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Retraction

Retracted: Methods of College Education Reform under the Background of Wireless Communication and VR

Wireless Communications and Mobile Computing

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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

(1) Discrepancies in scope

(2) Discrepancies in the description of the research reported

(3) Discrepancies between the availability of data and the research described

(4) Inappropriate citations

(5) Incoherent, meaningless and/or irrelevant content included in the article

(6) Peer-review manipulation

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

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

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

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

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

References

[1] G. Li, "Methods of College Education Reform under the Background of Wireless Communication and VR," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 2589533, 6 pages, 2022.

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Research Article

Methods of College Education Reform under the Background of Wireless Communication and VR

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With the rapid development of information technology, wireless communication and virtual reality technology have gradually been introduced to college education. Compared with traditional teaching methods, the use of information technology can make teaching more convenient and efficient. New teaching models such as online classrooms and shared notes have gradually shown their advantages, promoting the continuous advancement of higher education to intelligent development. Incorporating wireless communication and VR into our educational practice and selecting and innovating them according to the characteristics of colleges and universities and teaching content can better play the auxiliary role of technology. In this paper, the status quo of college education is studied through a questionnaire survey, and the advantages, existing problems, and solutions of wireless communication and virtual reality technology in college education reform are analyzed. The results show that wireless communication and virtual reality technology not only enhance the experience and motivation of students but also enhance the teaching quality of teachers. This provides an important reference value for college education reform.

1. Introduction

Since the latter part of the last century, the development of information technology has gradually emerged in higher education. Not only has the classroom format become more abundant but also, more importantly, the concept of informatization has been recognized by more education experts. Today, information technology is more closely integrated with education, especially higher education. From the entry of multimedia equipment into the classroom at the end of the last century to the real-time sharing of contemporary classroom teaching, wireless communication technology has brought an unstoppable momentum to traditional education [1]. Especially with the increasingly powerful functions of smartphones, college students have become more and more dependent on mobile information terminals at this stage.

It can be seen from Figure 1 that at this stage, Chinese college students generally spend a long time using mobile phones. Less than 2.59% of students use it for less than 1 hour. The most common range is 3-5 hours of use, and it is even found that 18.87% of students use mobile phones for more than 7 hours. In response to this trend, various universities have launched mobile-end teaching interactive platforms, online teaching evaluations, and student management. These measures have not only guided students' scientific use of information equipment but also made up for the shortcomings of some colleges and universities, such as insufficient teachers and poor management science. The concept of the contemporary knowledge economy has long been universally recognized. Speeding up the reform of college education mode, enhancing the training of colleges and universities for students' innovative awareness and ability, and completing the transformation of colleges from traditional knowledge transfer to comprehensive ability improvement are all in universities in my country at this stage [2], which is an urgent task of educational development.
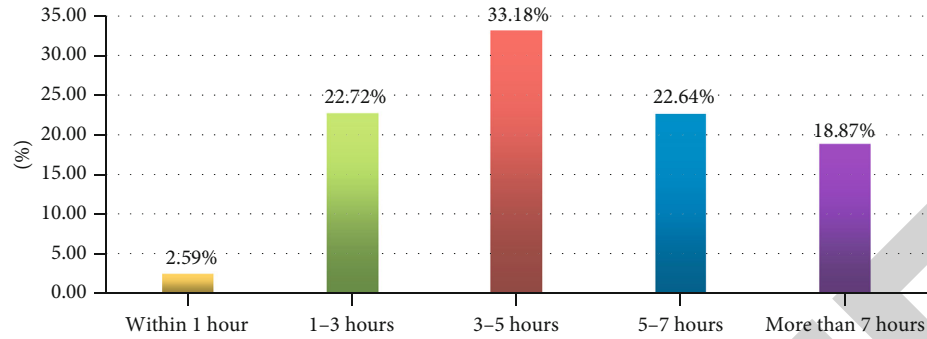
Figure 1: Average daily usage time of mobile phones by college students on weekends.

