

Retraction

Retracted: University Education Management Model Based on Artificial Intelligence Programming and Analysis Technology Foundation for Building Models and Applications

Mobile Information Systems

Received 1 August 2023; Accepted 1 August 2023; Published 2 August 2023

Copyright © 2023 Mobile Information Systems. 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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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.

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] M. Huang, "University Education Management Model Based on Artificial Intelligence Programming and Analysis Technology Foundation for Building Models and Applications," *Mobile Information Systems*, vol. 2022, Article ID 7545016, 11 pages, 2022.

Research Article

University Education Management Model Based on Artificial Intelligence Programming and Analysis Technology Foundation for Building Models and Applications

Ming Huang 

School Wuhan University of Technology, Wuhan, Hubei 430063, China

Correspondence should be addressed to Ming Huang; hm@whut.edu.cn

Received 28 March 2022; Revised 14 April 2022; Accepted 22 April 2022; Published 6 June 2022

Academic Editor: Chia-Huei Wu

Copyright © 2022 Ming Huang. 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.

The reform and development of university education management are operating according to their own laws with the changes of the internal environment of education and the social external environment such as politics, economy, science and technology, and culture. As a branch of the mechanism of university education management, the operation mechanism of university education management supports the reform and development of university education management. This article studies the construction of a university education management model based on an intelligent programming analysis method. The research shows that the average score of the control class before the experiment is 63.7748 and the average score of the experimental class is 63.8954. It can be seen that the average score difference between the two classes is only 0.1206. Understand the performance changes of various dynamic forces by gradually contacting complex structures. Through building + intelligent programming, we can preliminarily understand programming and increase children's interest in programming; strengthen programming ability; learn various complex structures; and lay a good foundation for later intelligent programming. This article studies the intelligent programming education of university education management and solves the problems existing in University Programming Education by formulating relevant policies, changing teaching methods and using after-school time, so as to optimize the teaching effect.

1. Introduction

In recent years, the CPC Central Committee and the State Council have successively made a series of major decisions, such as promoting the construction of world-class universities and first-class disciplines as a whole. Higher education is facing new major changes. Student management is an important part of China's university education management system, and it is an important guarantee to train students to be builders and successors of all-round socialist modernization [1]. The reform and development of university education management operates according to its own laws with the changes of the internal environment of education and the external social environment such as politics, economy, science and technology, and culture. As a branch of university education management mechanism, the operating mechanism of university education management supports the reform and development of university education

management [2, 3]. Through the research of university education management, absorbing the experience of other colleges and universities, and combining with the actual work, a complete teaching management control system, namely, "331 + 1" teaching management model, is established, which includes three control systems, corresponding to three control functions, forming a feedback loop, plus an influencing factor. After the founding of the People's Republic of China, through the exploration and practice of several generations of political cadres in Chinese universities, a student management system adapted to the academic year system has been gradually formed. It is a management system based on classes, with line management of schools, colleges, grades and classes as the means, counselors, and class teachers as the main force and concentrated activities as the main form. Through practice in recent years, it has achieved remarkable results in promoting teaching reform, strengthening teaching

infrastructure and improving the quality of personnel training [4]. Whether the operating mechanism of university education management can adapt to the internal and external environment and maintain efficient operation is related to its regulatory role. With the implementation of comprehensive deepening reform, optimizing the management operation mechanism, enhancing the vitality of running a school, making it adapt to the pace of comprehensive reform, and promoting the healthy and rapid development of university education are the new topics currently facing [5, 6].

The rapid development of information technology and the arrival of educational informatization have brought Earth shaking changes to the modern information technology classroom. New teaching contents such as robots, aircraft models, and programming have an increasing impact on the traditional information technology classroom teaching. Among them, the intelligent programming education of university education management, as a rising star, has also had a profound impact on the information technology classroom [7]. This article analyzes and studies the background from three aspects: the needs of the era of artificial intelligence and national strategy, the training and localization of steam education talents, and the needs. Through the inductive summary of the research status at home and abroad, based on the previous research results, this article focuses on the teaching of creative programming and aims at cultivating students' creative programming ability. The teaching design framework of creative programming course is built based on the university education management model based on the intelligent programming analysis method [8, 9]. These are the most cutting-edge technical fields in today's era, and the concept of the intelligent programming analysis method also changes due to the changes of the times. It can be seen that with the changes of the times, programming is being paid attention to, especially the emergence of graphical programming platform, which brings new opportunities for intelligent programming teaching of university education management [10]. Teaching practice of creative programming course is taken for research. Only through intelligent programming and analysis can the application value of teaching projects be tested. Therefore, we first analyze the teaching practice environment and teaching practice objects, organize students to launch the "App Inventor creative programming course questionnaire" test and analyze, and do the pretest [11] of CTS scale.

The training goal of intelligent programming education in university education management is to train students' logical thinking ability, cultivate concentration, improve innovation ability, and cultivate innovative talents in the intelligent age. In this article, the intelligent programming education of Chinese university education management is studied. By making relevant policies, changing teaching methods and using spare time, the problems existing in university programming education are solved and the teaching effect is optimized [12, 13]. The intelligent programming analysis method is a fundamental reform of education and teaching system. It implements elective programming, flexible programming, implementation of target management, and respect for students' personality

development. It is an educational management system suitable for the development of China's socialist market economy and higher education popularization, and has great advantages compared with the traditional academic year system or academic year intelligent programming. By learning to use this kit, we can solve simple problems, master some basic knowledge, and develop good hands-on ability. Understand the performance changes of various powers by gradually contacting with complex structures. Through building + intelligent programming, we can get a preliminary understanding of programming and increase children's interest in programming; strengthen programming ability; learn all kinds of complex structures; and lay a good foundation for later intelligent programming [14, 15]. In the future era, innovative talents will play an important role in the development of the country. Especially at present, the trend of informatization has been irreversible, so education must also keep up with the call of the times, improve its own educational ideas and methods, and adopt more modern teaching methods to train students' innovative ability and give full play to the advantages of the information age, so programming is particularly important.

