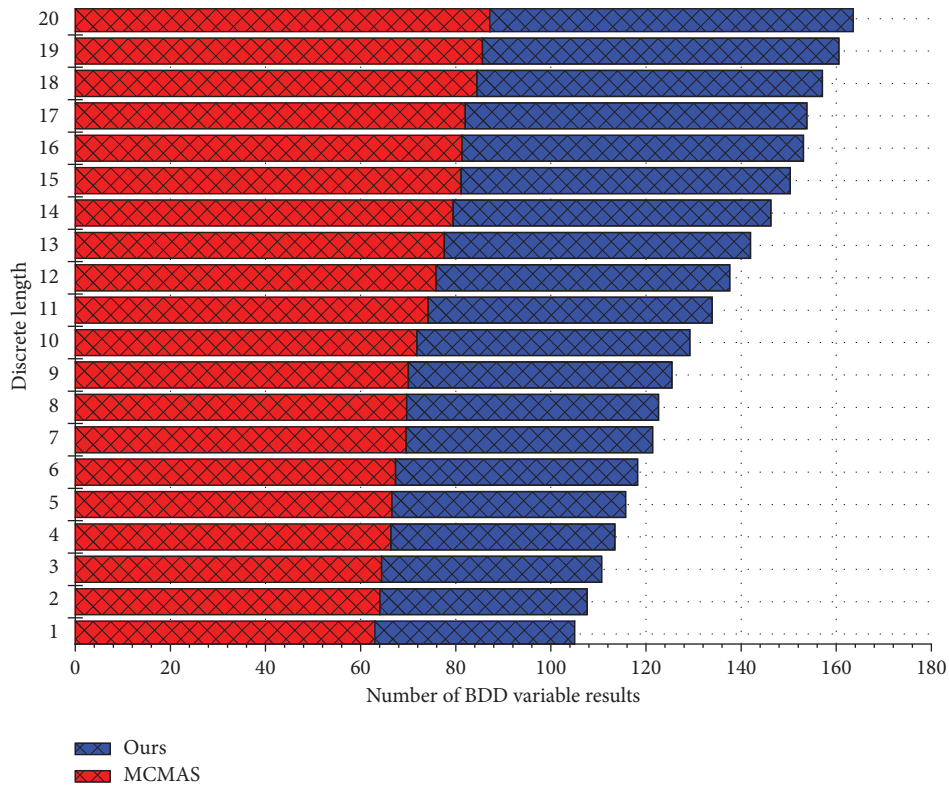

FIGURE 3: Comparison of discrete response curves.

