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Exploration of Teaching Mode of "Accounting" Based on Smart Classroom

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Abstract: With the rapid development of science and technology, the education industry has also ushered in new opportunities, and a new teaching model in the form of smart classrooms has been born. Therefore, applying this model to accounting teaching is not only the general trend of the times, but also opens up a brand-new way to change the increasingly rigid teaching situation and improve teaching efficiency. The purpose of this article is to study the teaching mode of "Accounting" based on the smart classroom. Starting from the perspective of ecological classroom teaching, this article is supported by a smart learning environment and student-oriented as its core concept. It cultivates students' value orientation and lays a solid foundation for lifelong learning, career development, and life values. First of all, this article constructs the teaching mode of the smart classroom, analyzes the realization conditions, teaching goals and teaching evaluation of the teaching mode construction. Explains the problems of the smart classroom teaching model, mainly from two aspects: the unskilled application of smart classroom technology and the unclear student body. Finally, the reasons for the problems are explored, and solutions are proposed according to the problems, so as to improve the teaching mode of the smart classroom. The experimental research results show that: 36.29% of teachers think it is difficult to conduct specific integration in the teaching process. 31.11% of teachers think that software and hardware obstacles often occur in the teaching process and 22.23% of teachers report that the school network is also often malfunctioning. 10.37% of teachers think that the functions of the smart classroom are complicated and difficult to operate. Therefore, it is necessary to strengthen all aspects of research in order to achieve better teaching effects.

1. Introduction

With the rapid development of science and technology, the education industry also ushered in new opportunities and a new teaching model in the form of smart classrooms was born. Therefore, the application of this model to accounting teaching is not only the general trend of the times, but also opens up a new way to change the increasingly rigid teaching situation and improve teaching

efficiency. However, it is generally at the application level and lacks innovative education teaching cases. The main reason is the lack of advanced top-level design concepts for smart classroom teaching as a guide. Smart classrooms have become the entry point for the cultivation of smart talents, relying on smart education to achieve the coordinated development of teachers and students.

In the research on the teaching model of "Accounting" based on the smart classroom, many scholars at home and abroad have conducted research on it and achieved good results. Malekigorji and Utomo summarized the automation of classroom notes, classroom records, and big data in the smart classroom. Feedback multi-dimensional interaction and other functions, which guide the direction of the effect research of the smart classroom. Yoo and Yu Fei believe that smart classrooms formally affirm the status of students as the subject of learning, allowing them to independently choose the way of knowledge externalization. The process of knowledge internalization is realized in student-student dialogue and teacher-student dialogue.

Starting from the perspective of ecological classroom teaching, this article is supported by a smart learning environment and student-oriented as its core concept. It cultivates students' value orientation and lays a solid foundation for lifelong learning, career development and life values. First of all, this article constructs the teaching mode of the smart classroom, analyzes the realization conditions, teaching goals and teaching evaluation of the teaching mode construction. This article explains the problems of the smart classroom teaching model, mainly from two aspects: the unskilled application of smart classroom technology and the unclear student body. Finally, the reasons for the problems are explored, and solutions are proposed according to the problems, so as to improve the teaching mode of the smart classroom.

2. Research on the Teaching Mode of "Accounting" Based on Smart Classroom

2.1. Construction of Teaching Mode of "Accounting" in Smart Classroom

(1) Realization conditions

The application prospect of smart phones in the classroom is very broad. The large screen and multi-function of mobile phones make them gradually replace tablet computers and other mobile devices and they have immeasurable uses in the education field. Teachers and students will generate a large amount of learning data in the teaching process. Traditional classrooms and digital classrooms cannot capture these learning trajectories due to technical reasons. Nowadays, with the support of big data technology, smart classrooms can use smart mobile terminals to capture and visualize the data generated during the teaching process of teachers and students in detail.

(2) Smart teaching goals

Smart classroom teaching is different from previous classrooms in that its purpose is to guide students to learn from the shallower to the deeper and to cultivate the students' ability to learn, including moral wisdom, rational wisdom, practical wisdom and value wisdom. In short, a smart classroom is an active classroom full of creativity in which knowledge and reason accompany, science and humanities accompany, theory and practice are combined and technology promotes the generation of wisdom.

(3) Evaluation of Smart Teaching

Teaching evaluation is a smart classroom teaching model. As the last link of the teaching model, teaching evaluation is very important. Students can give feedback on teaching effects during the teaching process and teachers can improve teaching methods based on the feedback results. At the same time, it can also collect relevant data in the teaching process, including students' homework and test scores. The results of data analysis remind learners to make relevant adjustments, making

learning activities more efficient.