This article studies and innovates the above problems from the following aspects:

- (1) A university education management model based on the intelligent programming analysis method is proposed. This article studies the construction of the university education management model, establishes a complete teaching quality evaluation system, and adheres to regular evaluation. Actively carry out all kinds of teaching evaluation in practice, including department-level teaching work evaluation, curriculum quality evaluation, practical teaching evaluation, professional evaluation, classroom teaching quality evaluation, experimental course quality evaluation, and teaching and research office work evaluation.
- (2) The design pattern of the university education management model based on the intelligent programming analysis method is constructed. When designing the university education management model based on the intelligent programming analysis method according to the activity theory, in order to make the effect more obvious, the core elements and secondary elements of the education management model should be designed, and the evaluation design should be carried out, which should be applied in the whole process of the activity.

The article is divided into five parts, and the organizational structure is as follows:

The first chapter introduces the research background and current situation of the university education management model, and puts forward and summarizes the main tasks of this article. The second chapter introduces the related work of the university education management model at home and abroad. The third chapter introduces the principle and model of intelligent programming analysis method. The

fourth chapter introduces the implementation of the university education management model based on the intelligent programming analysis method and compares the performance of the model through experiments. The fifth chapter is the summary of the full text.

2. Related Work

2.1. Research Status at Home and Abroad. Busco et al. put forward the standard system based on total quality management, established a perfect standardized system, improved the quality monitoring index and information feedback system, integrated the student management team of “combination of specialty and part-time,” and built a diversified “three-dimensional model of student management,” forming a working pattern of joint training of schools and departments, and complementary advantages of universities and communities, performing their respective duties and jointly managing, which laid the ideological foundation and provided services for the training of innovative talents in schools [16]. Croucher et al. proposed to create and implement a three-dimensional model of student management with “one body, two wings and three navigation.” to build a quality management guarantee system for students’ work and to promote the cultivation of applied innovative talents [17]. Ping et al. put forward that whether the operating mechanism of university education management can adapt to the changes of the internal and external environment of education and maintain efficient operation is related to the exertion of its regulatory role, which in turn determines the degree of adaptation of university education to economic and social development and directly affects the reform and development of university education [18]. Proskuryakova et al. put forward a series of reforms of university education, which expanded the resources of university education, stimulated the vitality of university education, promoted the transformation of school-running mode to adapt to the socialist market economic system, and laid a solid foundation for the popularization of higher education in China [19]. Boling et al. put forward the process control method, continuous improvement method, and characteristic work method of total quality management to infiltrate into every link of the student management quality monitoring and evaluation system, so that the key factors affecting the quality of students’ training and key links in the process are always under control, forming a closed cycle and sustainable improvement. The model is not only a standard system, but also a scientific and orderly refined management system. It is the reconstruction and practice of the traditional student management model, and it has shown great vigor and vitality [20]. DingJian et al. put forward that traditional university education follows the educational concept of “imparting knowledge” and adopts indoctrination teaching method. In most cases, there is no discussion teaching in education, and there is little communication between teachers and students, let alone deep communication. Under the traditional university education, student learning is a typical individual learning [21]. Sun et al. pointed out that the adaptability of the corresponding system and mechanism becomes particularly important when major changes take

place in any field. Without exception, the operating mechanism of university education management will also face the adaptability problem with the comprehensive deepening reform of university education in China. Optimizing the operating mechanism of university education management, further enhancing the vitality of running a university, adapting the operating mechanism of management to the pace of comprehensive reform, and promoting the healthy and rapid development of university education are the new topics currently facing. The premise of analyzing and optimizing the operation mechanism of university education management is to have a reasonable and practical model [22]. Kubičková et al. proposed that from the perspective of the operation mechanism of university education management, the essence of the reform and development of university education is the process of continuous adjustment and optimization of the authority of management elements “people, things, finance, materials and information.” The management operation mechanism model of the university education management model needs to be established around the core elements of university management, such as “people, things, finance, materials and information” [23]. Deja puts forward that the reform and renewal of the operation mechanism mode of university education management is a process of continuous transformation to adapt to the changes of social and economic development. The model divides the management of human, affairs, finance, materials, and information elements of the university education management system into six indicators and integrates the six different aspects into one system, which not only ensures the comprehensive, it can realize the microregulation in the local dimension [24]. Christensen and Gornitzka proposed that the CPC Central Committee and the State Council have successively made a series of major decisions, emphasizing that it is one of the major decisions to focus on improving the quality of higher education development and comprehensively promote the construction of world-class universities and first-class disciplines [25].

2.2. Research Status of University Education Management Model Based on Intelligent Programming Analysis Method. Based on the intelligent programming analysis method, this article studies the construction of the university education management model, establishes a complete teaching quality evaluation system, and insists on regular evaluation. Actively carry out all kinds of teaching evaluation in practice, including department-level teaching evaluation, curriculum quality evaluation, practical teaching evaluation, professional evaluation, classroom teaching quality evaluation, experimental class quality evaluation, and teaching and research section work evaluation. Formulate teaching work norms and realize the standardization of teaching management. Teaching management regulations are the basis for implementing teaching management. We constantly revised and improved in practice, and gradually formed a complete set of teaching management system. In the analysis method of intelligent programming in university education management, both theory and practice are emphasized, which

not only requires teachers to patiently explain the logical structure of programming, but also requires students to give full play to their imagination to boldly write programs and practice more. It takes a lot of time and energy to cultivate students' ability to use programming thinking to solve practical problems. It is very difficult to use these few class hours to achieve application-oriented teaching effect. The traditional teaching mode of "teaching practice" is widely used in teaching, and teachers are still dominant, and the teaching effect is not ideal. In order to change this teaching situation, we can adopt the learning activity-centered teaching mode. Therefore, the core task of intelligent programming analysis teaching is not to develop learning resources, but to design and organize learning activities. Therefore, this study explores the learning activities created by the application of graphical programming platform in detail, hoping to give some reference value to the current teaching of intelligent programming analysis of information technology in universities.

