Retraction

Retracted: The Potential Energy of Artificial Intelligence Technology in University Education Reform from the Perspective of Communication Science

Mobile Information Systems

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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] Y. Yang, "The Potential Energy of Artificial Intelligence Technology in University Education Reform from the Perspective of Communication Science," *Mobile Information Systems*, vol. 2021, Article ID 1057371, 7 pages, 2021.

Research Article

The Potential Energy of Artificial Intelligence Technology in University Education Reform from the Perspective of Communication Science

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In today's rapid development of science and technology, science is everywhere in people's lives, and science communication is everywhere. Science and communication are not only not far away but also very close. Since machine learning algorithms with deep learning as a theme have achieved great success in the fields of vision and speech recognition, as well as the large amount of data resources that cloud computing, big data, and other technologies can provide, the development speed of artificial intelligence has been greatly improved, and it has had a significant impact in various industries in the society, and the country has put forward the concept of intelligent education for this purpose. However, there have been few systematic discussions on the combination of artificial intelligence with education and teaching. Therefore, this article uses artificial intelligence technology to study the potential energy space of artificial intelligence technology in college education reform from the perspective of science communication, designs and implements an online education platform for colleges and universities, and conducts a trial of platform use in a domestic college and universities. Some teachers and students conduct a satisfaction survey after the platform is used, and the conclusions show that whether in the teacher group or the student group, most teachers and students are relatively satisfied with the online education platform designed in this article. The reform of college education includes many aspects. This article is a research study on the form of college education, changing from traditional offline education to online platform education. This research can provide a certain reference for the reform of college education.

1. Introduction

What is the connection between science and communication? I believe that by no means most people will think that the situation is irrelevant, Scientific research on the laws of nature and dissemination of research information: one is natural science and the other is social science. The two run at high speed on their respective one-way roads, but they are not incompatible with each other [1]. Everything is reasonable and logical. In recent years, controversial incidents in college education have occurred frequently. Behind these incidents, there is a common attribute that is "science." The reason why these incidents can continue to ferment in the field of public opinion also has a common driving force behind them. With the continuous development of our

country's higher education, the previous forms of education can no longer meet all the requirements of students. College students are an important force in the future of our country. The quality of education for college students will affect the quality of our country's future development. Traditional college education needs to be carried out. Certain reforms need to meet the educational needs of students in all aspects, but this requires new methods [2]. Since artificial intelligence technology was proposed by scientists, it has been developed rapidly, with more mature research results, and has been applied to all walks of life in society. Although the potential value of artificial intelligence technology is very great, there are relatively few researches on artificial intelligence technology in the reform of university education. Combining artificial intelligence technology with university

education will inevitably play a certain role in promoting university education [3]. Artificial intelligence is a branch of computer science. It attempts to understand the essence of intelligence and produce a new intelligent machine that can respond in a similar way to human intelligence. The research in this field includes robot, language recognition, image recognition, natural language processing, and expert system. Since the birth of artificial intelligence, the theory and technology have become more and more mature and the application field has been expanding.

Chinese scholar Yang believes that the era of artificial intelligence has come and "artificial intelligence +" embodies the in-depth integration of new artificial intelligence technologies and various industries. How college education can better adapt to the changes of the new era, aim at the frontiers of world science and technology, and use new technologies to promote the sound development of college education is a topic worthy of in-depth consideration and exploration [4]. Yang et al believe that with the continuous development of artificial intelligence technology has brought a profound impact on the field of education; it has also brought great challenges to teachers who play a major role in education. Based on the status quo of the application of artificial intelligence in college education in my country, how to quickly adapt to the era of artificial intelligence and comprehensively improve the application ability of teachers' artificial intelligence technology is very important in the reform of college education [5]. Wang et al believe that colleges and universities are the forefront of advanced science and technology in a country and a nation, as well as the source of new ideas and new thoughts. College students are the ones who are most likely to accept advanced knowledge and use advanced technology, and their mentality represents the development direction and future blueprint of a country. To ensure that our country has always had a professional and advanced team in the ideological and political education of college students and maintain the advanced nature of leading the direction of ideological and political education in colleges and universities, when the artificial intelligence technology boom is approaching, explore the feasibility of combining education and artificial intelligence, an advanced science, and technology. Sexuality introduces artificial intelligence into the investigation and research of college students' mental health and personality thoughts, innovating educational methods and concepts and enabling artificial intelligence to open a new mode of ideological and political education in colleges and universities [6]. Cloud computing is a kind of distributed computing, which means that the huge data computing processing program is decomposed into countless small programs through the network "cloud" and then processed and analyzed through the system composed of multiple servers. These small programs get the results and return them to users. In the early days of cloud computing, in short, it was simple distributed computing, which solved the task distribution and merged the calculation results. Therefore, cloud computing is also called grid computing. Through this technology, tens of thousands of data can be processed in a very short time (a few seconds) so as to achieve powerful network services.

