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Retraction

Retracted: Construction of Educational Model for Computer Majors in Colleges and Universities

Wireless Communications and Mobile Computing

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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

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

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

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

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

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

References

[1] B. Jiang and Y. Li, "Construction of Educational Model for Computer Majors in Colleges and Universities," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 6737202, 7 pages, 2022.

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Research Article

Construction of Educational Model for Computer Majors in Colleges and Universities

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With the rapid development of the Internet era and the high popularity of computers, China's economy, politics, and culture have made rapid progress in recent years. In order to adapt to this era of rapid change, China's higher education has also undergone great changes and carried out reform and innovation. As the top priority in the Internet era, computers should be reformed first. The traditional education model is mainly teacher-centered and classroom-centered. The disadvantages of this teaching mode are that students' subjective initiative cannot be fully developed and brought into play. Traditional teaching pays attention to knowledge teaching and ignores ability training. It emphasizes speaking and neglects practice. Therefore, in order to meet the development needs of the new era and cultivate modern talents, colleges and universities began to explore the innovation and entrepreneurship education mode. There is an application of TRIZ theory to the cultivation of innovation and entrepreneurship education, and TRIZ theory is a theory for solving invention problems. Its main content is to find its own laws in the process of technological evolution and analyze the laws to get a general solution, but there are many obstacles in exploring the mode of innovation and entrepreneurship education; for example, many governments do not support this education reform and do not broadcast relevant education and teaching funds for schools, resulting in uneven configuration of software and hardware in schools. According to the survey, the proportion of innovation and entrepreneurship education in the eastern coastal areas is as high as 70%, while the proportion of innovation and entrepreneurship education in the central and western regions is only 10%. This set of data shows that regional differences are the main reason for the differences in education development. In terms of the proportion of education funds, although the annual education funds will gradually increase in recent years, the proportion is still a drop in the bucket in front of huge fiscal revenue, with the highest being only 0.1%. Therefore, in order to improve the current situation of innovation and entrepreneurship education mode in colleges and universities, according to their own characteristics, the reform is carried out from the aspects of practical ability, competition participation, and training plan, and the BP neural network model is introduced to predict and analyze the effect of teaching methods. The results of this paper are investigated and analyzed. Finally, the investigation on the development of KAB course and SYB course and the analysis on the stability and error of BP neural network are within the allowable range, this shows that the model established in this paper is more favored by students than the traditional teaching methods, more in line with the social reality, the effect is more ideal, and the result is more stable.

1. Introduction

In this era of big data, the innovation and competitiveness of both countries and individuals are growing steadily. Especially after entering the 21st century, with the emergence of computers and the popularization of networks, the era of "Internet" has quietly come, which has promoted the development of a series of industries. However, the development of industries depends on the promotion of talents in various fields; so, the selection standards of talents are gradually improved [1–3]. The main sources of talents are universities. Therefore, according to the development trend of the times, cutting knife colleges and universities carry out the corresponding education model reform. However, according to statistical data, 1.5% of schools in China carried out innovation and entrepreneurship education from 2013 to the end of

2020, while the total amount of innovation and entrepreneurship education funds accounted for only 0.1% of the total national income in recent years. According to the statistical bulletin on the development of education industry in 2018, at the end of 2018, schools carrying out innovation and entrepreneurship education in the southeast coastal areas accounted for 30%, while schools carrying out innovation and entrepreneurship education in the western region accounted for only 1% [4–6]. The national innovation and Entrepreneurship Education Fund were only 10 million, accounting for 0.0025% of the national total annual income, an increase of 5.2% compared with last year. Figure 1 is the statistical chart of innovation and entrepreneurship education funds in 2018, and Figure 2 is the proportion of innovation and entrepreneurship funds from 2015 to 2018 [7–9].

