

Retraction

Retracted: Course Ideological and Political Teaching Platform Based on the Fusion of Multiple Data and Information in an Intelligent Environment

Journal of Sensors

Received 17 October 2023; Accepted 17 October 2023; Published 18 October 2023

Copyright © 2023 Journal of Sensors. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

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] J. Zhou, Z. Wei, F. Jia, and W. Li, "Course Ideological and Political Teaching Platform Based on the Fusion of Multiple Data and Information in an Intelligent Environment," *Journal of Sensors*, vol. 2021, Article ID 1558360, 10 pages, 2021.

Research Article

Course Ideological and Political Teaching Platform Based on the Fusion of Multiple Data and Information in an Intelligent Environment

Jieqiong Zhou,¹ Zhenhua Wei ,² Fengzhen Jia,¹ and Wei Li¹

¹School of Marxism, Xijing University, Xi'an, 710123 Shaanxi, China

²Faculty of Education, Xi'an Siyuan University, Xi'an, 710038 Shaanxi, China

Correspondence should be addressed to Zhenhua Wei; james@link.cuhk.edu.hk

Received 7 June 2021; Revised 1 July 2021; Accepted 10 July 2021; Published 31 July 2021

Academic Editor: Mu Zhou

Copyright © 2021 Jieqiong Zhou et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

In the current teaching of politics, teachers still focus on the cultivation of the basic intelligence of students' language intelligence, and it is easy to ignore the cultivation of other intelligences that affect the overall development of students. This research mainly discusses the design of curriculum ideological and political teaching platform based on the fusion of multiple data and information in an intelligent environment. This research adopts the MVC architecture, and the web application developed based on the MVC (Model View Controller) architecture pattern is easier to complete the realization of multiple controllers. The front desk ideological and political teaching teacher module includes the login system. In addition, the teacher can view the test status of a specific student and can also pay attention to the total intelligence of all students who have been tested. The process of the student test is to enter the correct account and password to log in to the system and then perform the test. After the test, the test result can be viewed, and the personal information can be maintained at the same time. In addition, the personal login password can be modified. The existence of the database is to ensure that the data is correct and effective. This system uses MySQL to design the database, and the name of the database is braintest_db. The data table in relational database is the main object of storing and managing data, and it is also an important task of database design. This system has designed three kinds of user logins, namely, administrator, student, and teacher, and login can be realized according to the account number and password. Among them, teacher's participation is by inquiring about students' test situation, paying attention to students' multiple intelligences, and teaching students in accordance with their aptitude. In addition, the main object of this test is students, and the analysis of multiple intelligences is realized through student tests. Students are vitally physical objects that can be tested and searched for results. In the study, 20% of the students both learn the basic content of the platform and use the forum. This research will help improve students' literacy in an all-round way.

1. Introduction

The fusion of multiple data and information breaks through the traditional education and teaching concepts, and is in line with the concept of quality education in my country. It is a theoretical theory that focuses on the development and diversification of students' intelligence. Consider the strengths and weaknesses of different aspects of intelligence, use strengths to drive weaknesses, and respect the development of students in all aspects of intelligence.

The fusion of multiple data and information is also an effective guiding ideology for the realization of quality education, which is of high value to educational research. The multiple intelligence test system uses this as a theoretical basis, breaks the limitations of traditional tests, establishes scientific and effective coping strategies through more topic tests, evaluates students' intelligence in many aspects, stimulates potential, and helps the development of education to the greatest extent.

The use of multiple data and information fusion is becoming more and more extensive. Perdikaris et al. have

developed a framework for multifidelity information fusion and predictive reasoning in high-dimensional input space and in the presence of a large number of data sets. The method they proposed establishes a new paradigm for constructing the response surface of a high-dimensional stochastic dynamic system and at the same time considers the multifidelity in the physical model and the multifidelity in the probability space. Although they combined these new development results, they can get a linear complexity algorithm, but it is not clear enough when it comes to benchmarking problems [1]. Zhou et al. believe that the integration of multiple functions and the context structure of unlabeled data have proven its effectiveness in enhancing similarity measures in many computer vision applications. First, integrate multiple features into a unified similarity to enhance the discriminative ability of similarity measurement. They uses the diffusion process on the tensor product graph to achieve these goals. Although the method they obtained has been verified on many challenging video sequences, the research process is very complicated [2]. Quing et al. believe that traffic state estimation plays an important role in operational traffic management and is essential for real-time traffic modeling and prediction. With the emergence of more and more heterogeneous traffic data, data fusion has become one of the main challenges of state estimation. Although their research has produced state estimation values, which are better than those obtained by any data source alone, PISCIT has a better performance in the source data. Structural errors and random errors are also very powerful [3]. Wen et al. believe that because timely early fault diagnosis is the key to ensuring operational safety and suppressing fault deterioration, they reviewed the data-driven initial fault research, which has low amplitude and is easily concealed by system interference and noise. In addition, they not only pointed out the problems related to complex systems but also hoped to promote the development of the field by adding new information and using new mathematical tools to mine unused hidden information. Although they proposed four ideas worthy of discussion, diagnosis based on correlation analysis, multi-source information fusion, machine learning, and time-frequency transformation, there are too few research process data [4].