2.2. Insufficiency of the Current Smart Classroom Teaching Model

(1) The application of technical functions is not mature enough

The construction of the smart classroom technology system has basically covered all teaching activities including pre-class preparation (preparation), in-class teaching (listening) and post-class extension (review). However, when most teachers teach, it is extremely common to choose functions such as whiteboard annotations, electronic textbooks, resource sharing, assignment and correction of homework, pictures and videos on the same screen, class questions and awards. Functions such as projectors, courseware production, and class space are relatively rarely used. The utilization rate of human-computer dialogue and one-to-one tutoring is almost zero.Students use the functions related to classroom interaction and completion of homework the most, and use the pre-class preview function, the after-class expansion function and the wrong question collection function less. As for the use of functions such as micro-class review and non-meeting with the teacher is rarely used. The human-computer dialogue and one-to-one tutoring functions designed by the teacher's tablet are mainly designed to address the problem of teachers' difficulty in personalized teaching to students during class teaching. Teachers have a sense of awe and lack of communication, which helps teachers to answer questions, check deficiencies, make up for omissions and teach students in accordance with their aptitude without face-to-face. However, these designs do not have the original effect in practice, which also shows to a certain extent that teachers and students have not fully developed and used the technical functions of the smart classroom.

(2) The subjectivity of students is not clear enough

Under the condition that smart classroom technology has given students the right to learn independently and space for personality development to a large extent, many students still feel that they are just cooperating with the teacher's teaching or are just passively receiving knowledge indoctrination and they lack the initiative, participate in the awareness of the learning model of smart classroom. It can be seen from this that the smart classroom teaching model in the general environment does not seem to allow the vast majority of students to have an accurate understanding of self-positioning in learning activities.

2.3. Reason

(1) The utilitarian teaching atmosphere is too strong

In the survey and interviews with students and teachers, it can be found that the current use of smart classrooms is not optimistic. Since the application of smart classroom teaching model, the school and the parents of students all have high expectations for the effect of it. Not only do they hope that the teaching format can be disruptively changed on the basis of the traditional teaching model, but also that the students' performance can be improved. There are leaps and bounds in this new teaching environment.

(2) Inadequate supervision of the network environment

Most schools have not established a special monitoring mechanism for the network environment, so to a certain extent the students are allowed to use the student's tablet with extreme freedom. Although the smart classroom itself has the limitation of software black and white lists and certain network blocking functions, students cannot download software for entertainment activities at will, but due to the large number of complicated external links on the learning resource page, students may still be exposed to bad information or the internet fiction. On the student tablet, functions such

as class space are usually unsupervised. A small number of naughty students use the anonymous speech function to make it a gathering place for chatting. Some students take advantage of the homework submission function and log in to other people's accounts. Copying homework, or pretending to be holding a tablet to watch synchronous teaching in class, is actually taking the opportunity to lower students' heads to play, etc. These behaviors have a negative impact on the learning atmosphere of the entire smart classroom and completely violate the original intention of the smart classroom client development. Makes the actual use effect of the smart classroom teaching mode unsatisfactory.

2.4. Solution

(1) Strengthen teachers' professional skills and use technical equipment rationally

Teachers need to improve themselves in terms of vocational skills, delve into the teaching materials, to better understand, so as to master the teaching content and even innovate the teaching content. At the same time, the teaching equipment should be actively developed and used reasonably in the teaching process. The teaching methods and techniques of modern education should be used flexibly. Teaching methods should be innovated in the new environment. Teaching activities should be better designed, carrying out teacher-student interactive teaching to improve teaching quality and efficiency.

(2) Establish a student mutual aid group

At present, most schools in China still adopt large-class teaching, but the students have strong curiosity, weak self-control and lack of acceptance. Therefore, it is recommended to set up multiple study groups for students' eyesight fatigue, low learning efficiency, inadequate discipline during classroom interaction, unskilled use of tablets, delay in submitting homework and inaccurate self-positioning in learning activities. Distributing reasonably and supervising each other to promote a group learning atmosphere.

(3) Comprehensively improve the feedback mechanism

A perfect feedback mechanism can improve the teaching effect of the smart classroom, strengthen the communication between teachers and students and improve the learning plan and teaching content according to the different learning situations of students. It is also convenient for the school to understand the implementation of the teaching mode in real time, to find out the problems in the use process and improve in time.

2.5. Algorithm

(1) R^2 statistics:

$$R^2 = 1 - \frac{P_G}{T} \tag{1}$$

Among them, P_G is the sum of squared deviations within the total class of G categories, and T is the sum of squared deviations of all individuals.

(2) Semi-partial R^2 statistics

When combining class C_K and class C_L into the next level of class C_M, define semi-bias:

$$R^2 = \frac{B_{KL}}{T} \tag{2}$$

Its value is the difference between the previous step R^2 and this step R^2. The larger the value, the better the effect of the previous merge.