As can be seen from the figure above, the investment in entrepreneurship is still far less than that in other regions in recent years, and the investment in education is still far less than that in other regions. Because the innovation and entrepreneurship education has been carried out for a short time and its own background is low, many colleges and universities have not found the correct teaching method, which leads to the innovation and entrepreneurship education only staying on the surface without much action. The specific manifestation is that the teaching method stays at the theoretical level and does not carry out practical teaching. Teachers have low qualifications and ability and cannot shoulder the important task of teaching courses. The implementation of teaching is divorced from practical activities, and it is not closely connected with ties. Instead of teaching according to students' professional characteristics, they teach according to the so-called outline. All the above are the immature performance of innovation and entrepreneurship education. Although many computer colleges and universities have set up this course, few colleges and universities really play its role [10–12].

Not only is there a big problem in innovation and entrepreneurship education, but as an emerging discipline in this era, computer science should comply with the trend of the times and teach according to the development trend of the times [13]. However, according to the statistical results in recent years, there are still many problems in the teaching mode and teaching method of computer science. For example, teaching only stays in principle knowledge, only teaches the knowledge in books, and does not consider the practicality and its own characteristics of computer science. There is less time for computer practice. Many schools only let students listen to teachers in class and less training of students' self-operation ability, resulting in many students not completing an engineering practice project after graduation. The teaching consciousness is weak, and they do not realize that teaching knowledge is a long-term accumulation process [14, 15]. Due to the fast pace of society, the teaching rhythm of many colleges and universities cannot help accelerating. Many times, more than ten classes of homework are taught in a class, which does not give students time to absorb independently. After class, they force students to master a lot of knowledge in a short time by arranging a large number of homework. Moreover, in order to improve their income and reduce their expenditure, many schools squeeze students, do not provide them with due resources and materials to achieve their goals, are unwilling to invest human, material, and financial resources to improve and configure the school's software and hardware facilities, and do not do a good job in the construction of infrastructure [16].

At the same time, it is not only the problem of the school itself but also the social atmosphere has caused some interference to the school teaching. At present, the popular atmosphere in the society is impetuous, efficient, and introverted. Because of the interference of these bad atmosphere, the students in the school gradually become impatient, blindly pursue to complete a high number of tasks in a short time, lose their calm and simple character, and the school teaching mode is single. Most of the knowledge learned by students is more than ten years of knowledge, which has not been updated, resulting in serious derailment between the school and the society, and the talent schools required by enterprises have not been trained [17]. Although some studies have formulated the innovation and entrepreneurship education plan, they still adopt the teaching method of traditional courses in the teaching process, which does not give full play to the value of the course itself. In the four years of university, they only complete routine teaching like middle school, both teachers and students are conformist, unwilling to break the rules, lack of guiding thinking, knowledge only stays in horizontal teaching, and the vertical depth is not enough, which does not play a substantive role in the cultivation of students' innovative ability [18].

2. Materials and Methods

2.1. Strengthen Practical Training to Improve the Problem-Solving Ability of College Students. The foundation of innovation and entrepreneurship education is practical teaching. According to the development needs of the times and society, the discipline characteristics of computer specialty, and the comprehensive quality and solving ability of students, the practical teaching of innovation and entrepreneurship education of computer discipline should mainly focus on code writing, database establishment, engineering practice, computer underlying knowledge learning, etc., which requires the school to increase the investment in student resources, by improving the software and hardware configuration of the school, establishing experimental groups, and adopting the competition mechanism, and students can learn in the competition and practice in the competition, so as to promote learning through practice and replace learning with practice. At the same time, each student should be equipped with corresponding tutors and implement the one-to-one teaching mode, so that students' own problems can be solved immediately, rather than dragging on, and finally become an irreparable bottomless hole. In teaching, teachers should always pay attention to their students' practical ability, record the changes through the scores of each competition and practice, and summarize and talk every week and month. In the teaching process, teachers should also form their own teaching system, which should not be piecemeal. In addition, teachers should constantly reflect and summarize in the