This research mainly discusses the design of curriculum ideological and political teaching platform based on the fusion of multiple data and information in an intelligent environment. This research adopts the MVC architecture, and the web application developed based on the MVC (Model View Controller) architecture pattern is easier to complete the realization of multiple controllers. The front desk ideological and political teaching teacher module includes the login system. In addition, the teacher can view the test status of a specific student and can also pay attention to the total intelligence of all students who have been tested. This system has designed three kinds of user logins, namely, administrator, student, and teacher, and login can be realized according to the account number and password. Among them, teacher's participation is by inquiring about students' test situation, paying attention to students' multiple intelligences, and teaching students in accordance with their apti-

tude. The main object of this test is students, and the analysis of multiple intelligences is realized through student tests. Students are vitally physical objects that can be tested and searched for results.

2. Course Ideological and Political Teaching Platform

2.1. Multivariate Data Information Fusion. In the process of using multiple data and information fusion, students' intelligence is multiple, and teachers should adopt multiple teaching methods. However, the purpose of the teaching method using multiple intelligences is not only to cultivate students' intelligence but to use multiple data and information fusion to enable students to better master the basic knowledge, at the same time, to train students on the world outlook, outlook on life, and values for students' life. Development lays the foundation for ideological and political quality [5, 6].

$$\lambda = e^{-(1/2\sigma)} \left(\tau_{(t)} - T \right)^2 + e^{1/2\sigma} \left(\tau_{(t)} + T \right). \quad (1)$$

λ is a multiple fusion parameter. Some teachers pay attention to the cultivation of multiple intelligences in the ideological and political classroom, but ignore the disciplinary characteristics of ideological and political and the role of the ideological and political classroom, as well as the students' mastery of basic knowledge [1].

$$\mu = \frac{T_{(t)} - T_{(\min)}}{T_{(\max)} - T_{(\min)}}. \quad (2)$$

T is the time for students to study [7].

$$\omega_{(n)} = Y - 0.5 \cos \frac{\pi n}{N} + 0.4 \cos \frac{\pi n}{N}. \quad (3)$$

2.2. Ideological and Political Teaching. In terms of specific disciplines, the liberal arts disciplines represented by language and history mainly examine students' speech-language intelligence, while the science disciplines represented by mathematics and physics mainly examine students' logic-mathematics. From this point of view, these disciplines are mainly based on a kind of intelligence factor, so these disciplines still mainly rely on speech-language intelligence or logic-mathematics intelligence in the evaluation process. At this time, the course of ideology and politics shows the difference from other disciplines under the fusion of multiple data and information. It is mainly manifested in: although school's ideological and political class is also based on students' speech-language intelligence, it often examines students' understanding and memorization ability, but it also often examines students' logic-mathematics intelligence P , such as economics study the calculation problems in the common sense part [8, 9].

$$P = \frac{1}{n} \sum_{i=1}^n \left| \frac{R' - R_i}{R_i} \right|. \quad (4)$$

R the relationship between matter and consciousness. In addition, sometimes, ideological and political classes often allow students to carry out group inquiry discussions and social practice. At this time, the main investigation is students' physical-motor intelligence, interpersonal intelligence, self-cognition intelligence, etc. So, in concrete terms, the focus of multiple intelligence evaluation in ideological and political courses is the comprehensive evaluation of multiple intelligence factors, not just one or two evaluations [10].

$$U = \sqrt{\frac{1}{M}} \sum_{i=1}^M (X_i - X), \quad (5)$$

$$Q = 1 - \frac{H_i - H^2}{H_i - HH} \sum_{i=1}^n (X - \bar{X}). \quad (6)$$

Q is a spatial factor, and U is an intellectual factor. Although various disciplines have introduced multiple data and information fusion to enrich the methods and means of evaluation of students in this discipline, so as to play the role of incentive and feedback of evaluation, however, due to the particularity of the school's ideological and political courses, the evaluation results of the school's ideological and political courses are different from other disciplines. Because the purpose of opening school ideological and political courses is to give play to the role of ideological and political education, help young people to establish a good value orientation, and form a positive outlook on life, values, and world outlook. Therefore, the final result of implementing school's ideological and political multiple intelligence evaluation system is to help students form a good character. At the same time, the final result of the evaluation of multiple intelligences in other disciplines is to help students firmly grasp an ability [11]. For example, Chinese, mathematics, and other subjects use the feedback function of the multiple intelligence evaluation system in the teaching process, so that students can firmly grasp the reading ability and calculation ability [12].

$$P_x = K \sum_{i=1}^T (X - \bar{X})^2 (X + \bar{X}), \quad (7)$$

$$P_y = K \sum_{i=1}^T (Y - \bar{Y})^2, \quad (8)$$

$$P_z = G \sum_{i=1}^t (T - \bar{T})^2 (T - X + Y)^{1/N}. \quad (9)$$

P_x means reading ability. P_y represents computing power. P_z stands for feedback ability [13, 14].

2.3. Teaching Platform. When analyzing a system, feasibility analysis is also an indispensable link. Technical, economic, operational, and social factors will affect a system. These factors should also be taken into account by mature developers. First of all, from the analysis of technical feasibility, the software and hardware equipment of this test system includes

ordinary personal computers, stable Windows systems, stable functional Eclipse development tools, and mature and rich MySQL databases. I have a good grasp of programming languages such as Java and databases. The situation is good, and the tutor has been engaged in the research and teaching of related majors and has given some help to ensure the normal development and operation of the system. Then, from the analysis of operational feasibility, the system is mainly oriented to students and teachers. The interface of the system is direct and friendly. It has a little foundation in computer or some help and guidance. As long as you enter the system and understand the text prompts of the system, you can proceed related operations [15].

$$Z_x = \phi \sum_{i=1}^T \eta (X - \bar{X}) (Y - \bar{Y}). \quad (10)$$

Z_x indicates the degree of self-confidence [16, 17].

