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AN EMPIRICAL STUDY ON THE INTRODUCTION OF SYNOLOGY NAS TECHNOLOGY TO "BODY ART" TO STRENGTHEN AFTER-CLASS CONTROL AND FEEDBACK IN TEACHING

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ABSTRACT: *Physical education curriculum teaching, including preparation before class, control, feedback and evaluation to strengthen three links, the particularity of course cannot effectively solve the homework monitoring and feedback, and just rely on the classroom teaching cannot ensure the good teaching effect, difficult to improve students' skill levels, which affect the students' sports participation and the establishment of lifelong sports consciousness. Therefore, with the help of Synology NAS technology and the body art course as an example, this paper makes relevant reform and exploration on the course control and feedback link, and changes the traditional form of "lack of feedback and control in after-class exercises" to a certain extent.*

KEY WORDS: Synology, NAS, after-school control (feedback), body art

INTRODUCTION

The significance of the introduction of Synology NAS technology into the body art course

Policy support

The Central Committee of the Communist Party of China, the State Council "Chinese Education Modernization 2035" pointed out: accelerate the information age of education reform. Construction of intelligent campus, overall construction of an integrated intelligent teaching, management and service platform. Using modern technology to accelerate the reform of talent training mode and realize the organic combination of scale education and personalized training. At the same time the Ministry of Education about "speed up the construction of high level undergraduate course education to improve the talent to train the opinion of ability in an all-round way" also point out "because of school conditions, widely develop education teaching research activities, improve the ability of modern information technology and teaching depth fusion of teachers", "reshape education form... Accelerate the formation of a cloud service system for higher education that is diversified and coordinated, rich in content and timely in service, and create smart classrooms that meet the needs of students for independent learning, independent management and independent service. The rapid

development of information technology also provides an opportunity for the reform of PE education and teaching.

Explore and establish a new teacher-student interaction mode in PE course

The introduction of NAS technology to establish a network platform makes up for the control and feedback teaching links outside the classroom. Through this platform, teachers and students will also establish a new teacher-student interaction model of physical education course, which will reflect positive significance in the following four aspects. First of all, based on the two-way feedback of the platform, students can upload the practice videos to the platform, and teachers can review all students' practice assignments and give relevant guidance. Students' practice effect will be improved accordingly and their interest in learning will be constantly stimulated. Secondly, according to the practice videos uploaded by students on the platform, teachers can make appropriate adjustments to the current teaching priorities and difficulties as well as the progress, or improve the teaching methods and means to meet the current teaching needs. Moreover, through the platform, students actively complete the tasks assigned by teachers, and teachers give enough attention and guidance to students. Such frequent interaction can also promote the establishment of a more harmonious relationship between teachers and students to a certain extent, so as to build a more harmonious learning atmosphere on campus.

Improve the teaching quality

Combined with the Internet information technology, the after-class training of students is presented on the network platform. At the same time, the platform has a more scientific and reasonable management mode, which can solve the embarrassing situation of leaving the homework undone in the past, thus obviously improving the quality of classroom teaching to a certain extent.

Synology NAS technology was introduced into the experimental design of body art course

Experimental Objectives

With the assistance of Internet information technology and the support of NAS private cloud technology, the corresponding network platform can be established so that students' after-class exercises can be effectively controlled and feedback on this platform, so as to realize the reform goal of improving the teaching quality of body art courses.

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Experimental steps

Platform construction

Synology NAS technology to establish a network platform, the introduction of the main auxiliary teaching and feedback loop, the control of its core technology that students practice to upload the video to the platform, the teacher can be in the light of the problems existing in the practice of students give reasonable and effective Suggestions, the platform will run from the background and system operation of the interface to play two aspects of construction. The first is the hardware technical support, it includes DS918+ with 16T Seagate enterprise disk, its capacity can meet the teaching reform experimental class video data storage, in addition to Schneider UPS uninterruptible power supply guarantee platform 24 hours continuous operation, dandelion X5(gigabit routing) to guarantee the access speed of the external network. Secondly, the platform operation interface is the content of the software included in the plate: (1) the NAS system login interface (user name and password). ② Teacher account ③ Student account, students can log in to watch the tutorial, check the homework requirements, upload their own practice videos, and view the teacher's guidance opinions on the previous videos. (4) System administrator account, administrator through login system maintenance, to ensure the normal operation of the system.