(3) Pseudo F statistics

$$t^2 = \frac{B_{KL}}{(W_K+W_L)/(n_K+n_L-2)} \quad (3)$$

The pseudo-F statistic evaluates the effect of being divided into G categories. The larger the pseudo-F statistic, the more reasonable it is to divide into G categories. Usually, the clustering level with a larger pseudo F statistic and a smaller number of classes is used.

3. Experimental Research on the Teaching Mode of "Accounting" Based on Smart Classroom

3.1. Experimental Subjects and Methods

In this experiment, students and teachers majoring in accounting of a certain school were used as experimental subjects. Through actual investigation, the effects and obstacles of smart classrooms were studied experimentally.

3.2. Data Collection

The experimental data was investigated through group assignment tasks and the data was obtained through actual communication between students and teachers, and the data was recorded and sorted and the experimental data was finally obtained.

4. Experimental Research and Analysis of "Accounting" Teaching Model Based on Smart Classroom

4.1. Analysis of the Role of Smart Classroom in "Accounting"

This experiment conducted an actual survey of accounting students in a certain school and analyzed the main effects of students' use of smart classrooms on accounting in those aspects. The experimental research results are shown in Table 1:

Table 1: Analysis of the role of smart classrooms

	Student intention
Improve classroom efficiency	96.27%
Strengthen teacher-student interaction	91.54%
Rich teaching content	99.13%
Easy access to teaching materials	18.47%
Help self-aware	21.85%
Increase opportunities for self-exhibition	74.92%

As shown in Figure 1, 99.13% of them agree that smart classroom technology makes teaching content richer, followed by 96.27% and 91.54% in teaching efficiency and teacher-student interaction. This fully shows that the use of smart classroom technology has brought great improvements to traditional accounting teaching and students also agree that the use of this new teaching model is more convenient and efficient than traditional classrooms.