The speed of science dissemination through the Internet is extremely fast. With the development of the times, the educational form of colleges and universities should also be reformed accordingly. The research of artificial intelligence technology is gradually mature, and it is possible to try to reform college education through artificial intelligence. This article will establish an online education platform focusing on learning. The platform aims at low-cost and efficient learning results for learners, takes benefit balance as the driving force for curriculum construction, and continuously improves the quality of courses and services through competition. The collaboration of course builders at different levels and professional divisions of labor reduces the high requirements of high-quality curriculum construction for knowledge communities and solves the lack of credit, high organizational costs, high communication costs, and management costs through the innovation of systems, mechanisms, and cooperation models. The five mountains built by traditional online courses with high promotion costs allow learners to realize the joy and freedom of learning, allow education service providers to work harder, grow at a high speed, and provide learners with more and better products and services. Before class, teachers collect relevant materials according to educational objectives and educational contents and make them into web pages; in class, the teacher explains the classroom tasks and allows students to independently explore, seek, and exchange answers or solutions to problems according to their own understanding of the tasks and their own weak links. Then the teacher gives the answer to the problem or the method to solve the problem. This kind of teaching method fully makes the students change from the passive receiver of knowledge to the explorer of knowledge. Students focus on solving the knowledge they have not mastered according to their own situation, so as to avoid the passive situation that the students who have mastered the knowledge in the classroom have nothing to do or the students who have not mastered the previous part of the knowledge do not know what to do.

2. The Potential Energy Space of Artificial Intelligence Technology in University Education Reform from the Perspective of Communication Science

2.1. Development Status of Domestic Online Education. Because the distribution of domestic educational resources is uneven, some cities usually have more excellent educational resources, so second and third-tier cities are in great need of excellent educational resources. At the same time, owing to the fast pace of life in the first-tier cities, in addition to the increasing pressure of students to learn, the workplace also has an increasing trend in the learning demand for vocational skills due to the increasing pressure of competition in the workplace [7, 8]. Online education meets these increased learning needs in a timely manner. Therefore, online education has attracted people's attention as soon as it was launched. Many traditional offline education companies

have quickly realized the transformation of the Internet and have received investment from capitalists in a short period of time [9].

The network has advanced WeChat, online chat, and other real-time communication technologies, which provide an equal communication opportunity for all users. Network education makes interactive learning possible and creates an environment of mutual communication, information sharing, and cooperative learning for them. Network education makes teachers and students present information in an interactive way in education. Students not only accept but also express in the network. Teachers can adjust education according to students' feedback. Students can interact with teachers, ask them questions, ask for guidance, and express their views. This interaction can also occur among students, which is conducive to give full play to the role of group learning and collaborative learning. This interactive education strengthens the communication between teachers and students and plays a positive role in improving the quality of education and learning effect.