$$\chi_i = \sum_{n,m \in V} \sum_{j \in C} o_{m,j} * W_{j,n} * L_{n,m}^j * T_n, \quad \forall i \in V. \quad (11)$$

The variable R_n is used to represent the data transmission speed of the ideological and political teaching platform [18].

$$\sum_{i:(i,k) \in E} F_{Lk} = \sum_{j:(k,j) \in E} F_{kj} + \sum_{j:(k,j) \in H} F_j^k + X_k. \quad (12)$$

Here, f_{ik} represents a link transmission delay connected to the node J where v is set. Then, from the analysis of economic feasibility, the school provides laboratories for students majoring in computer science, and a certain amount of computers are available for students to use [19, 20]. Nowadays, laptops are basically students' academic must-haves. In terms of materials, school libraries, and college materials, relevant information can be provided by libraries, online resources, etc. [21]. The optimization problem solved by this technique can be expressed as follows [22, 23]:

$$\arg_{\text{max}} = \mu_1 N(A - A_{\min}) + \mu_2 N(E_{\max} - E) + \mu_3 N(T_{\max} - T) + \mu_4 N(S_{\max} - S). \quad (13)$$

Here, A , E , and T represent a problem that needs to be optimized, which can be changed according to the requirements of the task [24, 25]. Finally, from the analysis of social feasibility, the system mainly combines multiple data and information fusion to help students develop various intelligences, develop their advantages and discover deficiencies, fully implement teaching concepts, and improve teaching quality [26].

$$W = -\beta \frac{-\theta_x F_y + \theta_y F_x}{[F_x^2 + F_y^2]} [F_x^2 + F_y^2]^{1/2} = \beta \frac{F_{xx}(F_y)^2 + (F_x)^2 f_{yy} - 2F_x F_y F_{yy}}{[F_x^2 + F_y^2]}. \quad (14)$$

Therefore, the product of the vector of the rate of change in the direction of the gradient $F(X, Y)$ can be represented by the symbol β as the boundary and the magnitude of the gradient [27].

3. Design Experiment of the Course Ideological and Political Teaching Platform

3.1. Overall Structure Design of the System. MVC is the model (Model), view (View), controller (Controller), and web applications developed based on the MVC (Model View Controller) architecture pattern; it is easier to complete the implementation of multiple controllers; when the controller is written, relevant setting of page navigation is relatively troublesome. Through the research of web applications based on the MVC architecture, differences in implementation can be found. Based on these differences, this type of web software can be developed, which adjusts the calling process in accordance with the MVC architecture. For the differences, it is pointed out that the strategy of using external configuration files is used and achieved. With such an ingenious way to set the changed part through the configuration file, the web software can be made into a development platform, allowing the developer to use the previous software to set the basic structure according to the MVC architecture, and the developer only needs to follow his own actual situation. If you need to achieve specific functions, you can achieve the development of Web projects. This kind of Web software is called a Web framework, and the use of this framework can reduce workload, improve implementation efficiency, and effectively reduce maintenance costs.

This system is designed to adopt Struts2+Bootstrap framework mode combination development. Struts2 is developed on the basis of WebWork2. The business controller action is written and implemented by the developer. It can be a simple Java class, separated from the ServletAPI. The processing flow of Struts2 is roughly to send a request through a browser. The central processor finds the corresponding action class for processing the request according to the struts.xml file. The interceptor chain of WebWork automatically applies general functions to the request, such as, WorkFlow, validation, and other functions. When the method parameter is configured in the Struts.xml file, the Method in the action class corresponding to the method parameter is called; otherwise, the general execute method is called to process the user request, and the result returned by the corresponding method in the action class is responded to the browser. The overall structure is shown in Figure 1.

3.2. System Flow. According to the analysis of system requirements and functions, combined with the overall structure design, the system's various functional processes are basically determined. The system administrator mainly manages the accounts of teachers and student users, so that the foreground data and the background data will always be consistent and only need to use the existing permissions to operate.

The process of the front desk teacher includes logging in to the system, and only entering the correct account and password can enter the teacher system interface. If a student

forgets his password information, the teacher can help the student modify the information through this interface. In addition, the teacher can view the test status of a specific student and also pay attention to the total intelligence of all students who have been tested.

The process of the student test is to enter the correct account and password to log in to the system and then perform the test. After the test, the test result can be viewed, and the personal information can be maintained. It mainly includes the maintenance of the personal user name and email address, and the individual can be modified login password.

In short, the administrator has the highest authority and can restrict teachers and students as users to perform some specific operations and at the same time master their information. Teachers can manage students in a certain range; on the one hand, it is convenient for teachers to understand students and at the same time protect students' privacy. In addition to operating with their own permissions, student users do not affect other users, but they are the most important users in this system and the basis for other users' operations.

3.3. Database Design. Data is an important element of the project. The existence of the database is to ensure that the data is correct and valid. This system uses MySQL to design the database. The name of the database is brain_test_db. The data table in the relational database is the main object of storing and managing data, and it is also an important task of database design.

The design of the database is carried out according to the data needs of the system. This system has designed three user logins, namely, administrator, student, and teacher, and login can be realized according to the account number and password. Among them, teacher's participation is to check students' test conditions, pay attention to students' multiple intelligences, teach students in accordance with their aptitude, and help students to progress and develop according to the actual situation. It also includes gender and mailbox, and different attributes can help the system identify users. In addition, the main object of this test is students, and the analysis of multiple intelligences is realized through student tests. Students are vitally physical objects that can be tested and searched for results. Because the login interface of teachers and students are the same, their attributes are the same, including account number, password, name, gender, and email address.