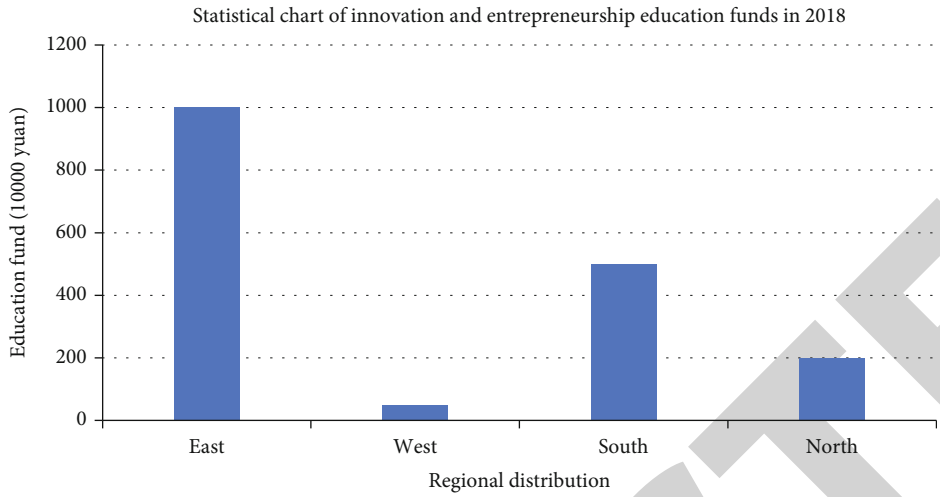

Figure 1: Statistical chart of innovation and entrepreneurship education funds in 2018.

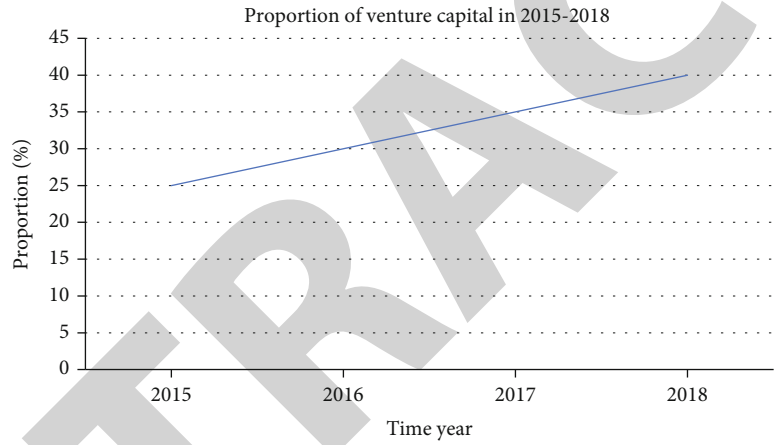

Figure 2: Proportion of venture capital in 2015-2018.

teaching process, so as to improve the teaching methods, teaching quality, and students' ability to solve problems.

2.2. Constructing the Innovation and Entrepreneurship Training Mode of "Promoting Learning through Competition and Combining Competition with Courses." Innovation and entrepreneurship teaching can never be completed by relying on piecemeal practical activities and theoretical teaching in the classroom. It depends more on students to participate in various innovation and entrepreneurship competitions and know their shortcomings by accumulating experience in the competitions, and the competition should focus on thinking training and enhancing the spirit of innovation, so that they can make up for their own loopholes and shortcomings in future teaching. There are many valuable competitions in universities worth participating in, such as the "Internet+ competition," the "Challenge Cup" National College Students' mathematical modeling competition, the National College Students' mathematical competition, the college students' innovation and entrepreneurship competition, the Blue Bridge Cup software design competition, and ACM; at the same time, we should also assign special teachers to tutor students in the process of participating in the competition and implement the tutor system of multiteacher throughout life, by organizing students to participate in various innovation and entrepreneurship competitions to improve students' innovation awareness and entrepreneurial ability, cultivate students' own team cooperation ability, strengthen communication with others, and form the idea that the team is better than the individual. At the same time, it can also carry out the training of simulated sand table, exercise students' overall thinking through the deduction of sand table, and form a style of overall consideration. The above strategies are conducive to improving students' own comprehensive quality. At the same time, it is also conducive to the school to build an innovative and entrepreneurial training mode of "promoting learning through competition and combining competition with courses."