2.2. The Form of Online Education in Colleges and Universities. The educational objects of college education are undergraduates and graduate students. They have relatively independent study time and a strong thirst for knowledge and free to choose courses of interest to study and can supplement the knowledge points in the classroom. Therefore, online education in colleges and universities can be divided into three parts of the world with adult vocational education and K12 education, and it is known as one of the main forces of online education. In higher education, online education is presented in the form of AKC and SPL. AKC has a wider audience and more participating colleges and universities. It is the main force of higher online education. Similar to the shortcomings of foreign AKC, domestic AKC also has general problems such as insufficient systemization, low course completion rate, and obvious regionality. In addition, most of the domestic AKC colleges and universities are replicas of traditional classroom teaching, innovative and interesting, with lack of personalized teaching [10]. At the same time, domestic colleges and universities AKC rely too much on the foreign AKC platform; the choice is too wide, and there is a lack of systematic curriculum system construction. More importantly, AKC courses in domestic colleges and universities lack an effective learning effect evaluation mechanism. Although AKC is popular, there are almost no courses that can really allow students to obtain credit recognition. AKC can only be used as an aid to extracurricular learning, and it is difficult to reflect students. The level of learning exacerbates the phenomenon that students cannot persist in completing the AKC course. The form of SPL, although more targeted and interactive than AKC, embodies the student-centered teaching ideology; it also faces the dilemma of not being able to obtain credit recognition [11]. Therefore, the main problem faced by online education in colleges and universities lies in the lack of an effective quality evaluation and learning effect evaluation system, which, in turn, affects the evaluation and

recognition of the overall online education quality. Microeducation is an online education platform of sina Weibo. With the introduction of sina Weibo's huge customer flow and strong brand credibility, microeducation is committed to solving the problems of uneven geographical distribution of China's educational resources and unequal supply and demand information through Internet technology, and carefully building a large B2C education service platform integrating educational information release, video teaching, live interactive classroom and campus interactive platform.

2.3. The Impact of Artificial Intelligence on Online Education in Colleges and Universities from the Perspective of Science Communication. As a symbolic technology of the rise of the Internet, artificial intelligence has the characteristics of large scale, fast speed, multiple types, high value, and high accuracy. It can effectively mine valuable information from massive amounts of data and serve as effective data support for decision-making. Artificial intelligence can make students learn more efficiently and at the same time prompt teachers to change their identities and continue to learn as learners and to a large extent shuffle course providers, creating new educational prospects. At the same time, artificial intelligence has received widespread attention in recent years. It has not only achieved impressive results in Go but also achieved relatively good results in the college entrance examination, and even artificial intelligence-based driverless cars have been put into trial operation. In the future, many jobs can be replaced by artificial intelligence, and companies that do not accept the concept of artificial intelligence will be completely eliminated. It can be seen that the development of artificial intelligence is very promising, and the in-depth integration of artificial intelligence and the online education industry is also an inevitable trend. The three aspects of artificial intelligence, that is, face recognition, speech recognition, and text recognition technology, have been relatively mature. The current technical difficulties are mainly in natural language understanding, deep learning, and optimization of core algorithms [12]. For online education, once major breakthroughs in natural language recognition and understanding can be achieved, online education will immediately enjoy technological dividends. Applying artificial intelligence to online education can help online education break through its own limitations and bottlenecks.

Deep learning is a kind of machine learning, and machine learning is the only way to realize artificial intelligence. The concept of deep learning comes from the research of artificial neural network. Multilayer perceptron with multiple hidden layers is a deep learning structure. Deep learning combines low-level features to form more abstract high-level representation attribute categories or features so as to find the distributed feature representation of data. The motivation of studying deep learning is to establish a neural network that simulates the human brain for analytical learning. It simulates the mechanism of the human brain to interpret data, such as images, sounds, and texts.

3. The Research Process of the Potential Energy Space of Artificial Intelligence Technology in University Education Reform from the Perspective of Science Communication