3. Principle and Model of Intelligent Programming Analysis Method

Intelligent programming originates from new media art and refers to the use of programming to create images, animation, and interactive devices. John Maeda, Dean of Rhode Island School of design, once explained the meaning of creative programming in his book *creative code*. John Maeda founded the aesthetics and computing group at MIT and promoted the transformation from stem to steam. He juxtaposed art and technology with advanced computer programs and redefined the use of electronic media as an expression tool. Students not only need a high level of English, but also need to be familiar with grammar instructions, which is very difficult for students. However, students' abstract thinking is poor. This language learning will inevitably make students feel boring and obscure. Over time, students will lose interest in learning. The emergence of intelligent programming analysis methods has completely changed the shortcomings brought to students by the traditional programming environment. When designing the teaching process of intelligent programming, the author thinks about the following three problems. First, how to give play to the advantages of intelligent programming and analysis of various elements; let students design novel, interesting, and valuable app applications and enhance their interest in programming. Second, how to infiltrate the basic ideas and skills of computational thinking in each teaching link. Third, what kind of intelligent programming activities should be designed so that students can understand the relationship between computing thinking and other disciplines and life, and use computing thinking to think and solve problems. Thus, the teaching process design diagram based on the intelligent programming analysis method is drawn, as shown in Figure 1.

3.1. Problem Introduction. Teachers create problem situations in connection with real life and at the same time put forward relevant preset questions. Under the guidance of teachers, students understand and characterize the preset

problems and put forward their own problems, leading and leading the whole project with engineering thinking.

3.2. Background Experience Study and Discussion. On the basis of analyzing the problems, provide students with more learning activities of intelligent programming background experience, so as to support them to learn relevant knowledge later and accumulate necessary practical experience. The activity teacher will provide students with interdisciplinary learning materials related to the project and help them establish the connection of knowledge points of different disciplines. Students mainly rely on scientific and mathematical experience to complete autonomous learning, summarize, and participate in speech and interaction through the PAD discussion area.

3.3. Collaborative Problem Solving. The accumulated knowledge and experience will help students play a role in solving problems. In this session, the teacher will review the problem again, help students to decompose modular tasks, and use task lists, mind maps, and program flow charts to represent and model data, so as to help students design or choose solutions to problems. If you cannot find a solution to the problem, you will go back to the previous link, and students will continue to cycle through background experience learning and problem-solving, and finally find a feasible solution.

When designing the university education management model based on the intelligent programming analysis method according to the activity theory, in order to make the effect more obvious, the core elements and secondary elements of the education management model should be designed, and the evaluation design should be carried out, which should be applied in the whole process of the activity. The purpose of educational management model design is to effectively carry out learning tasks, effectively implement the learning activity process, and help students master programming knowledge and cultivate their ability in the learning process. The design pattern of the university education management model based on the intelligent programming analysis method is shown in Figure 2.

The traditional programming teaching generally focuses on teaching grammar and lacks practical thinking and skills. Intelligent programming is to master the program optimization standard in practice, cultivate algorithmic thinking, and get used to thinking and expressing in programming language. Intelligent programming is not the indoctrination of single software function and usage, but the cultivation of students' knowledge and ability to construct programming. Explore the development path of steam education in senior high school, fully integrate the students' background experience learning with the knowledge of science, technology, engineering, and art and mathematics, train them to think from the perspective of multiple disciplines, from the generation of teaching objectives in steam guided appinventor creative programming course, the analysis of learners based on steam cognition. The teaching design framework of creative programming course is constructed from four aspects:

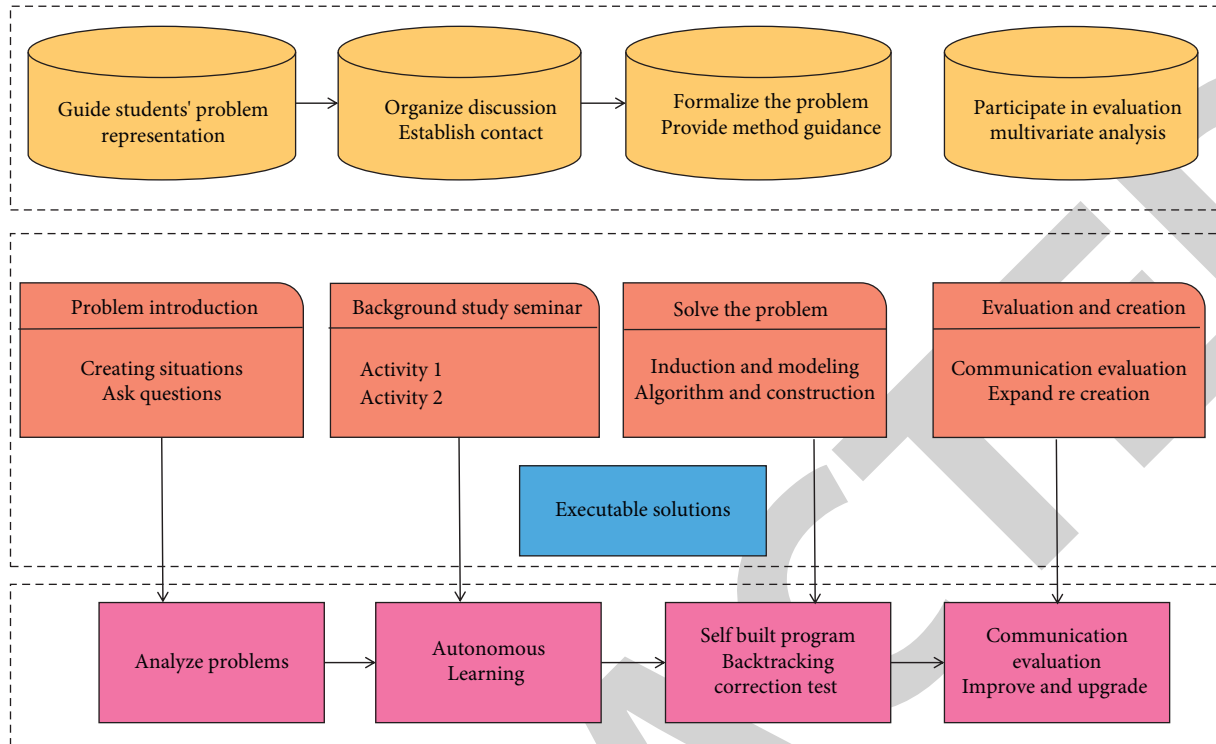


FIGURE 1: Design of teaching process based on the intelligent programming analysis method.