Zhang Yuantao believes that although wireless communication technology is developing rapidly, the integration with college education is still at a relatively simple level, and there is still a lot of potential to be tapped in fields such as human-computer interaction [3]. Sun Ling fully explained the opportunities brought by the "Internet +" technological change to the educational innovation of colleges and universities, and pointed out that all-round efforts should be made from schools, teachers, students, etc., in order to make better use of the advantages of wireless communication technology, and emphasized wireless communication technology. It can achieve individualized education for students to a large extent, thus conforming to the development trend of contemporary education in an all-round way [4]. Chen Wen believes that the development of wireless communication technology is a double-edged sword for college students. Colleges and universities must attach great importance to this issue when carrying out educational reforms, strengthen guidance, and strengthen the cultivation of college students' awareness of autonomous learning, aiming at the problem that the effect of education reform is difficult to quantify [5, 6]. Yang Lijun has built a new set of quality evaluation systems for college education reform based on big data technology, which effectively improves the accuracy of evaluation [7, 8]. Chen Li proposed that in the future, university education management will be more closely linked to the Internet, and breakthroughs in sensor technology will enable the entire campus to be in a complete intelligent perception system [9]. Through the processing and transformation of perceived data, personalized services for different groups of people will be formed, in order to truly realize the effective combination of wireless communication technology and college education [10].

In the field of practical application, wireless communication and virtual reality technology have already been used on college campuses [11]. For example, the CQ6688 developed by Shijing Wireless to transmit and receive wireless high-definition video has been widely installed in the recording and broadcasting classrooms of various colleges and universities at this stage. The classroom records can be clearly and quickly transmitted to colleges with relatively weak resources [12], making the links between universities closer [13]. At the same time, wireless communication and virtual reality technologies based on 5G and WIFI6 also provide strong technical support for the creation of a smart campus

management platform, which is of great value for breaking through the barriers of traditional university campus information fragmentation [14]. As long as you are walking on the campus, you can obtain the account of the light recording system according to your own identity and enjoy the convenience brought by the university management system that combines wireless communication and VR technology [15].

2. The Progress of College Education Reform Based on Wireless Communication and Virtual Reality Technology

2.1. The Needs of the Times of College Education Reform. Higher education has provided countless talents for the development of our country. It has played a significant role in the development of our country and will inevitably play a more important role in the future [16]. However, under the background of the rapid development of various science and technology, the education methods in colleges and universities are still carried out in the traditional way, and there is no corresponding method upgrade according to the characteristics of the times. There are problems of "mismatch between practice and theoretical research" and "poor effect of student training." The problem prevents some students from adapting to the rapid development of society, and it is difficult to match the demand for innovative talents, whether in employment or in academic research [17].

Strengthening the cultivation of students' innovative ability is one of the goals that my country's higher education pays attention to after entering the new century [18–20]. The widespread use of wireless communication and virtual reality technology in college education makes teachers and administrators unable to ignore the tremendous impact of information technology on students in their work [21]. Judging from the current situation, although many schools have invested a lot of money in the equipment of software and hardware and the digital and intelligent level of school running conditions have been greatly improved, there are still many shortcomings in the dominant teaching concept [22]. For example, backward teaching concepts and outdated student management systems have severely restricted the in-depth development of college education reform [23]. Therefore, the current demand of my country's college

education reform is to make full use of wireless communication and virtual reality technology, build an efficient teaching and management system, and focus on improving students' innovation capabilities [24–26].

2.2. New Characteristics of College Education Reform under the Background of Wireless Communication and Virtual Reality Technology

2.2.1. Large-Scale Development of Online Teaching. With the development of wireless communication and virtual reality technology, coupled with the impact of the new crown epidemic, online teaching has been widely used [27]. On the one hand, virtual reality technology makes classroom teaching more vivid, and the development of simulation experiments has more stable technical support. On the other hand, in order to solve the problem of concentration of students in online teaching, intelligent sensory control technology has also been integrated into the online teaching platform [23, 28, 29]. This technology can observe and identify the concentration of students in the classroom. If abnormalities are found, a reminder will be sent to the teacher, so that the teacher can correct the student's bad state the first time, thereby effectively improving the actual effect of online teaching.

In order to ensure the quality of online teaching, a three-dimensional evaluation system including education departments, teachers, and students has been created, and efforts have been made to establish a quality improvement cycle including five main links. At the same time, the Academic Affairs Office aggregates student feedback through the online classroom evaluation platform. Courses with a high favorable rating are recommended as online demonstration courses, and courses with the lowest favorable rating are instructed to go back to relevant departments to identify problems and propose improvement measures.