3.1. Related Artificial Intelligence Technology. The Gokall language is a new type of statically typed programming language. Many features of the Gokall language are designed on the basis of Linkl. The first version of the Gokall language is an experimental project developed by Google employees outside of working hours. Later, Google found that it would have a lot of room for development on the server side and organized a team to support the development of the Gokall language. The Gokall language design is very similar to the C language, but it has many features that the C language does not have, such as automatic garbage collection, multiple built-in types, support for multiple return value functions, error handling, function closures, interfaces and coroutine concurrency, and so on. These features are unique to the new generation of languages. Although the Gokall language is a statically compiled language, it feels like a dynamically typed interpreted language when used. Compared with other languages, Gokall language can be directly branched on the other's platform without external dependency libraries. It has its own set of command line tools. It will automatically compile the corresponding dependency libraries according to the package references, without the need to use configuration files. The Gokall language comes with a very rich development library, with many basic libraries to be used; it has been integrated in the built-in system library. The Gokall language is not an operating system thread in the traditional sense. It is called a microthread. Developers can use a coroutine just like a thread, and a simple keyword can start a coroutine. The Gokall language can do concurrent synchronization in many ways, and the language itself has designed a very complete tool chain. To understand the difference between static and dynamic, we should start from the operation of variable assignment. In static-type language, the type of variable must be declared first, that is, the type of variable has been determined at the moment of creation, and then in use, you can only assign the data of this specified type to the variable. If data of other irrelevant types is forcibly assigned to it, an error will be raised. In static languages, once a variable is declared to be of type int, you can only assign data of type int to it; otherwise, an error will be caused. Dynamic types have no such restrictions. What type of data you assign to a variable is what type the variable is.

3.2. Function Analysis of Online Education Platform in Colleges. The platform sets four roles, including teachers, students, institution administrators, and platform administrators. The teacher's identity can be used to construct courses and test papers, manage courses, correct test papers, manage scores, view learning traces, help guide learning, and so on; the student identity can learn course content, view past learning traces, participate in exams, evaluate courses, and so on; the administrator can create all university teacher users and university student users included in the institution

and manage these teacher and student users and can perform course certification management, and so forth; the platform administrator can manage and maintain the platform. Curriculum construction is mainly divided into four parts: curriculum information, teaching content, resource management, and learning. Course information functions include general information, course overview, course content, and so on. Teaching content functions include chapters, resource libraries, local resources, online videos, and so on. Resource management is mainly to manage all learning resources on the platform in accordance with the standards of media resources. Resource management is convenient for college teachers to call when creating courses or test papers. At the same time, these are also important materials for college students to learn; learners can carry out online learning of selected courses through this platform. Course learning content includes video lectures, and the course content learns highly relevant documents, excellent case studies, and so on; the learning content is presented in the form of online books. The platform can directly edit test papers online or use existing documents to directly import test papers. Online test paper composition is mainly for college teachers to directly edit test questions online, and you can set the question stem, answer analysis, score, and difficulty system. The question bank set by a certain course teacher can be dynamically added and adjusted, or it can be cited by other course teachers through authorization.

In online education, using the unique information database management technology and two-way interaction function of computer network, on the one hand, the system can realize complete system tracking and recording of each network student's personality data, learning process, and stage. On the other hand, the teaching and learning service system can record the personal data according to the system and put forward personalized learning suggestions for different students. Network education provides a practical and effective way for personalized teaching.

3.3. Overall Design of Online Education Platform in Colleges and Universities. The online education platform for colleges and universities designed in this paper mainly includes four areas: foundation, management, service, and security. The foundation refers to the foundation of all hardware and the support of the platform. For the virtualization of physical resources, the use of virtualization technology is realized. The allocation and layout of resources are realized through the adjustment and management of virtualized resources; management is mainly for the preservation and management of educational resources and adjustment and processing, as well as service transfer through the performance of resource utilization; service refers to the use of data-based educational resources to establish a shared service system to process resources and provide them to users, including question bank management, learning trace recording, instant messaging, course creation, course learning, learning monitoring, and so forth. Security is to ensure the security of the platform and users through mechanisms such as identity

authentication, role management, and authority management. Platform support services mainly include five support services such as load balancing servers, business nodes, file server clusters, video-on-demand service clusters, and database clusters. The load balancing server is the business portal of the entire platform, which automatically distributes user requests to different services according to business concurrency. Business nodes include four major microservices, including evaluation services, instant messaging, course content, and unified verification. The file server cluster is a universal file high-availability cluster and is the main support service for the course content. The video-on-demand service cluster is a general-purpose video high-availability cluster service and serves as a course video resource support service. The database cluster is a high-availability disaster-tolerant cluster service for general databases and core database support services for operating operations.