The connection between the teacher and the student is mainly through the test result. The student enters the test interface by logging in and submits the test content to obtain the result, and the teacher can query the test result of a single student or view the intelligent result curve graph of all students and understand the overall situation. The current state of intellectual development of all students.

In addition, the design of test questions is related to the actual development and progress of social life, combined with the classification of intelligence in the concept of multiple data information fusion, and the test questions are classified, which are related to language intelligence, logical

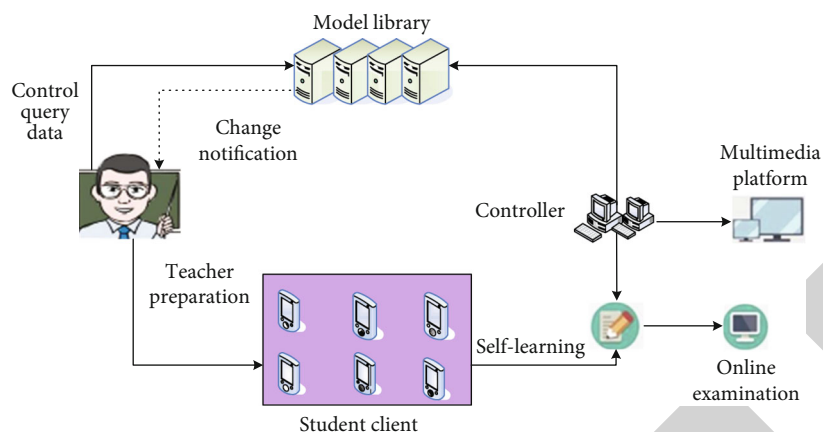


FIGURE 1: Overall structure.

TABLE 1: Teacher information.

Data item	Data item meaning	Type of data	Space
Id	Teacher id	Int<20>	No
Account	Account number	Var char<100>	No
Pass word	Password	Var char<100>	No
User_name	Name	Var char<100>	Yes
Sex	Gender	Int<1>	Yes
User_type	User type	Int<1>	No

mathematics intelligence, and spatial intelligence, physical movement intelligence, musical intelligence, interpersonal intelligence, self-cognition intelligence, and natural intelligence topics. Teacher information is shown in Table 1.

3.4. Module Design

3.4.1. Administrator Module. A complete system requires an administrator to lead the overall situation, manage every user who uses the system, and make all operations within the scope of authority. Of course, the administrator also needs to have an account and password. After passing the authentication, the administrator can enter the management interface. Administrator’s login interface is shown in Figure 2.

In this interface environment, the administrator can add users. If some users will not register or the client has problems, the administrator can assign an account to them to help users better access the system. Among them, teacher users need to apply for distribution at the administrator to prevent users who are not teachers from registering wantonly and infringing on the information of other users. The design of this function ensures the reasonableness and safety of the system.

In addition, through this interface, when facing some malicious users or needing to organize user information, the administrator can delete some worthless user information, and then, this account will no longer be able to login on the user side.

3.4.2. Teacher Module. The teacher module is a channel for teachers to understand and analyze the intelligence of stu-

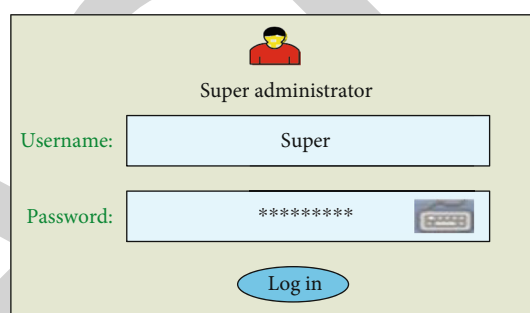


FIGURE 2: The login interface of the administrator.

TABLE 2: Student information.

Data item	Data item meaning	Type of data
Id	Student id	Int<10>
Account	Account number	Var char<50>
Pass word	Password	Var char<50>
User_name	Name	Var char<50>
Sex	Gender	Int<1>
User_type	User type	Int<1>

dents through the system. After they have a certain grasp of the intelligence, they can adjust teaching strategies and methods to improve teaching quality. The reflection of multiple intelligences adjusts teachers’ view of students. Teachers should adjust teaching according to the uniqueness of each student’s intelligence. Different students need different ways of education, especially for students who are relatively backward in performance. Pay attention to the development of its advantages and intelligence, use its advantages to drive disadvantages, build up students’ self-confidence, face up to the current social demand for talent types, and fully realize quality education.

If the teacher wants to view the test result of one of the students, check the test result to help the student improve specifically, enter student’s account, and click to view the single test result, there will be a histogram of student’s test result. In addition to the students, only the teacher has the authority to view the personal test results. Through the understanding

TABLE 3: Student motivation.

Options	Before the experiment		After the experiment	
	Experimental class	Control class	Experimental class	Control class
Strongly motivated people	3	3	5	3
Motivated average number	3	4	3	4
People with weak motivation	2	2	1	2

of a certain student's intelligence status, combined with the actual communication, the teaching concept of paying attention to each student can be realized. The test result is not an absolute evaluation by the students, but only as a reference item for the smooth progress of the teaching work, to provide teachers with some realistic data of the students, so as to facilitate the adjustment of teaching strategies and teach students in accordance with their aptitude.

If the teacher wants to view the test results of all students, just click view all test results to have all the student result information, and all the results will be fed back to the teacher in the form of a line graph. Teachers can adjust the way of classroom teaching according to the general intelligence of students, adjust the teaching progress according to the development progress of students' intelligence, integrate theory with practice, and complete teaching tasks better and faster. Secondly, the presentation of this result allows teachers to have a relative reference standard for the evaluation of students, to have a relative evaluation of students, and to help students in combination with their specific conditions.