2.2.2. The Curriculum System Is Richer and More Personalized. On the basis of wireless communication and virtual reality technology, college teachers can adopt more scientific permutations and combinations of teaching modes and classroom link design. The degree of freedom in college classrooms is relatively high, and the classroom is no longer limited to the students of the major. This caused great troubles for professional teachers to teach. With wireless communication technology, the school's academic affairs office can build a course optimization reservation platform. Students need to register before attending classes. Teachers conceive classroom links according to the number of class registrations and scientifically connect MO classes, live broadcasts, and classroom Q&A. Doing so can not only make full use of high-quality network resources to realize teaching but also help students save time in choosing among the massive learning resources. At this stage, many online teaching platforms have emerged on the Internet, such as Tencent Conference and Dingding Conference. Each of these platforms has advantages and disadvantages, but there is always one that works for teachers and students. The school's academic affairs office must actively communicate with teachers and choose a suitable platform for the specific situation of the students. Online learning has become an important choice for people to improve themselves. In this regard, the national education management department and universities have launched very rich teaching video resources, most of which are free and open to society. These measures have provided curriculum guarantee for college education reform.

2.2.3. Integration and Intelligence of Student Information Management. In the past, although various departments of universities such as the student office and library also used information equipment to store and manage student information, due to the limitations of the integration and intelligence of supporting software functions, student information management often experienced information updates lagging behind problems. If students' information changes, they must apply for changes from department to department. In the context of the highly developed wireless communication technology, schools can connect to the Internet by assuming a unified campus network, thereby integrating and sharing student information management across the entire campus. Under such a model, the information of students in various departments of the school is close to synchronization. When a student's information changes, it will be directly related to similar information in other departments and be directly adjusted. This has a very positive effect on improving the management of college students and breaking the limitations of information islands. Through the establishment of the student management information platform, the three major constituent units of universities-teachers, students, and management departments form a mutually independent and closely connected database. Based on this, each department has corresponding authority over its own functional scope, avoiding mutual interference, and greatly improving the intelligence of student management.

3. Difficulties Faced by College and University Education Reform under the Background of Wireless Communication and Virtual Reality

3.1. Realistic Dilemma

3.1.1. The Scope of Dissemination of Teaching Resources Is Limited. In recent years, my country has vigorously promoted the sharing of online course resources. There are not only comprehensive open course resource websites such as MOOC, NetEase open courses, and love courses but also course resources independently developed by various universities. Almost all of these open class resources are explained by famous teachers, and each has its own focus, which can meet the needs of learners to a large extent. However, through the development of online questionnaire surveys of students from six comprehensive universities in Chengdu, the utilization of these high-quality educational resources by students is not high.

In Table 1, among the students participating in the survey, 645 students chose "never used," accounting for 48.7%

Table 1: The learning situation of network resources among students in six universities in Chengdu ($N = 1325$).

Category	Choose the number of people	The proportion
Never used	645	48.7%
Occasionally use	365	27.5%
Frequently used	315	23.8%

of the total number. 365 students chose "occasional use," accounting for 27.5%. Only 315 people used it frequently, accounting for only 23.8%. The comparison of these three sets of data shows that the promotion of online teaching resources by colleges and universities at this stage has not had the desired effect.

3.1.2. Emphasize Scientific Research over Teaching. The imbalance between the improvement of scientific research ability and teaching ability is also one of the key problems to be solved in my country's college education reform. Judging from the current situation, there is a widespread phenomenon in our country's universities that scientific research ability is stronger than teaching ability. This is because the quantitative system of the scientific research level is relatively complete. Teachers can get more attention and affirmation for their performance in scientific research. However, the perfection of the evaluation standard system of teaching ability of university teachers has great defects, such as examination results and student evaluation, and so cannot accurately reflect the true teaching ability of teachers, causing many teachers to focus on the field of scientific research.

3.1.3. Ignore the Cultivation of Students' Innovative Ability. For a long time, my country's education management departments have emphasized that all levels of education should attach importance to the cultivation of students' innovative ability, especially as a university with the strongest academic atmosphere and the highest degree of freedom of thought; it should be taken as a key task. But from the specific effect, it is not satisfactory. Many educational concepts in colleges and universities still remain at the level of knowledge transfer in the past. Students simply memorize the teacher's classroom notes mechanically and put them on the shelf after the exam, never thinking deeply about the subject theory.

3.2. Ways to Realize Educational Reform in My Country's Higher Education

3.2.1. High Sharing of Teaching Resources. The sharing of teaching resources is the main means to change the current imbalance of the distribution of teaching resources in various universities in our country. The traditional teaching model makes teaching resources only flow between inherent barriers. It is difficult for students in some remote areas or universities with weak scientific research capabilities to enjoy high-quality teaching resources. Relying on the modern teaching shared resource platform constructed by information technology, teaching resources can be spread in a more stable and convenient digital form without distinction, and learners can participate in the sharing of resources in a variety of ways.