The teaching management platform of computer network has the functions of automatic management and remote interactive processing. It is applied to the teaching management of network education. The consultation, registration, payment, course selection, inquiry, student status management, homework, and examination management of remote students can be completed through network remote interaction.

3.4. Questionnaire Survey of College Teachers and Students. After the design of the online education platform of the university is completed, let a domestic university conduct a trial use. After 3 months of use, a questionnaire survey will be conducted on the teachers and students of the university. The content of the survey is mainly about the degree of satisfaction with the online education platform designed in this article. Including teachers and students from freshman to senior year, the survey subjects come from different professional disciplines. There are 50 teachers and 200 students with equal numbers of men and women. The sample situation of teachers and students is shown in Table 1.

4. Analysis of Survey Results

4.1. The Domestic Online Education Market. As shown in Figures 1 and 2, the domestic online education market has been investigated. From 2017 to 2020, the market size of China's online education industry and the growth rate of the number of users have remained above 20%, and it has been in just four years. In 2020, the scale of China's online education industry market has exceeded 269.26 billion yuan, and the user growth rate remains at 20.4%, which shows how fast its development is.

4.2. The Degree of Satisfaction of College Teachers with the Online Education Platform. According to Table 2 and Figure 3, it can be known whether they are male or female teachers and that the number of people whose satisfaction is more than satisfactory is 18, accounting for 72% of the total number. This shows that this article uses artificial intelligence

Table 1: Sample situation of teachers and students.

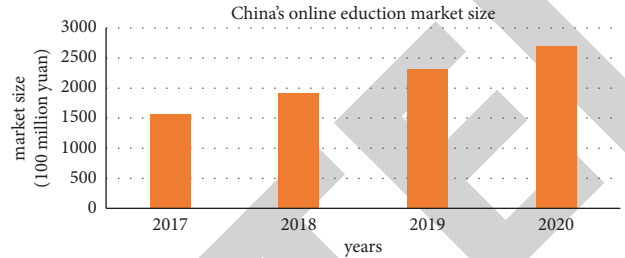|	Teachers	Students
Male	25	100
Female	25	100

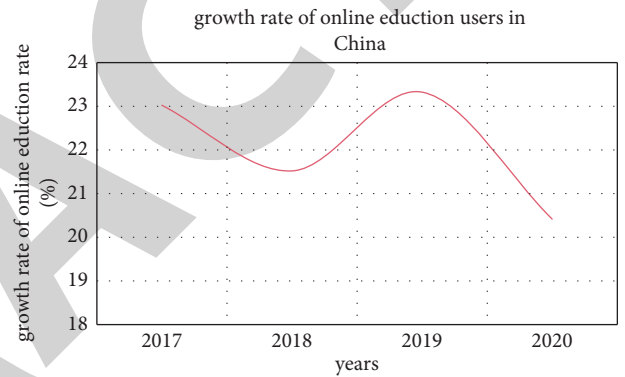Figure 1: The scale of the domestic online education market over the years.

Figure 2: The growth rate of domestic online education users over the years.

Table 2: Satisfaction of university teachers.

	Male teachers	Female teachers
Very satisfied	6	8
More satisfied	12	10
Generally satisfied	5	4
Dissatisfied	2	3

technology to design the college online education platform. The application in the teacher group is relatively successful, and the poor satisfaction ratings given by a few of them may be related to factors outside the platform, such as network fluctuations leading to stagnation and other reasons.