3.4.3. Student Module. The design of student's module is mainly to allow students to understand their own intelligence through the test, in order to help students adjust the pace of development; this module is mainly for testing; the first is to verify whether there is this permission to enter the test system. If you have not registered an account and the administrator has not assigned it, you need to register a user that belongs to you. There are restrictions on what you need to fill in during registration. For example, if the registered user name is already used by others, a prompt message will pop up.

After login verification, you will enter the main interface of the student test. If you want to return or exit, there is a prompt button in the upper right corner to operate. This interface is all the operations that student users can perform, including testing, viewing the results of the test, maintaining personal information, and modifying personal passwords, because the password is a main verification information for a user to log in to the system, and its importance is not unusual, so a label is specifically set to allow users to manage passwords.

After clicking the start exam button, students will enter the main interface of the test. All test questions are presented in the form of single selection, and the options are divided into 5 levels. The tester chooses according to his actual situation and the degree of conformity with the content, and all the questions appear randomly. Each time the user performs a test, the question will be updated. All questions are randomly given by the question bank, to ensure that users will

not reduce the reliability of the test because of memorizing the content of the questions.

3.4.4. Smart Homework Evaluation Homework Evaluation Module. It is a relatively traditional evaluation method, and it is also a very effective evaluation method. In actual teaching work, we should actively expand the effect of homework evaluation and gradually transition from the traditional single-intelligence homework evaluation to the multiple-intelligence homework evaluation mode. In order to realize the diversification of the evaluation of students in the school's ideological and political courses, improve the objectivity of the evaluation results, and promote the teaching of the school's ideological and political courses. Intelligent homework evaluation requires teachers to take into account the various intelligences of students in the process of designing homework and organically combine specific knowledge requirements with intelligent evaluation. Only in this way can the objective and perfect evaluation results be achieved, the quality of the homework will be improved, and the quality of the work will be improved. There is an advancement of the teaching reform of ideological and political courses in schools. In the actual homework design, the reasonable allocation of subjective questions and objective questions should be achieved, and the open test questions should be combined with general test questions. Only in this way can the role of evaluation be better realized.

4. Results and Discussion

According to the specific implementation of the system, the data tables designed from this mainly include teacher information table, student information table, multiple intelligence test question table, and test result table. Different tables define different permissions and contents. Student information is shown in Table 2.

Before and after the experiment, students' learning motivation, interest in learning, and attitude to the evaluation of multiple intelligences in ideological and political classes were investigated through interviews, so as to grasp the degree of recognition of students' evaluation of multiple intelligences. At the same time, it was also found through comparison in the teaching of ideological and political classes. Use multiple intelligences to evaluate the role and value. The motivation of students is shown in Table 3.

After the experimental class implemented the multiple intelligence evaluation strategy for a semester, students' interest in the study of ideological and political courses has also been greatly improved. The changes in student interest are shown in Figure 3.

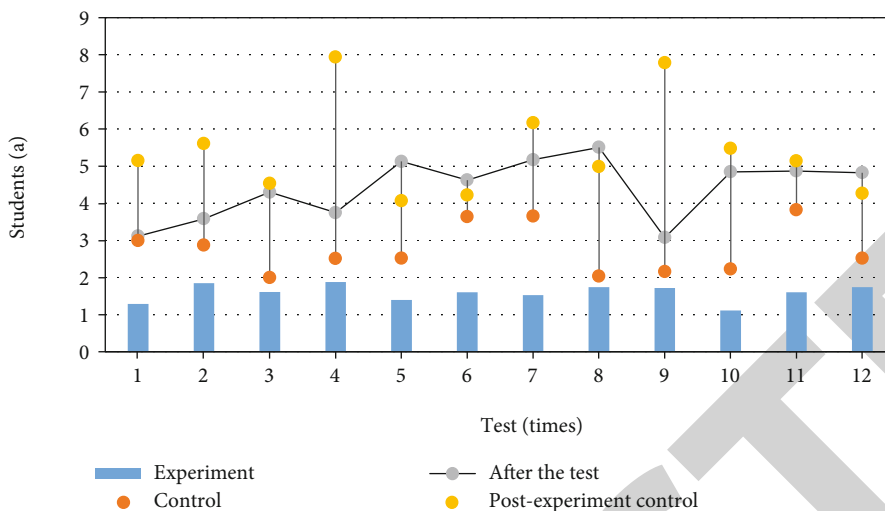


FIGURE 3: Changes in student interest.

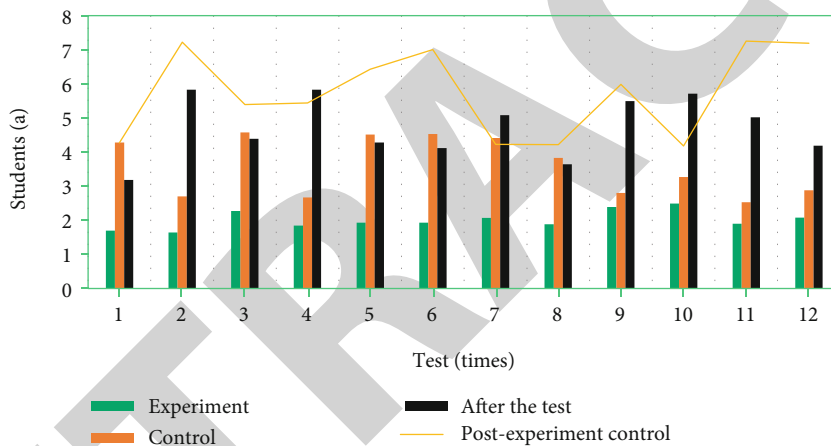


FIGURE 4: Students' evaluation of multiple intelligences in ideological and political classes.