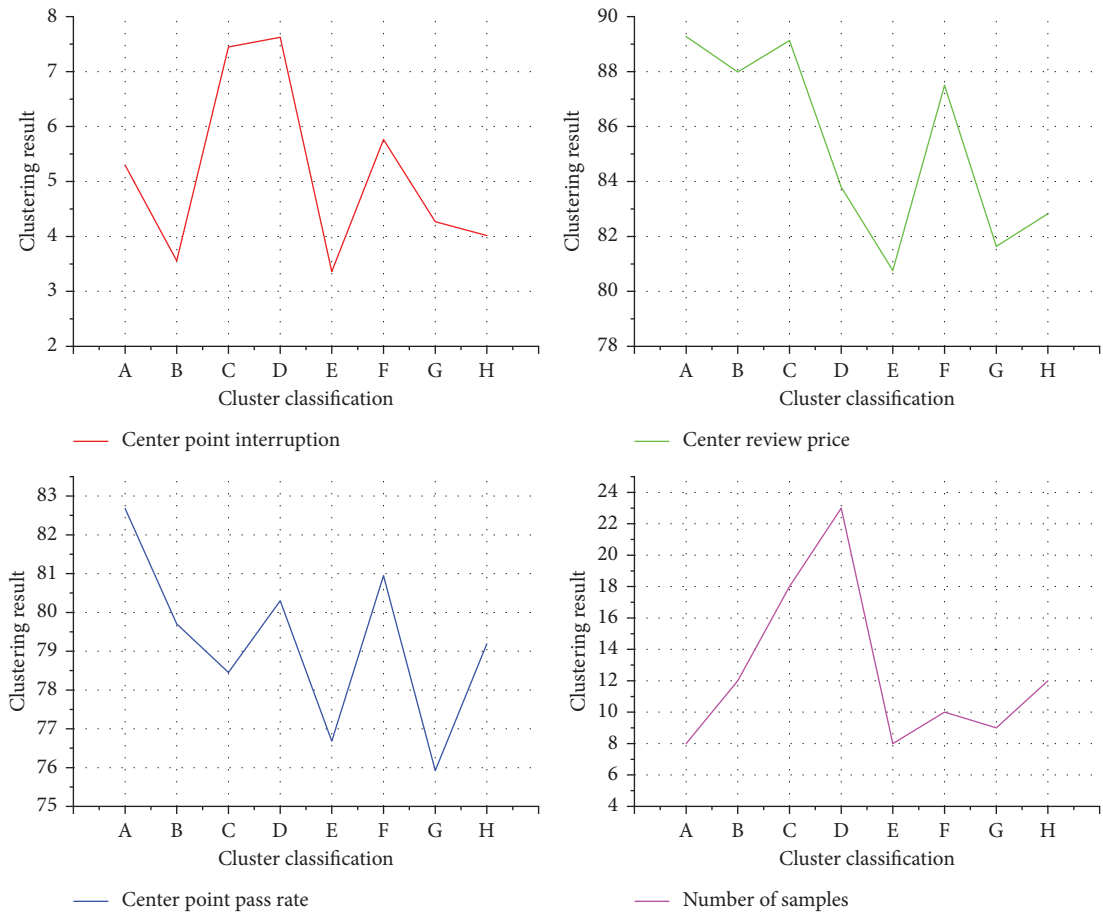Figure 4: Experimental comparison of RTLDL formulas.
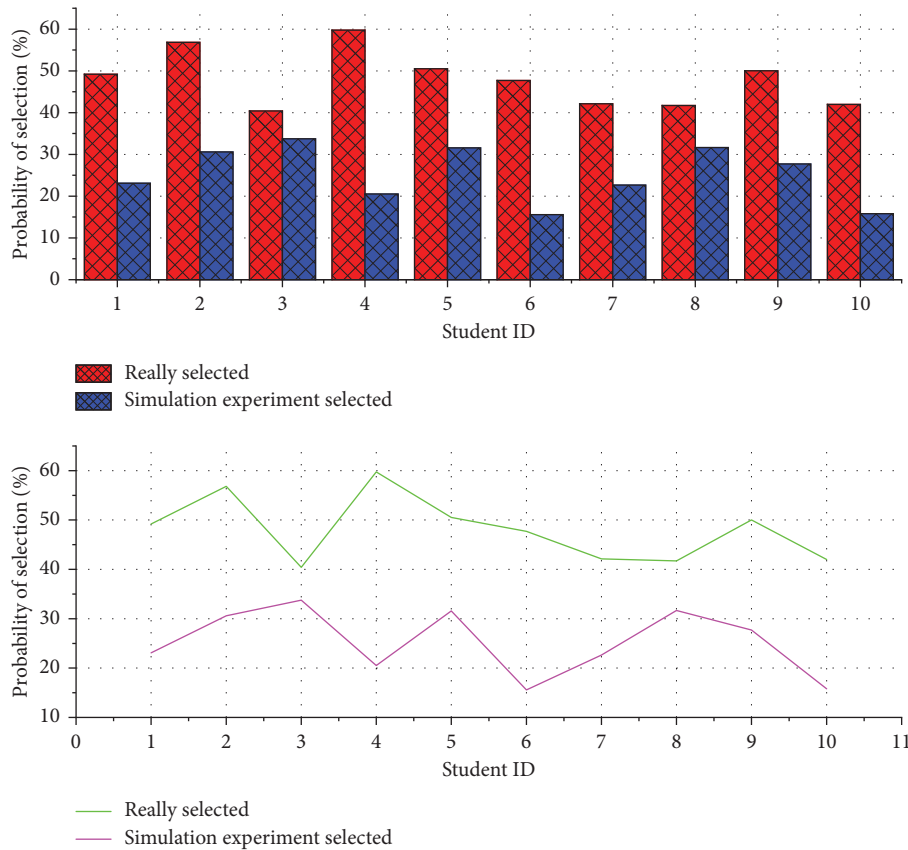