2.3. Establishing BP Neural Network Model to Verify Rationality. When testing whether the education model we have built is close to reality, we can introduce BP neural

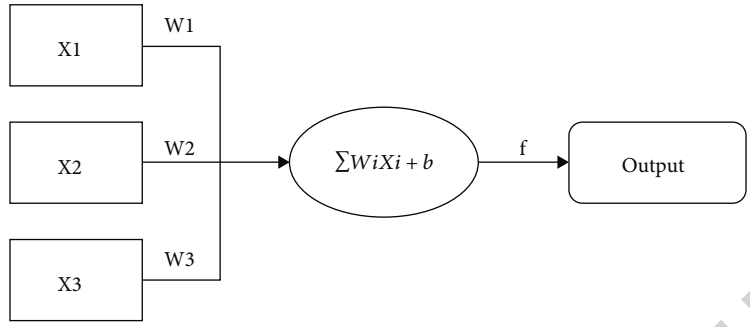

Figure 3: BP neural network perceptron model.

Table 1: KAB course offering.

KAB course	\	Proportion	\	Proportion
Do you understand	Understand	40%	Do not understand	60%
Whether to participate	Participate in	20%	Not involved	80%
Demand for it	In need	70%	No demand	70%

network model for prediction and analysis. The model uses the hierarchical structure system of artificial neural network (ANN) to adjust the weight through continuous reverse input, so as to achieve the goal of zero error between the real value and the predicted value. The model mainly includes the following steps.

2.3.1. Build Training Set. Assuming that a is student satisfaction, $f(a)$ can obtain the corresponding new vector after function transformation. WA represents weight, B represents bias, and f represents activation function. The perceptron model is shown in Figure 3 below.

Set the corresponding class labels for the vectors according to the order, which can be expressed as $y(a) = \{1, 2, 3, 4\}$. After the classification is completed, it is used to output four different representations of the model bits to obtain a labeled learning vector set $L = \{(A1, Y1), \cdots, (am, YM)\}$.

2.3.2. The Model Is Solved by Gradient Descent Method. The essence of the solution is to calculate the weight of the hidden layer by iterative approximation. Since the input eigenvector needs to be normalized, the sigmoid function is selected as the transformation kernel function of the hidden layer, as shown in equation (1):

$$\begin{cases} z = \omega^T{}_V + b, \\ f(z) = \dfrac{1}{1 + \exp(-z)}. \end{cases} \tag{1}$$

After calculating the weight value of the hidden layer, it can be clear that the function is the feature transformation core of the vector, mine the sample data in the characteristics of traffic parameters through the selves coding depth learning model, and predict and classify new samples at the same time. Set the function as $F(x) = x^2 + X$. Assume that when the initial value is $x = 3$, the function value is the smallest, and the step size is set to 0.2. Then, at this time, the values of $F(3.2)$ and $f(2.8)$ will be calculated, and the party with the smaller function value f (2.8) will be taken as the central value of the next iteration. Then, the next time is to compare $f(3)$ and $f(2.6)$ and iterate successively until the minimum value is selected.

3. Results and Analysis

3.1. KAB Courses Offered. KAB course is the basic course of innovation and entrepreneurship. Some researchers have visited and investigated the situation of students in major colleges and universities about KAB course. The survey shows that 60% of the students do not know whether the school has KAB course, and 80% of the students have not participated in KAB course, but 70% of the students have demand for KAB course.

It can be seen from Table 1 that colleges and universities have great defects in the opening of KAB courses, and the main reason for these defects is the insufficient publicity for students. As a result, nearly 60% of students have never heard of KAB courses, but the students' demand for opening KAB courses in colleges and universities has reached 70%, which shows that colleges and universities can increase the publicity of KAB and let students participate in KAB courses when carrying out the reform of innovation and entrepreneurship education mode, learn more basic knowledge of innovation and entrepreneurship.