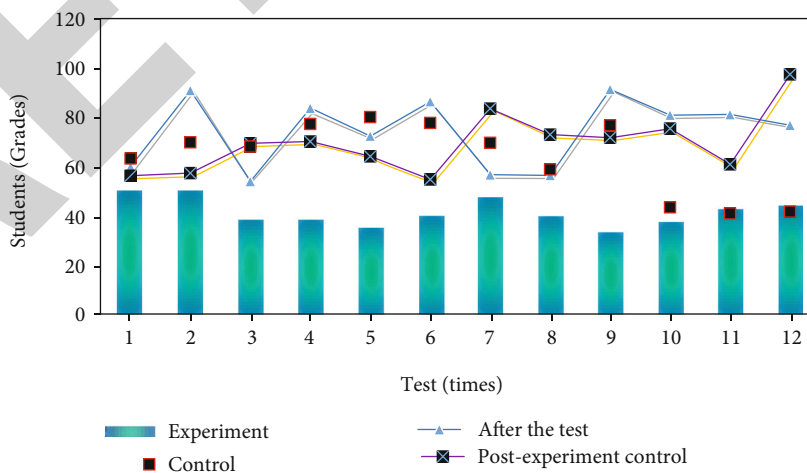


FIGURE 5: Student performance statistics.

Analyzing the comparative data, we can find that after the experiment, the students in the experimental class have a strong interest in the evaluation of multiple intelligences in

the ideological and political class. Before and after the experiment in the control class, there was basically no change in the three indicators of the students. This shows that the

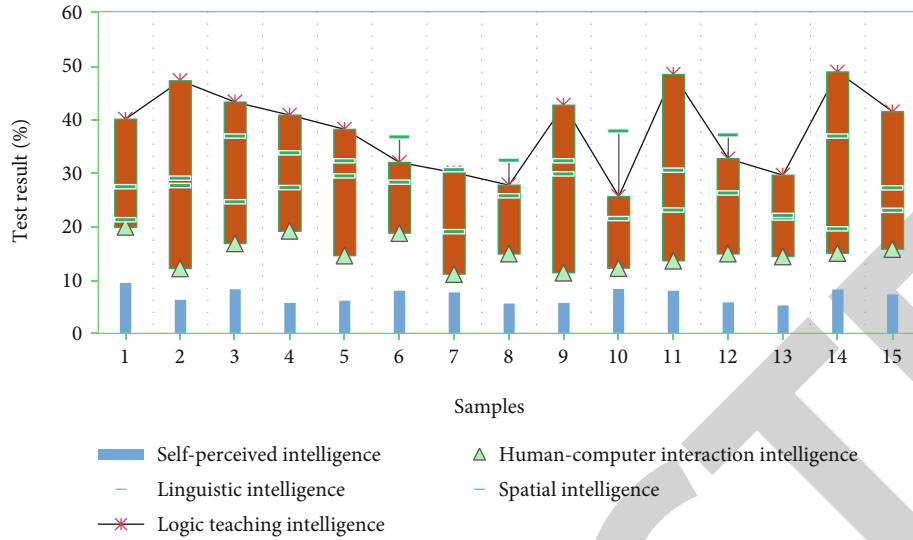


FIGURE 6: Test results on students.

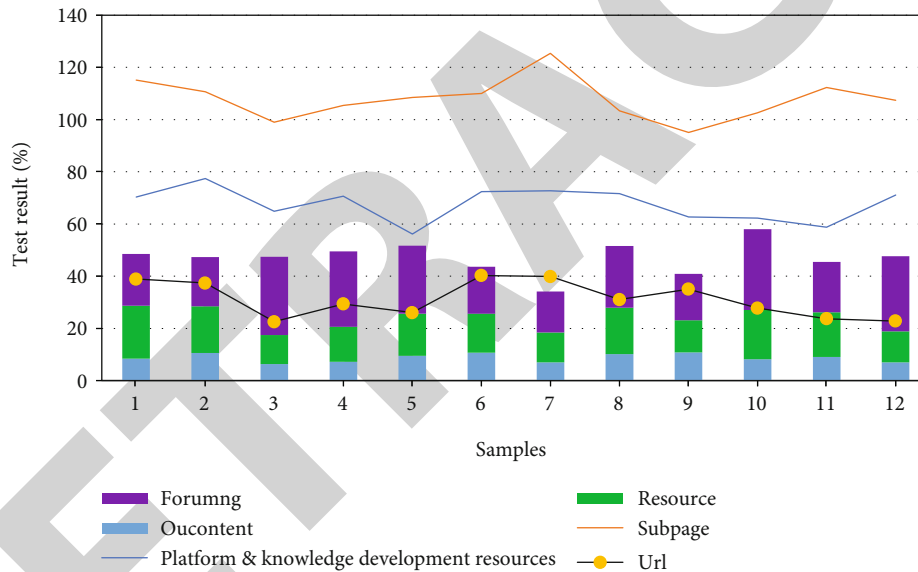


FIGURE 7: The use of the platform by students.

evaluation of multiple intelligences in ideological and political courses has a greater effect on improving students' learning motivation and interest in ideological and political courses. At the same time, students prefer the evaluation of multiple intelligences in ideological and political courses and should be actively used in the future teaching process. Students' evaluation of multiple intelligences in ideological and political classes is shown in Figure 4.