Figure 5: Clustering centroids.

FIGURE 6: Comparison of the probability of being selected before and after college students.

eight college students out of all ten pilots involved, and compare the results as shown in Figure 6. With accurate prediction through big data, to take timely intervention measures and provide psychological counseling to college students at the right time, the efficiency of a college education can be greatly improved through big data prediction, and the efficiency of college educators can also be greatly improved. In conclusion, big data in education is gradually forming a trend and gradually influencing all aspects of the field of Civic Education. For education managers, big data as advanced technology and tool has potential and an invisible influence on education managers and plays an important role in improving the effectiveness of Civic Education for college students.

Figure 7(a) shows the average expected evaluation of the first college student in evaluating the college student education model when there is no rating coefficient, and it can be seen that as the number of people increases, this college student's evaluation will become lower and lower to make the maximum score of the college student education model evaluation, and it is presumed that when the number of people tends to infinity, the evaluation will be close to the expected rating of the college student. At the same time, the more people participate in the evaluation, the smaller the evaluation score of this college student education model will be. Figure 7(b) shows the expected benefit of the first college student with the smallest rating coefficient (0.5) after the introduction of

the rating mechanism, and, comparing with Figure 7(a), we can conclude that when the number of evaluators is the same, the best rating of the college student with the smallest rating increases after the introduction of the rating coefficient, and the expected evaluation of the college student education model increases (e.g., when there are 5 college students and no rating mechanism, the best rating is 40, the best offer increases to 48 after the introduction of the rating mechanism, and the expected rating increases from 6.2 to 14.79).