4.3. The Degree of Satisfaction of College Students with the Online Education Platform. According to Table 3 and Figure 4, it can be seen that 71.5% of the number of people who are satisfied with college students' satisfaction degree above the relatively satisfactory evaluation indicates that the online education platform designed by artificial intelligence technology in this article is effective in college students' groups. The application is quite successful. For the 9% of the students who gave unsatisfactory evaluations, the experience may be poor due to factors other than the system. In summary, for
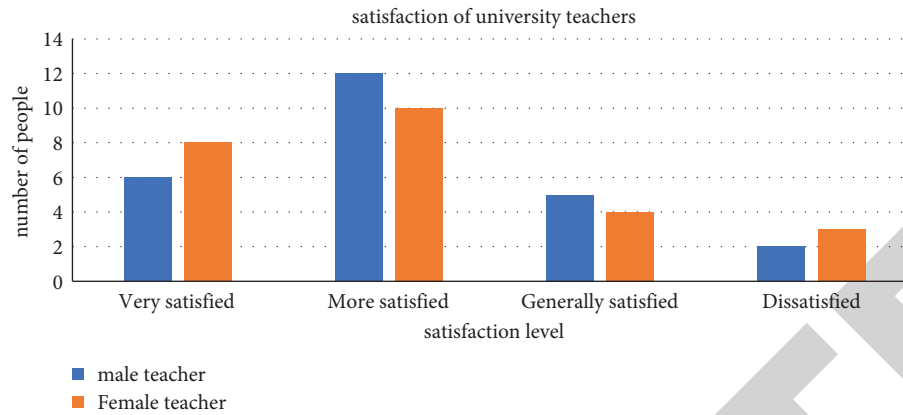
FIGURE 3: Satisfaction of university teachers.

TABLE 3: Satisfaction level of college students.

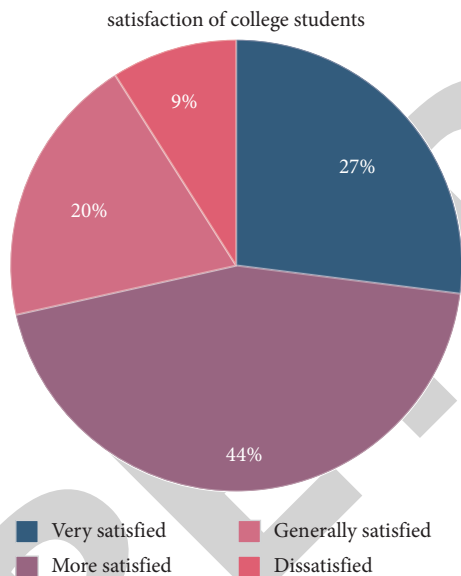|	Male students	Female students	Proportion of people (%)
Very satisfied	23	31	27
More satisfied	46	43	44.5
Generally satisfied	20	19	19.5
Dissatisfied	11	7	9

FIGURE 4: Satisfaction level of college students.

teachers and students, 72% and 71.5% of the people are more satisfied with the evaluation given by the online education platform of colleges and universities designed and implemented using artificial intelligence technology in this article, respectively. Such data fully show the online education platform designed in this article is generally successful.

5. Conclusions

Based on the background of science communication, this article uses artificial intelligence technology to design and implement an online education platform for colleges and universities and put the platform for use in a domestic college.

The components of the platform include the resource production and management system, resource learning and monitoring system, instant messaging system, and so on. College students can study the resources in their personal accounts, track the progress and effects of personal learning, and discuss problems encountered in the resources with resource creators and other learners; college teachers can always monitor the student's learning progress and corresponding learning results and pass learning traces to analyze the learning habits of students, thereby improving the rationality of resource creation. Finally, this paper collects the evaluation opinions of teachers and students on the platform designed in this paper in the form of a questionnaire and analyzes the evaluation of teachers and students, which shows that the online education platform designed in this paper is generally more successful. Deep learning is the internal law and representation level of learning sample data. The information obtained in the learning process is very helpful to the interpretation of data such as text, image and sound. Its ultimate goal is to make the machine have the ability of analysis and learning like human beings, and be able to recognize characters, images, sounds, and other data. Deep learning is a complex machine learning algorithm, which has achieved far more results in speech and image recognition than previous related technologies.

Data Availability

The data underlying the results presented in the study are available within the manuscript.

Disclosure

The author confirms that the content of the manuscript has not been published or submitted for publication elsewhere.

Conflicts of Interest

The author declares no conflicts of interest.

Authors' Contributions

The author saw the manuscript and approved to submit to the journal.

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