Through analysis, we can find that before the experiment, the ideological and political performance of the experimental class and the control class is basically the same, and the average score, variance, and standard deviation data show that there is no big difference. However, after a one-semester evaluation of multiple intelligences in the experimental class, the two classes reuse the same test paper for the test. The average score of the experimental class is nearly 6 points higher than

the control class, and the standard deviation and variance have decreased. This shows that the overall performance of the students in the experimental class has made greater progress, and the gap between the students has further narrowed. This shows that the evaluation of multiple intelligences is of great significance to the teaching of ideological and political courses in schools. Student performance statistics are shown in Figure 5.

Each test will produce a test result; in the result, the system will classify and summarize the scores of each intelligence and then feed back to the tester in time in the form of a histogram, which more intuitively reflects the status of each intelligence. Testers can perform multiple tests and have a certain understanding of their own intelligence based on the situation reflected by the system. Although this test does not fully reflect their own strength, it can be used as a

reference to discover their own superior intelligence, develop their expertise, and improve those who are relatively weak. Other intelligence promotes all-round development. Everyone's intelligence distribution is definitely different. Even for students with low overall intelligence, they can find their own shining points and improve self-confidence. The society does not need different types of talents; as long as they have talents, they will be paid attention to. Figure 6 shows the test results for students.

Schools should pay attention to the mutual participation of subjects in interactive evaluation so that they can actively cooperate, participate, communicate, and even evaluate themselves in an equal and democratic atmosphere, so as to effectively improve the effectiveness of multisubject evaluation. According to analysis, more than 6% of students only learn the basic content of online learning platform (oucontent), more than 7% of students only learn knowledge expansion resources (resource), and more than 5% of students only use forums (forumng) for discussion, with nearly 37% of students learn not only the basic content on the platform but also knowledge expansion resources, more than 25% of students only learn supplementary materials through links (url), and 20% of students both learn the basic content of the platform and use forums, and nearly 1% students log in to the subpage to learn. The use of the platform by students is shown in Figure 7.

5. Conclusion

With the in-depth development of basic education curriculum reform, building a developmental evaluation system has become an inevitable trend in the development of teaching evaluation. At present, what changes have taken place in the teaching evaluation of ideological and political courses in schools, what are the problems in teaching evaluation in teaching practice, and how to solve these problems. Based on the above questions, this research has conducted a research on the teaching evaluation of ideological and political courses in schools. This research adopts the MVC architecture, and the web application developed based on the MVC (Model View Controller) architecture pattern is easier to complete the realization of multiple controllers. The front desk ideological and political teaching teacher module includes the login system. In addition, the teacher can view the test status of a specific student and can also pay attention to the total intelligence of all students who have been tested. This system has designed three kinds of user logins, namely, administrator, student, and teacher, and login can be realized according to the account number and password. Among them, teacher's participation is through inquiring students' test situation, paying attention to students' multiple intelligences, and teaching students in accordance with their aptitude. In short, in the future, teachers need to pay more attention to the comprehensive training of students and teach students in accordance with their aptitude.

Abbreviations

MVC: Model View Controller

CPU: Central processing unit
RAM: Random access memory
MAE: Mean absolute error.

Data Availability

Data sharing is not applicable to this article as no datasets were generated or analysed during the current study.

Conflicts of Interest

The authors declare that they have no competing interests.

Acknowledgments

This work was supported by the Educational Research Fund SGH20Y1529 of A Study on the Teaching Status of Humanities General Education Courses in Private Universities and Reform Strategies: A Case Study of Five Private Universities in Shaanxi. This work was supported by educational research fund YBKT-1801 of Shaanxi Education Bureau.

References

- [1] P. Perdikaris, D. Venturi, and G. E. Karniadakis, "Multifidelity information fusion algorithms for high-dimensional systems and massive data sets," *SIAM Journal on Scientific Computing*, vol. 38, no. 4, pp. B521–B538, 2016.
- [2] Y. Zhou, X. Bai, W. Liu, and L. J. Latecki, "Similarity fusion for visual tracking," *International Journal of Computer Vision*, vol. 118, no. 3, pp. 337–363, 2016.
- [3] Q. Ou, J. W. C. van Lint, and S. P. Hoogendoorn, "Piecewise inverse speed correction by using individual travel times," *Transportation Research Record*, vol. 2049, no. 1, pp. 92–102, 2008.
- [4] C. L. Wen, F. Y. Lv, Z. J. Bao, and M. Q. Liu, "A review of data driven-based incipient fault diagnosis," *Acta Automatica Sinica*, vol. 42, no. 9, pp. 1285–1299, 2016.
- [5] J.-F. Ehlenbröcker, U. Mönks, and V. Lohweg, "Sensor defect detection in multisensor information fusion," *Journal of Sensors and Sensor Systems*, vol. 5, no. 2, pp. 337–353, 2016.
- [6] M. Yousefi and E. Carranza, "Data-driven index overlay and Boolean logic mineral prospectivity modeling in greenfields exploration," *Natural Resources Research*, vol. 25, no. 1, pp. 3–18, 2016.
- [7] B. Rasti, P. Ghamisi, J. Plaza, and A. Plaza, "Fusion of hyperspectral and LiDAR data using sparse and low-rank component analysis," *IEEE Transactions on Geoscience & Remote Sensing*, vol. 55, no. 11, pp. 6354–6365, 2017.
- [8] P. Braca, R. Goldhahn, G. Ferri, and K. D. LePage, "Distributed information fusion in multistatic sensor networks for underwater surveillance," *IEEE Sensors Journal*, vol. 16, no. 11, pp. 4003–4014, 2016.
- [9] A. de Paola, P. Ferraro, S. Gaglio, G. L. Re, and S. K. Das, "An adaptive Bayesian system for context-aware data fusion in smart environments," *IEEE Transactions on Mobile Computing*, vol. 16, no. 6, pp. 1502–1515, 2017.
- [10] B. J. Liu, Q. W. Yang, W. U. Xiang, F. A. Shi-dong, and G. U. Feng, "Application of multi-sensor information fusion in the fault diagnosis of hydraulic system," *International Journal of*