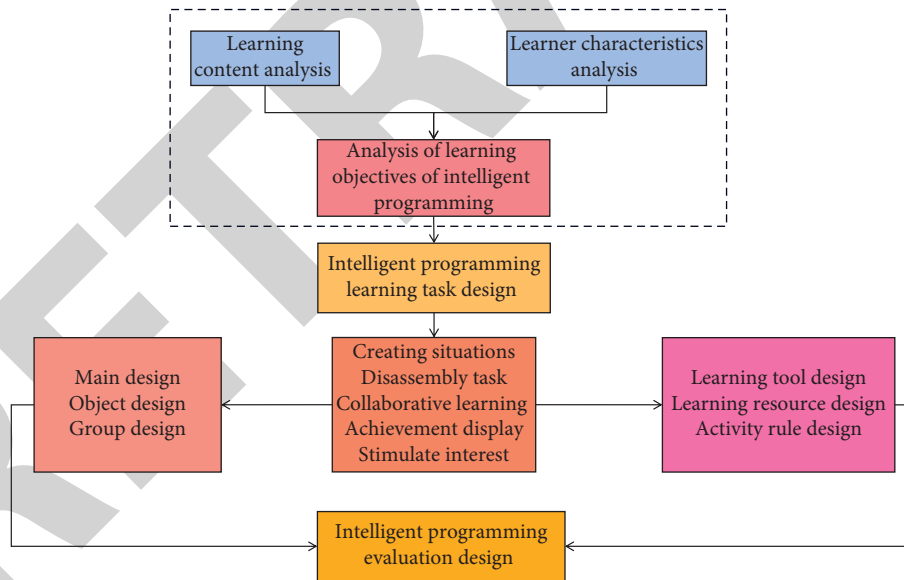


FIGURE 2: Design pattern of the university education management model based on the intelligent programming analysis method.

steam optimization of teaching strategy design in appinventor creative programming course, steam development of teaching content throughout appinventor creative programming course, steam service, and teaching evaluation and modification of teaching in appinventor creative programming course.

According to the normal distribution theory, the maximum error range 3σ is used as the basis for discrimination, and a set of measured values $x_i (1, 2, \dots, n)$ is set, with the

average sample value \bar{x} and the deviation $\Delta x_i = x_i - \bar{x}$, and the standard deviation is calculated according to the following formula:

$$s = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1}} = \sqrt{\frac{\sum_{i=1}^n (\Delta x_i)^2}{n-1}}. \quad (1)$$

If the deviation of a measured value $x_i (1 \leq i \leq n)$ is $|\Delta x_i| > 3s$, x_i is considered an abnormal value.

The biggest advantage of this method is that it is simple and convenient and does not need to look up the table, but it is not accurate for small samples. It often hides some outliers and makes the mistake of “keeping false.” For example, in case of $n \leq 10$, the deviation Δx_i caused by any measured value can meet $|\Delta x_i| \leq 3s$, and it is impossible to be greater than $3s$. Of course, it is possible to hide the abnormal value. $2s$ is also used in some occasions with strict requirements, but $n \leq 5$ measurement cannot eliminate bad values.

Let (X_1, X_2, \dots, X_n) be the sample from population x , and check the following assumptions at level α , assuming that $H_0: X$ obeys the normal distribution $N(\mu, \sigma^2)$. The W -Test used to test this hypothesis is

$$W = \frac{\sum_{k=1}^{\lfloor n/2 \rfloor} a_k (X_{(n+1-k)} - X_{(k)})^2}{\sum_{k=1}^n (X_{(k)} - \bar{x})^2}, \quad (2)$$

where $X_{(1)} \leq X_{(2)} \leq \dots \leq X_{(n)}$ is the order statistic from the sample. For a given significance level, the rejection domain is $W \leq W_\alpha$, where W_α is a quantile of W distribution when H_0 is true, and W_α and a_k can be obtained by looking up the table.

The process of D test is similar to that of the W -test, and the statistics used are different. The order statistics of samples are

$$D = \frac{\sum_{i=1}^n (i - n + 1/2) X_{(i)}}{(\sqrt{n}^3) \sqrt{\sum_{i=1}^n (X_{(i)} - \bar{x})^2}}, \quad (3)$$

where $X_{(1)} \leq X_{(2)} \leq \dots \leq X_{(n)}$ is the order statistic from the sample. The approximate standardized random variable of d is $Y = \sqrt{n}(D - 0.28209479)/0.02998598$. For a given significance level, the rejection domain of D test is $Y \leq Y_{\alpha/2}$, and $Y_{\alpha/2}$ can be obtained by looking up the table.

For the random variable $x \sim N(0, \sigma_x^2)$ with known normal and independent distribution, its autocorrelation coefficient is

$$\rho(r) = \delta(r) = \begin{cases} 1, & r = 0, \\ 0, & r \neq 0. \end{cases} \quad (4)$$

Obviously, when $r \geq 1$, $\rho(r) = 0$. However, we can only get the estimated value $\hat{\rho}(r)$ of the sample autocorrelation coefficient, and $\hat{\rho}(r)$ is generally not equal to $\delta(r)$, so we need to use Bartlett formula.

If $\rho(r)$ tends to zero at $r > M$, its variance is when n is large enough:

$$D[\hat{\rho}(r)] \approx \frac{1}{N} \sum_{m=-M}^M \hat{\rho}^2(m) (r > M). \quad (5)$$

And when $r > M$, $\hat{\rho}(r)$ is approximately normal distribution.