3.2. SYB Courses Offered in Colleges and Universities. Compared with KAB courses, SYB courses have a deeper degree of knowledge and difficulty and have higher requirements for the qualifications and abilities of teaching teachers. Most SYB courses are aimed at social enterprises to help employees and management figures of small enterprises improve their abilities of organization and management, market analysis,

Table 2: SYB course offering.

SYB course	\	Proportion	\	Proportion
Do you understand	Understand	16.88%	Do not understand	83.12%
Whether to participate	Participate in	21.66%	Not involved	78.34%
Demand for it	In need	91.23%	No demand	8.77%

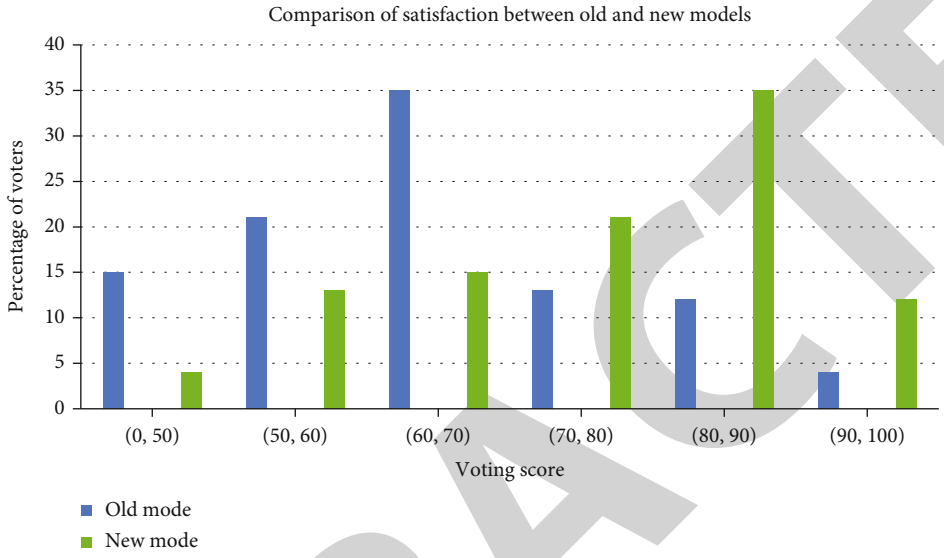

Figure 4: Comparison of satisfaction between old and new models.

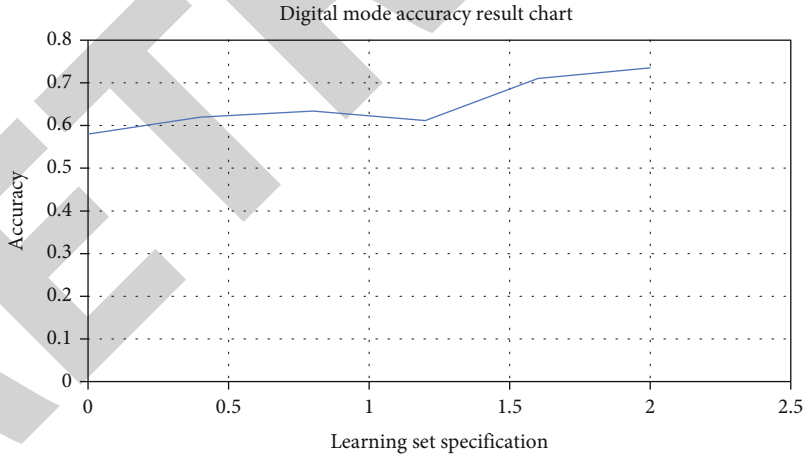

Figure 5: Teaching accuracy result chart.

and risk control. However, colleges and universities do not pay much attention to such an important course. In 2018, a professor once conducted a survey and statistics on the opening of SYB courses and students' learning in all colleges and universities across the country. As shown in Table 2, 83.12% of the students did not understand the SYB courses of the university, and 78.34% of the students did not participate in SYB training, but 91.2% of the students needed SYB.