- Plant Engineering & Management*, vol. 22, no. 1, pp. 12–20, 2017.
- [11] M. Zhou, Y. Long, W. Zhang et al., “Adaptive genetic algorithm-aided neural network with channel state information tensor decomposition for indoor localization,” *IEEE Transactions on Evolutionary Computation.*, p. 1, 2021.
- [12] C. Zhang and C. Fagan, “Examining the role of ideological and political education on university students’ civic perceptions and civic participation in Mainland China: some hints from contemporary citizenship theory,” *Citizenship Social & Economics Education*, vol. 15, no. 2, pp. 117–142, 2016.
- [13] Z. Zhang, C. T. Hansen, and M. Andersen, “Teaching power electronics with a design-oriented, project-based learning method at the Technical University of Denmark,” *IEEE Transactions on Education*, vol. 59, no. 1, pp. 32–38, 2016.
- [14] N. A. Batista, “Interprofessional education in the teaching of the health professions: shaping practices and knowledge networks,” *Journal of Hubei Correspondence University*, vol. 7, no. 3, pp. 419–435, 2016.
- [15] Z. Liu, “Teaching reform of business statistics in college and university,” *Eurasia Journal of Mathematics Science and Technology Education*, vol. 13, no. 10, pp. 6801–6807, 2017.
- [16] H. Halwiindi, “Transfusion transmissible infections among voluntary blood donors at the university teaching hospital, Lusaka, Zambia,” *Medical Journal of Zambia*, vol. 42, no. 3, pp. 90–95, 2016.
- [17] G. Odewale, O. J. Adefioye, J. Ojo, F. A. Adewumi, and O. A. Olowe, “Multidrug resistance of *Acinetobacter baumannii* in Ladoke Akintola University Teaching Hospital, Osogbo, Nigeria,” *European Journal of Microbiology & Immunology*, vol. 6, no. 3, pp. 238–243, 2016.
- [18] D. Fekade, T. Weldegebreal, A. M. Teklu et al., “Predictors of survival among adult Ethiopian patients in the national ART program at Seven University Teaching Hospitals: a prospective cohort study,” *Ethiopian Journal of Health Sciences*, vol. 27, no. 1, pp. 63–71, 2017.
- [19] N. Li, K. V. Pyrkova, and T. V. Ryabova, “Teaching communication skills and decision-making to university students,” *Eurasia Journal of Mathematics Science & Technology Education*, vol. 13, no. 8, pp. 4715–4723, 2017.
- [20] Z. V. Shilova and T. V. Sibgatullina, “Methodology features of teaching stochastics to university students of the biology specialization,” *EURASIA Journal of Mathematics, Science and Technology Education*, vol. 13, no. 8, pp. 4725–4738, 2017.
- [21] S. Ohba, “Problems and improvement of teaching handwriting in a regular class to children with writing difficulties,” *The Japanese Journal of Special Education*, vol. 33, no. 4, pp. 15–24, 1996.
- [22] O. Lopez-Zaldivar, A. Verdu-Vazquez, T. Gil-Lopez, and R. V. Lozano-Diez, “The implementation of building information modeling technology in university teaching: the case of the polytechnic university of Madrid,” *International Journal of Engineering Education*, vol. 33, no. 2A, pp. 712–722, 2017.
- [23] F. A. Faduyile, S. S. Soyemi, F. E. Emiogun, and J. O. Obafunwa, “A 10 years autopsy-based study of maternal mortality in Lagos State University Teaching Hospital, Lagos, Nigeria,” *Nigerian Journal of Clinical Practice*, vol. 20, no. 2, pp. 131–135, 2017.
- [24] W. Samuel, B. Mehretu, and G. Samson, “Magnitude and factors associated with post-cesarean surgical site infection at Hawassa University teaching and referral hospital, southern Ethiopia: a cross-sectional study,” *Ethiopian Journal of Health Sciences*, vol. 27, no. 3, pp. 283–290, 2017.
- [25] M. Zhou, Y. Li, M. J. Tahir, X. Geng, Y. Wang, and W. He, “Integrated statistical test of signal distributions and access point contributions for Wi-Fi indoor localization,” *IEEE Transactions on Vehicular Technology*, vol. 70, no. 5, pp. 5057–5070, 2021.
- [26] A. I. Hijas-Gómez, R. M. Egea-Gámez, J. Martínez-Martín, R. González-Díaz, J. I. Losada-Viñas, and G. Rodríguez-Caravaca, “Surgical wound infection rates and risk factors in spinal fusion in a university teaching hospital in Madrid, Spain,” *Spine*, vol. 42, no. 10, pp. 748–754, 2017.
- [27] S. Zimba, P. M. Ntanda, S. Lakhi, and M. Atadzhanov, “HIV infection, hypercoagulability and ischaemic stroke in adults at the University Teaching Hospital in Zambia: a case control study,” *BMC Infectious Diseases*, vol. 17, no. 1, p. 354, 2017.