Obviously, if $\hat{\rho}(r)$ is the autocorrelation coefficient of white noise, then $M = 0$:

$$D[\hat{\rho}(r)] \approx \frac{1}{N} (r \approx 0). \quad (6)$$

According to the statistical test and 2σ principle, when

$$|\hat{\rho}(r)| \leq 1.96 \sqrt{\frac{1}{N}} \approx 2 \sqrt{\frac{1}{N}}, \quad (7)$$

$$\sqrt{N} |\rho(r)| \leq 2.$$

When it is zero, it can be considered that the probability of $\hat{\rho}(r)$ is 95%, so we can accept the estimation of $\hat{\rho}(r) = 0 (r > 0)$; that is, the data are independent.

Replace u_i with x , replace u_o with y , and convert the differential equation into the following difference equation:

$$x(n)\tau \frac{y(n) - y(n-1)}{t} + y(n). \quad (8)$$

Tidy up

$$y(n) = \frac{t}{\tau + t} x(n) + \frac{\tau}{\tau + t} y(n-1). \quad (9)$$

If $a = t/\tau + t$ is taken, the above formula becomes

$$y(n) = ax(n) + (1-a)y(n-1). \quad (10)$$

When using moving average filtering, the fitting functions of the adjacent two points to be estimated are different. New data information is continuously introduced with the passage of the estimation points. Therefore, the moving average algorithm can truly and carefully reflect the basic characteristics and change law of the measurement data, so as to obtain satisfactory filtering results. The intelligent programming analysis method is transformed into a series of instruction blocks. In the programming process, learners only need to drag the blocks to achieve the programming effect. The whole process is very intuitive, simple, and interesting. In the programming environment, students think and analyze specific problems with the help of the living situation created by the programming platform, so as to master the basic principles and ideas of program design, cultivate computational thinking, and apply it flexibly in the living situation.

4. Realization of University Education Management Model Based on Intelligent Programming Analysis Method

4.1. Analysis of University Education Management Model. The teaching of university education management based on the intelligent programming analysis method should adopt “mixed learning” mode, that is, the combination of online learning and classroom discussion. The group designed by intelligent programming analysis method refers to the community in which subjects participate in learning activities and form a connection in order to achieve a consistent goal during learning. Intelligent programming classroom advocates the concept of collaborative learning and inquiry learning. The learning group formed between students, the class students who complete learning goals together, and the community of mutual learning between teachers and students can all be called the group in programming classroom. As the online link of teaching, students learn online microcourse videos before class and

complete the corresponding learning tasks. In class, students and teachers discuss and solve questions in online learning together. Make a syllabus. Teaching syllabus is the main guarantee to achieve the goal of talent training, the concrete embodiment of teaching plan and the concrete measure to achieve the control of teaching objectives. When drawing up the syllabus, we take the basic requirements of the curriculum as the basis and under the condition of ensuring the optimization of the curriculum system specify the substantive contents such as knowledge and skills that students must master, and focus on the cultivation of students' abilities. In the university education management model system, the three control systems all have their own characteristics and specific contents. They are interrelated, restricted, and coordinated properly, which can form the best operation mechanism and maximize the management efficiency. The design of secondary elements includes learning resources, activity rules, and the design of learning tools. It also includes the method of designing learning tools in programming classroom, its specific purpose, and the actual effect. The design criteria of learning rules cover the design of rules related to testing, classroom, cooperation, question and answer, incentive and reward, etc. The design of learning resources mainly includes the push and selection of learning resources and related generative learning resources.

Some people think that the future teaching should pay more attention to the interaction between teachers and students and the exploration of knowledge. In the process of university education management, we work closely around the design scheme of the control system, strengthen the effective control of university education management, improve the management efficiency, and improve the teaching quality in an all-round way. By analyzing the existing data of intelligent programming analysis method, it is found that there are still many differences in the definition of the university education management model and the division of its system. For example, some scholars believe that the mode of university education management is such an operating mechanism as "the state regulates the talent market and the talent market guides universities"; there is also a view that it is a management mode of "state-directed schools, universities run schools independently, and market-guided training." At the same time, the school regularly organizes bidding projects to tackle key problems collectively, and some researches have won national and provincial teaching achievement awards, which have played a good guiding role in the teaching reform of our school.

4.2. Experimental Results and Analysis. During the implementation of the experiment, the standardized examination results of information technology course of 35 students in class 1 of the experimental class and 35 students in class 2 of the control class at the end of the last semester and the end of the next semester are used as the pretest and post-test results of the experiment. Before analyzing the post-test scores of the experimental class and the control class, first analyze the pretest score data, and the results are shown in Table 1.

Before the experiment, the average score of the control class was 63.7748 and the average score of the experimental class was 63.8954. It can be seen that the average score difference between the two classes is only 0.1206. The *t*-test results of independent samples of pretest scores are shown in the table. The observed value of *F*-test is 0.357, *SIG* = 0.550 > 0.05; that is, it is greater than the significance level. It is considered that there is no significant difference in variance. It can be seen from the *t*-test results that *sig* = 0.952 > 0.05, indicating that there is no significant difference between the pretest results of the experimental class and the control class; that is, the results of the two classes are similar before the experiment. The pretest results of the independent sample *T*-test are shown in Table 2.

To a certain extent, the change law of students' grades can reflect some situations outside students' study. For example, some students' grades have always been very good, but their grades have obviously declined due to poor physical condition, family financial difficulties, bad relationship between classmates, mental disorder, and other reasons. Therefore, it is of great significance for managers to pay attention to the change law of students' grades. In addition, it is instructive for both students and teachers to give the distribution of students' academic achievements. In this experiment, three experiments were conducted in four classes, and the results of each student in different semesters are shown in Figures 3–5.