As can be seen from Table 2, the opening of SYB courses in colleges and universities is more serious than that of KAB courses. Students do not know SYB courses and almost know SYB courses. Students have low enthusiasm for learning SYB courses. However, many students choose to start a business in colleges and universities; so, their demand for SYB is very high. The above situation shows that colleges and universities can vigorously promote SYB courses and

their enthusiasm and insight in learning SYB on campus when carrying out the reform of education mode.

3.3. Prediction and Evaluation Results of BP Neural Network Model. In order to test the performance of the constructed college teaching model, the sample data are classified based on BP neural network, and the satisfaction and social feedback of students who do not adopt the teaching model are compared. After this operation, the accuracy of the test results of the model constructed in this paper can be compared. The following figure shows the comparison of students' and society's response and the accuracy of the model under different teaching modes.

It can be seen from Figures 4 and 5 that when the number of learning samples is small, the accuracy of learning prediction using BP neural network is high. When the number of samples continues to increase, the accuracy of the BP neural network developed in this paper has been rapidly improved. When the number of samples continues to increase, the accuracy can be guaranteed to reach 75%. Compared with Figure 4, the reformed education model is obviously more favored by students, more in line with the actual social situation, it can be concluded that the effect of the teaching model established in this paper is more ideal, and the result is more stable.

4. Conclusion

(1) By collecting the number of innovation and entrepreneurship courses offered by a large number of colleges and universities and the funds invested in the course, and making a comparative analysis according to the three-line table, column table, broken line table, and other tables, it can be concluded that the current situation of innovation and entrepreneurship education offered by computer majors in colleges and universities across the country is not good. A total of 2200 data are used this time. In the big data statistics, it can be found that the annual investment in the eastern region accounts for 70%. The annual investment in the western region accounts for only 10%, which shows that the popularization of education and ideological openness in the inland lag behind those in the coastal areas. Regional differences are a major obstacle to the development of education. Although the national annual investment fund is increasing year by year, it is insignificant compared with the huge annual fiscal revenue, these data can objectively show that the existing education methods of colleges and universities in China have great problems and need to be further improved

(2) Based on the situation of each university and the trend of national education model reform, this paper puts forward four reform schemes. Scheme 1 mainly focuses on the reform of practical ability. According to the characteristics of the development of the times and the needs of computer innovation and entrepreneurship, as well as students' comprehensive quality and problem-solving ability, we should strengthen the practical training link in teaching practice. Scheme 2 mainly focuses on the reform of competition, improves students' innovation awareness and entrepreneurial ability by organizing and participating in various innovation and entrepreneurship competitions, cultivates students' team cooperation competitions, promotes students' ability of team cooperation, independent thinking, and risk control in the process of competition, and forms an innovation and entrepreneurship education training mode of "promoting learning through competition and combining competition with class." BP neural network model is introduced to detect the accuracy of the model to ensure the enforceability of the model in practical application

(3) The current situation of innovation and entrepreneurship education in colleges and universities can be reflected by the opening of KAB courses, the opening of SYB courses, and students' expectations of connecting majors with innovation and entrepreneurship courses. From the data in the table, it can be seen that the popularity of innovation and entrepreneurship education in colleges and universities is low, students' learning enthusiasm for innovation and entrepreneurship courses is low, and most students are not aware of the role of the innovation and entrepreneurship course in the future life planning. By comparing the popularity of the old and new teaching modes, we can find that the reformed teaching mode is closer to the needs of students and society, more liked by students and more in line with social reality. Finally, we analyze the deviation of its error degree and find that the model is stable and executable

Data Availability

The figures and tables used to support the findings of this study are included in the article.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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