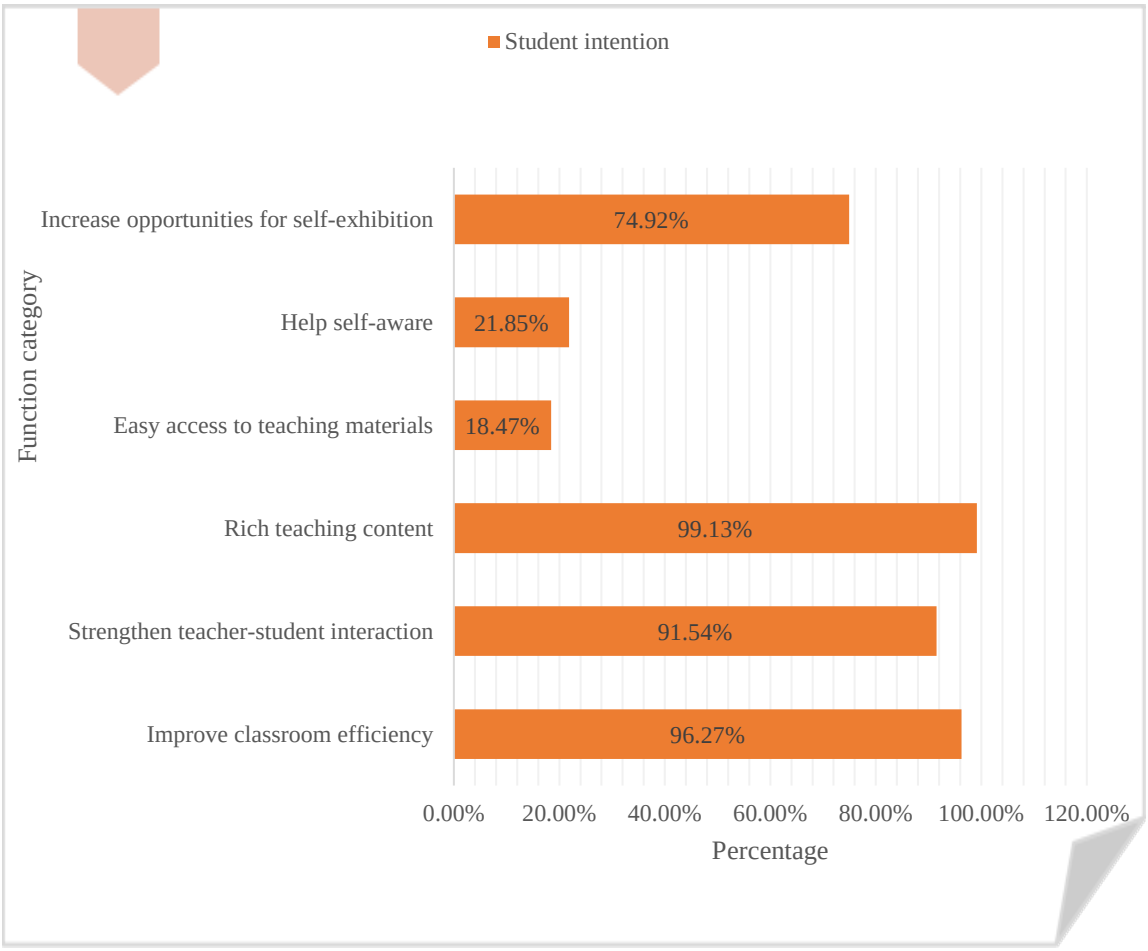

Figure 1: Analysis of the role of smart classrooms

4.2. Analysis of the Obstacles of the Smart Classroom Teaching Model

In this experiment, teachers from the accounting school of a certain school are used as experimental objects. Through experimental research on obstacles encountered in the process of smart classroom teaching, the obstacles are analyzed and the teaching mode is improved. The experimental research results are shown in Table 2:

Table 2: Analysis of the obstacles of the smart classroom teaching model

	Influence level
Difficulty in operation	10.37%
Difficult to blend	36.29%
Software and hardware failure	31.11%
Network failure	22.23%

As shown in Figure 2, 36.29% of teachers believe that it is difficult to conduct specific integration in the teaching process, 31.11% of teachers believe that software and hardware obstacles often occur in the teaching process, and 22.23% of teachers report that the school network is also often malfunctioning, 10.37% of teachers think that the various functions of the smart classroom are more complicated and difficult to operate. Therefore, it is necessary to strengthen all aspects of research in order to achieve better teaching effects.

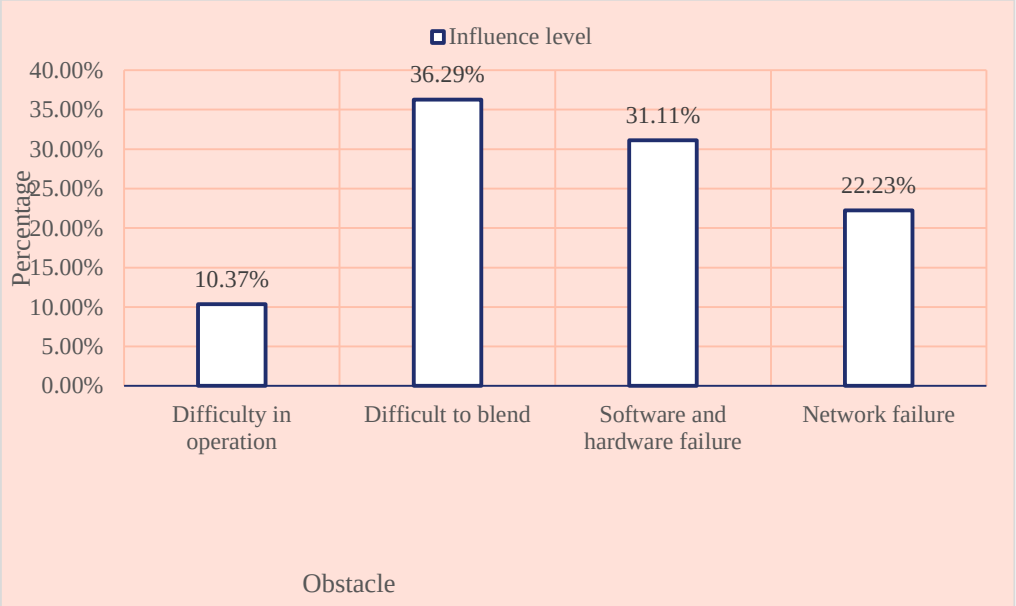

Figure 2: Analysis of the obstacles of the smart classroom teaching model

5. Conclusion

This article finds that building a complete smart classroom is not something that only teachers can complete. It has higher requirements for hardware and software facilities. This also requires teachers to improve this model by constantly stimulating their own wisdom, self-reflection and putting into practice, in order to seek a more effective teaching model and to pursue the goal of "wisdom" teaching by teachers and "wisdom" learning by students. A designed case of decimal mathematics applying this mode carried out practice and got a good application effect. The author also realizes that only technology can be fully embodied in teaching, in order to better promote the completion of teachers' "wisdom" teaching and students' "wisdom" learning. However, there are still many shortcomings in the research of this article. It is necessary to further combine students' learning characteristics and model advantages to design more excellent grade cases, adopt more effective implementation plans and strategies to make smart classrooms a normalized and efficient classroom.

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