From Figures 3–5, it can be seen that the semester scores of students in general and class 2 are obviously decreasing, while those of students in class 3 and class 4 are obviously increasing. In addition, we can also clearly see the positions of students in different semesters in the class and the changes of students' scores in the previous and next semesters. It is found that these changing rules can provide different services for different personnel. The quality management model of education emphasizes taking students as the focus, highlighting the principle of people-oriented and prevention as the first priority, pursuing scientific development with facts as the basis for decision-making, paying attention to the role of research, taking system as the basis for management, emphasizing the process as the basic method of running a school according to law, implementing the whole process control with records as the evaluation evidence, paying attention to positive incentives, taking satisfaction as the quality purpose, and persisting in continuous improvement. For students, through the distribution chart of semester grades, they can clearly understand their position in the class and the changes of their grades, so as to further analyze the reasons for their learning progress or retreat and take corresponding measures.

For student managers, they can understand the overall learning situation of the class through the distribution chart of semester grades and pay timely attention to the students whose grades have decreased significantly, so as to help them find out the reasons for the decline. In this way, it is possible to avoid some unexpected things caused by poor physical condition, family financial difficulties, mental disorders, and other reasons, so as to prevent them. At the same time, students who have made progress in study can be encouraged in time to make better achievements in the future. In this

TABLE 1: Descriptive statistical results of the pretest results.

Class	N	Mean value	Standard deviation	Standard error of mean
Control class	35	63.7748	14.3478	2.3598
Experimental class	35	63.8954	13.5897	2.2454

TABLE 2: Pretest results of the independent sample T-test.

	Leven detection		T-test of mean value equation				
	F	Sig.	t	Sig.	Mean difference	94% confidence interval	
						Lower limit	Upper limit
Assuming equal variance	0.357	0.550	-0.058	952	-0.19441	-6.81235	-6.484
Assuming that the variance is unequal	—	—	-0.058	952	-0.19412	-6.84124	-6.458

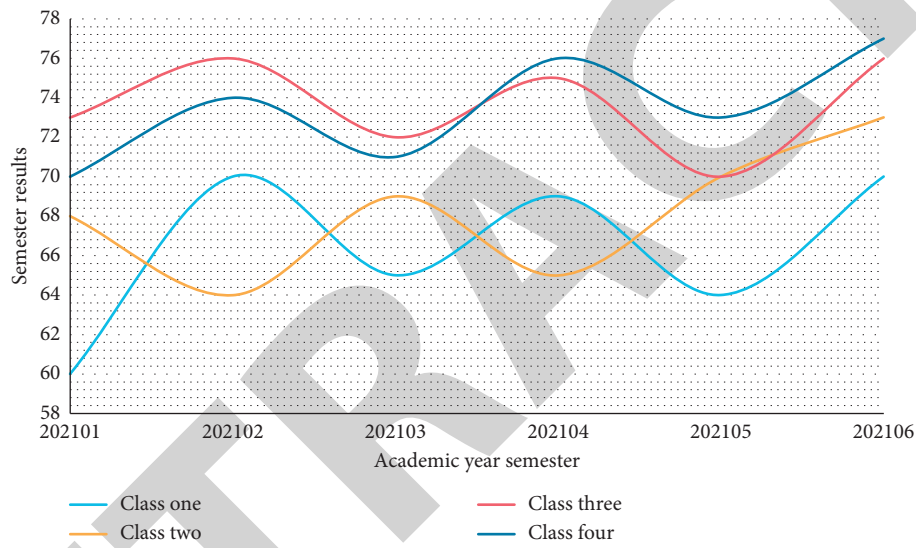


FIGURE 3: Changes of the distribution of students' semester grades in computer science department.

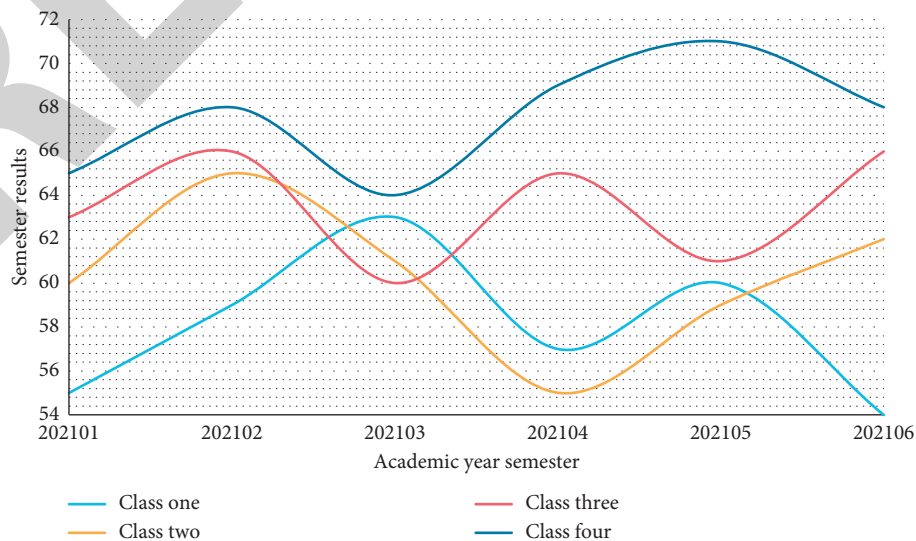


FIGURE 4: Distribution and change of students' semester grades in computer science department.

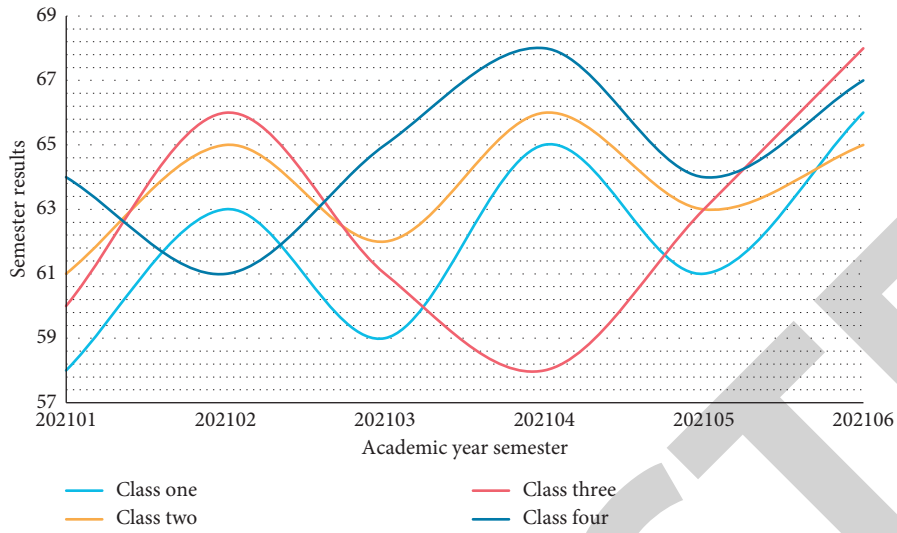


FIGURE 5: Distribution and change of students' semester grades in computer science department.