3.2.2. Realize the Coordinated Development of Scientific Research Ability and Teaching Ability. Recently, my country's education management departments have made a lot of efforts to realize the collaborative development of university teachers' scientific research and teaching abilities. Some examples are shown in Table 2.

Although some colleges and universities encourage teachers to pay more attention to classroom teaching by setting up bonuses, their energy is limited after all. Many teachers said that the difficulty of appraisal and evaluation of teaching awards set up by the school is much higher than that of scientific research, and it may involve more energy. Compared with teaching work, many scientific research projects can be carried out at home. With the development of wireless communication and virtual reality technology, it can help teachers to solve the limitation of this space distance to a large extent and help teachers reduce the workload. This situation is expected to be completely reversed.

It can be seen from Figure 2 that among the six colleges and universities in Chengdu that conducted the survey, the essays published by teachers in the past 3 years are more and more closely integrated with teaching practice, and the number of participating teaching competitions is directly proportional to the number of essays published. It shows that more and more teachers regard the classroom as their main work, take scientific research into teaching work, and to a large extent realize the coordinated development of the two.

3.2.3. Effectively Enhance Students' Innovation Ability. The cultivation of students' innovative ability is an issue that college education has paid special attention to for more than ten years, and it is also one of the main goals of education reform. At this stage, economic construction and social development have increasingly urgent demands for innovative talents. The Chinese government has repeatedly emphasized the need to promote the cultivation of innovative talents in universities. Through the construction of a research learning environment, students' ability to analyze and solve specific problems is enhanced. At the same time, virtual reality technology can also provide effective verification for students' problem-solving ideas. To this end, various universities have generally established or jointly established innovation demonstration bases and have built a strong guidance team. This indicates that the improvement of college students' innovative ability in our country has entered a relatively mature stage.

4. Conclusion

The development of wireless communication and virtual reality technology has provided strong support for our higher education reform. Whether it is the development and sharing of teaching resources, the improvement of teachers' teaching ability, or the cultivation of students'

TABLE 2: Teaching awards established by some universities.

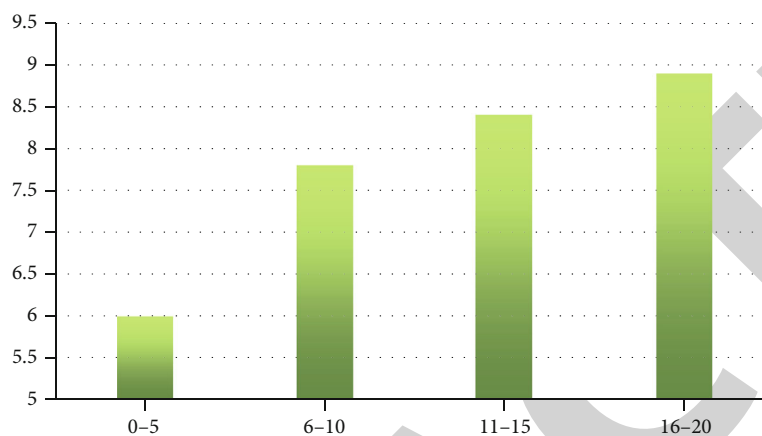| University name	Award name
Sichuan University	Teaching Excellence Award
Nanjing Agricultural University	Zhongshan Famous Teaching Teacher, Excellent Teaching Award
Wuhan University	Excellent Undergraduate Teaching Achievement Award

FIGURE 2: The relationship between the number of essays published by teachers from six universities in Chengdu and the number of participating teaching competitions in the past three years.

innovative ability, these difficulties encountered in the current education reform in colleges and universities can be alleviated to a greater extent with the help of wireless communication technology. It is believed that with the further development of wireless communication technology, it can not only provide us with faster and more stable data transmission but also develop an application platform with more complete functions, so that the reform of college education can develop to a deeper level.

This paper firstly conducts a questionnaire survey on the current situation of college education and then combines wireless communication and virtual reality technology to analyze the advantages and challenges of using new technologies in college education reform. The results show that wireless communication and VR technology can promote the learning efficiency of students and reduce the teaching burden of teachers. In the future, with the progress of the two technologies, the reform of college education will enter a stage of rapid development.

Data Availability

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest

It is declared by the author that this article is free of conflict of interest.

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