Promote the transformation of education evaluation from experience and single dimension to data and multiple dimensions. The personality of the educator is an important factor affecting the implementation of personalized education. Big data is a microscope for people to analyze their thoughts and observe their behaviors in the new era. While using big data to analyze the characteristics and state of students' thoughts and behaviors, educators should also actively apply big data analysis to carry out self-cognition, compare their personality qualities with the matching degree of education personalization work and students' actual needs, and timely analyze and discover their shortcomings and reasons. By strengthening the awareness of big data, establishing big data thinking, actively improving their personality quality, and trying to shape their own positive and healthy excellent personality quality, they can better promote education personalization.
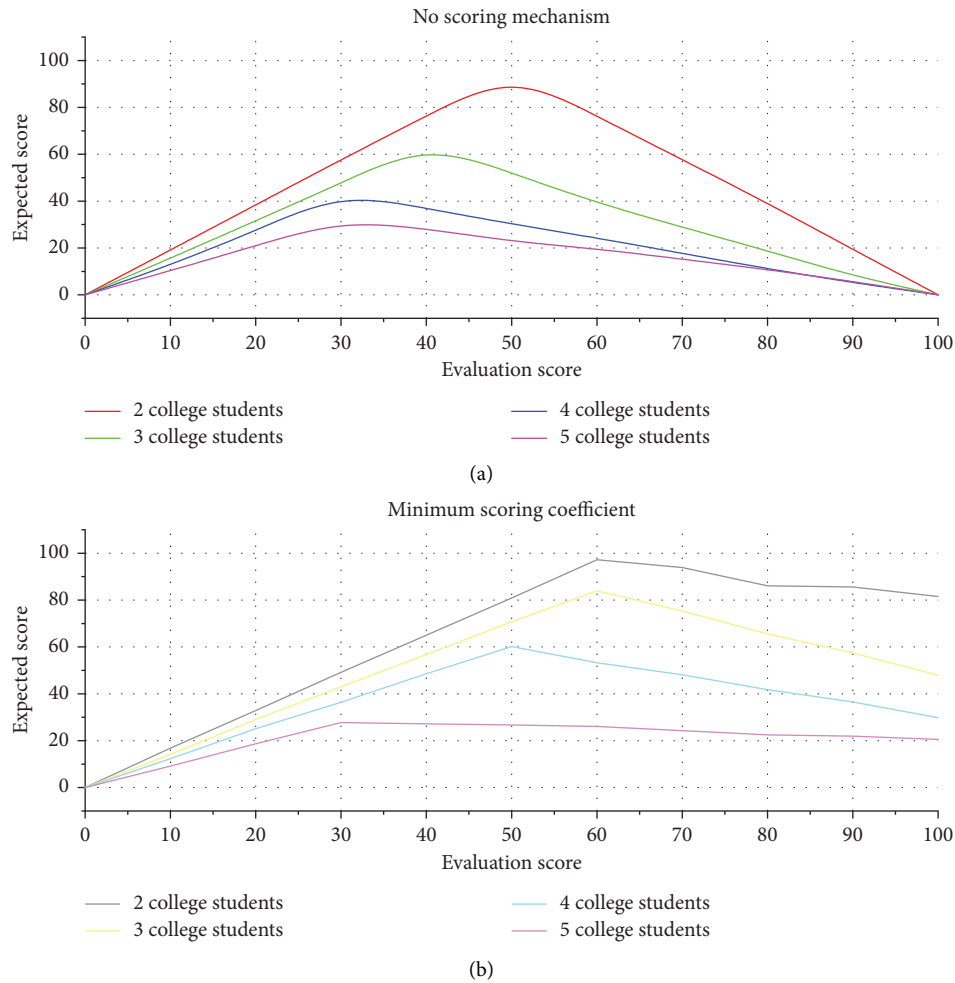
Figure 7: Evaluation of expected results. (a) No scoring mechanism. (b) Minimum scoring coefficient.

5. Conclusion

Big data also makes college education face a more serious and complicated dilemma: the mainstream consciousness of college students is impacted, the main position of educators is shaken, and the ethical dilemma in the era of big data is triggered. The development of an era will inevitably give rise to new things, and the emergence of new things will inevitably have various impacts on old things. Therefore, we should not ignore the development of new things because of these impacts but should maintain an optimistic attitude, adopt a new research perspective to solve the dilemmas faced by big data in college education, enhance educators' awareness of big data, and transform traditional education concepts. The research will help educators to enhance their data thinking and data ability. By constructing a temporal tester, the discrete dynamic model big data game problem is simplified. The focus of this study is on the discrete dynamic big data game model, which contains two types of operators: the modal operator and the regular operator. Since the semantics of regular operators and program statements are very similar, we borrow the method of program control flow tagging to tag the regular expressions in the temporal formulas and construct migration relations by assigning values to the tagged variables. The test is a relatively special operator, which only makes judgments at the current and position without consuming characters. Improve the supervision and management mechanism and network optimization mechanism, strengthen the education work team, and combine with big data technology to innovate the education work method, so that big data can be fully used in the education of college students, so that educators can fully explore the hidden value behind big data and more accurately predict the trend of college students in thoughts, behaviors, and emotions, to make correct decisions and improve the timeliness and relevance of education. This paper does not directly implement the discrete dynamic model. In this paper, there is no tool to directly implement the discrete dynamic model big data game, so it is of great significance for the research and expansion of discrete dynamic model if we can directly implement our proposed model big data game algorithm

and develop specific tools to support the discrete dynamic model big data game.

Data Availability

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

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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