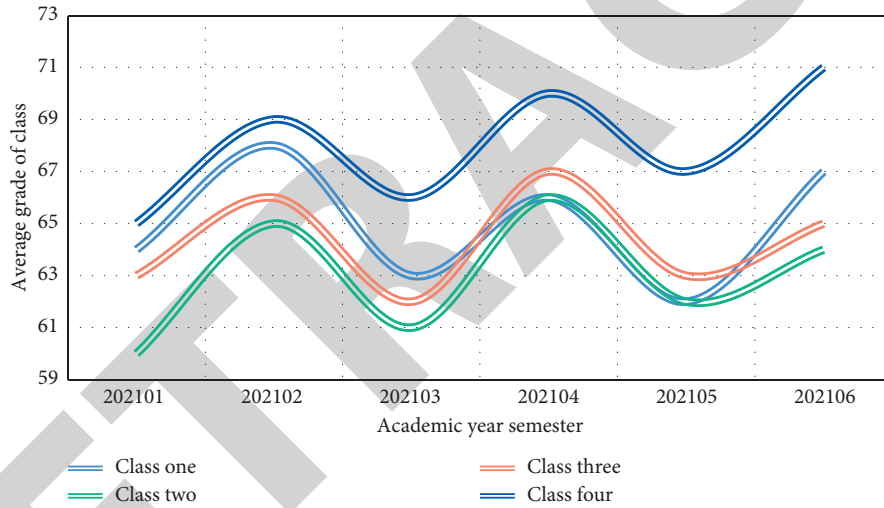


FIGURE 6: Distribution chart of semester scores of different classes in the Computer Department of Grade 2021.

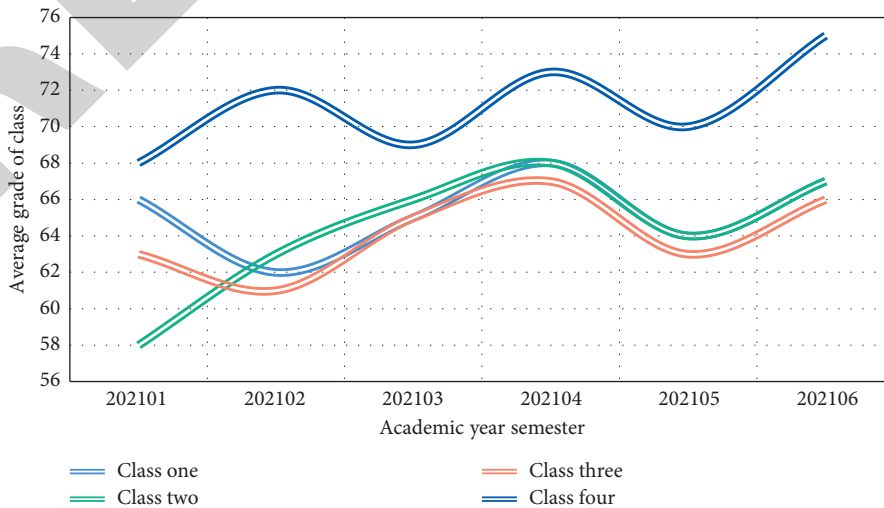


FIGURE 7: Distribution chart of semester scores of different classes in the Computer Department of Grade 2021.

experiment, the semester grades of different classes in grade 2021 are tested, and two experiments are carried out, respectively. The results are shown in Figures 6 and 7.

From Figures 6–7, we can see that the average scores of Class 4 are basically in front of the whole grade for several semesters, while the scores of other classes have changed to varying degrees; especially, the scores of Class 2 have dropped significantly. According to this information, counselors can investigate and analyze different classes, analyze the characteristics of classes with good average scores all the time, and analyze the specific reasons for classes with obvious decline in scores, so that they can know the situation of classes in time and be very helpful for future management. We realize that the quality of education coexists with the risk of running a school, and all kinds of “dangerous sources” such as possible injuries, unexpected diseases, and material and property losses make the quality of school education face unprecedented risks of running a school. Therefore, it is particularly important to pay attention to the health and safety level of teachers, students, and staff to a new level to provide a solid safety foundation for teaching.

5. Conclusions

The construction of the university education management model operates according to its own laws with the changes of the internal environment of education and the social external environment such as politics, economy, science and technology, and culture. As a branch of university education management mechanism, the operation mechanism of the university education management model supports the reform and development of university education. The key to strengthening the timely control of university education management process is to establish a good university education management model and form a teaching process control system with teaching quality control as the main body and various teaching evaluation as the guarantee. Take various measures to mobilize the enthusiasm of teaching and learning, and constantly adjust, reform, and improve the teaching process, so as to improve the teaching quality. The university education management model based on the intelligent programming analysis method is applied to teaching practice. Through case analysis, effectiveness summary, performance analysis, and other forms, it is verified that the design of university education management model based on the intelligent programming analysis method can stimulate students' interest in learning, improve students' performance in information technology, and exercise students' problem-solving ability and hands-on operation ability. In terms of logical thinking ability and innovation ability, the effect is quite remarkable. The research shows that the average score of the control class before the experiment is 63.7748 and the average score of the experimental class is 63.8954. It can be seen that the average score difference between the two classes is only 0.1206. The construction of the university education management model is the basis for studying its characteristics, development trend, and adaptability. The essence of the reform and development of university education based on the intelligent

programming analysis method is the process of continuous adjustment and optimization of the authority of management elements “human, affairs, finance, materials and information” between centralization or decentralization.

Data Availability

The data used to support the findings of this study are included within the article.

Conflicts of Interest

No competing interests exist concerning this study.

References

- [1] H. Bakırcı, M. Çalık, and S. Çepni, “The effect OF the common knowledge construction model-oriented education ON sixth grade students' views ON the nature OF science,” *Journal of Baltic Science Education*, vol. 16, no. 1, pp. 43–55, 2017.
- [2] T. Jaowiec, I. Micula, and P. Maloch, “Model of military university management,” *Management*, vol. 30, 2021.
- [3] M. Arnot, L. Casely-Hayford, and T. Yeboah, “Post-colonial dilemmas in the construction of Ghanaian citizenship education: national unity, human rights and social inequalities,” *International Journal of Educational Development*, vol. 61, pp. 117–126, 2018.
- [4] T. Ramus and A. Vaccaro, “Stakeholders matter: how social enterprises address mission drift,” *Journal of Business Ethics*, vol. 143, no. 2, pp. 307–322, 2017.
- [5] B. Keshtegar, M. Bagheri, D. Meng, R. Kolahchi, and N. T. Trung, “Fuzzy reliability analysis of nanocomposite ZnO beams using hybrid analytical-intelligent method,” *Engineering with Computers*, vol. 37, pp. 1–16, 2020.
- [6] Y. Hu, Q. Q. Li, and S. W. Hsu, “Interactive visual computer vision analysis based on artificial intelligence technology in intelligent education,” *Neural Computing & Applications*, vol. 31, pp. 1–19, 2021.
- [7] S. Syed and H. Malik, “Gene expression programming (GEP) based intelligent model for high performance concrete comprehensive strength analysis,” *Journal of Intelligent and Fuzzy Systems*, vol. 35, pp. 1–16, 2018.
- [8] J. Liu, C. Wang, and X. Xiao, “Internet of things (IoT) technology for the development of intelligent decision support education platform,” *Scientific Programming*, vol. 2021, no. 3, pp. 1–12, 2021.
- [9] I. T. M. T. Ive, “Intelligent tutor for programming system using multiple intelligences,” *IEEE Latin America Transactions*, vol. 16, no. 2, pp. 634–638, 2018.
- [10] M. M. Rahman, Y. Watanobe, and K. Nakamura, “A neural network based intelligent support model for program code completion,” *Scientific Programming*, vol. 2020, no. 1, pp. 1–18, 2020.
- [11] J. Li and L. Yang, “Robust sparse principal component analysis by DC programming algorithm,” *Journal of Intelligent and Fuzzy Systems*, vol. 39, no. 3, pp. 3183–3193, 2020.
- [12] M. G. Hasan, Z. Ashraf, and M. F. Khan, “Multi-choice best-worst multi-criteria decision-making method and its applications,” *International Journal of Intelligent Systems*, vol. 37, 2021.
- [13] E. Bellodi, K. Satoh, and M. Sugiyama, “Summarizing significant subgraphs by probabilistic logic programming,” *Intelligent Data Analysis*, vol. 23, no. 6, pp. 1299–1312, 2019.

- [14] L. Chen, M. Y. Lee, and J. Wu, "Analysis of higher education and management model based on cognitive anthropology," *Cognitive Systems Research*, vol. 52, no. DEC, pp. 909–916, 2018.
- [15] X. Wei, Q. Gu, Y. Luo, and G. Chen, "The reform of computer experiment teaching based on O2O model," *Computer Applications in Engineering Education*, vol. 27, no. 1, pp. 102–111, 2019.
- [16] C. Busco, C. Dooner, and A. d'Alencon, "Universidad de Chile: self-assessment and its effects on university's management," *Higher Education*, vol. 75, no. 3, pp. 431–447, 2018.
- [17] G. Croucher, W. Wen, H. Coates, and L. Goedegebuure, "Framing research into university governance and leadership: formative insights from a case study of Australian higher education," *Educational Management Administration & Leadership*, vol. 48, no. 2, pp. 248–269, 2019.
- [18] W. Ping, K. M. Chao, C. C. Lo, and Y. S. Wang, "Using ontologies to perform threat analysis and develop defensive strategies for mobile security," *Information Technology and Management*, vol. 18, no. 1, pp. 1–25, 2017.
- [19] L. Proskuryakova, D. Meissner, and P. Rudnik, "The use of technology platforms as a policy tool to address research challenges and technology transfer," *The Journal of Technology Transfer*, vol. 42, no. 1, pp. 206–227, 2017.
- [20] J. R. Boling, D. T. Mayo, and M. M. Helms, "Complementarity merger as a driver of change and growth in higher education," *Journal of Organizational Change Management*, vol. 30, no. 1, pp. 27–42, 2017.
- [21] J.-L. Ding and B. Shi, "Analysis and Modeling of Enterprise Competitive Intelligence Based on Social Media User Comments," *Entrepreneurship Research Journal*, vol. 11, no. 2, pp. 47–69, 2021.
- [22] H. Sun, C. T. Lo, B. Liang, and Y. L. B. Wong, "The impact of entrepreneurial education on entrepreneurial intention of engineering students in Hong Kong," *Management Decision*, vol. 55, no. 7, 1393 pages, 2017.
- [23] L. Kubičková and M. Toulová, "Internationalization of higher education: theoretical and empirical investigation of its influence on university institution rankings," *International Journal of Management Reviews*, vol. 15, no. 7, p. 217, 2018.
- [24] M. Deja, "Information and knowledge management in higher education institutions: the Polish case," *Online Information Review*, vol. 43, no. 7, pp. 1209–1227, 2019.
- [25] T. Christensen and A. Gornitzka, "Reputation management in complex environments-A comparative study of university organizations," *Higher Education Policy*, vol. 30, no. 1, pp. 123–140, 2017.