Establishment of mechanism

The specific operation process of relevant platforms is as follows:

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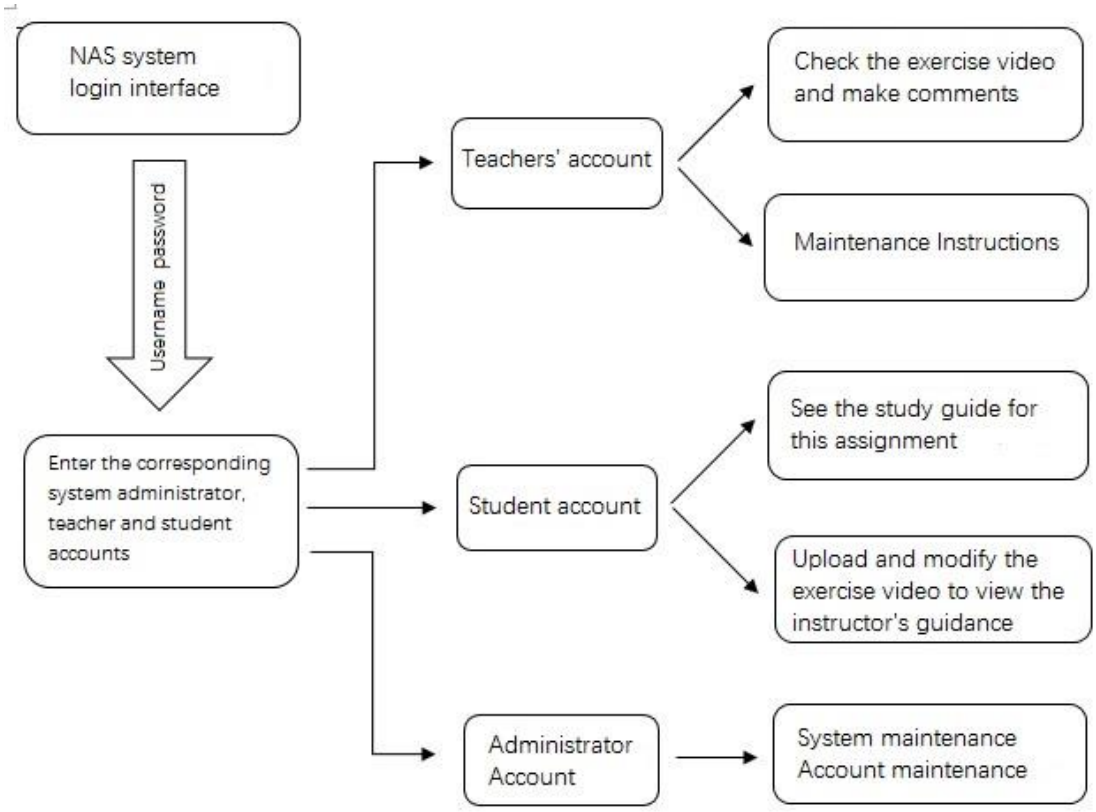

Action research

(1) Select experimental samples and establish a network platform of NAS private cloud of corresponding scale according to the sample size. Select body art class A and class B of the same grade, with 40 students in each class. Class A is an experimental class, and all students report their training assignments to the NAS network platform after class every week. Class B is the control class, and all the students learn PE courses once a week in accordance with the traditional mode. The course duration is one academic year.

(2) Take the teaching experiment method, compare the results of Class A and Class B before and after the experiment, and draw A conclusion through statistical test. These include shoulder width, hip flexibility and coordination.

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The experimental results and analysis of the introduction of Synology NAS technology into the body art course

Hardware construction results of the project

Through the network platform supported by Qunhui NAS technology, the hardware facilities needed for after-class control and feedback of the body art course have been completed.

Establishment of new teaching process model

Realize extracurricular interaction mode between teachers and students

With the network platform as the carrier, the body art course has realized the new interaction mode of "students' after-class exercises and teachers' guided question-answering", which makes up for the missing learning link of the previous body art course.

The management mode ensures the privacy of the video

Under the premise of ensuring the privacy of students' personal videos (completely stored in Qunhui teachers' hard disk, not uploaded to the Internet cloud disk), the teaching mode of uploading videos by students and receiving feedback from teachers is more efficient.

High efficiency of management mode

For the video homework, it provides a clear and efficient management mode for both students and teachers: students can upload freely by logging in the APP with their accounts, and teachers can clearly archive the video homework of all classes. To some extent, it reduces the workload of teachers to send, receive and classify videos, and students do not need to worry about the loss of videos.

Improvement of students' personal quality and ability

By measuring the reflect the quality of teaching the value of each index, index categories include: the opening of the shoulder, hip flexibility, jumping ability and coordination ability, and the experimental group before the experiment, the control group after the experiment, the experimental group before the experiment, the index data of the control group after experimental subject within the effect inspection and effect between the main body, the specific results are shown in table below. (Shoulder width, hip and coordination ability are shown in order in each figure)

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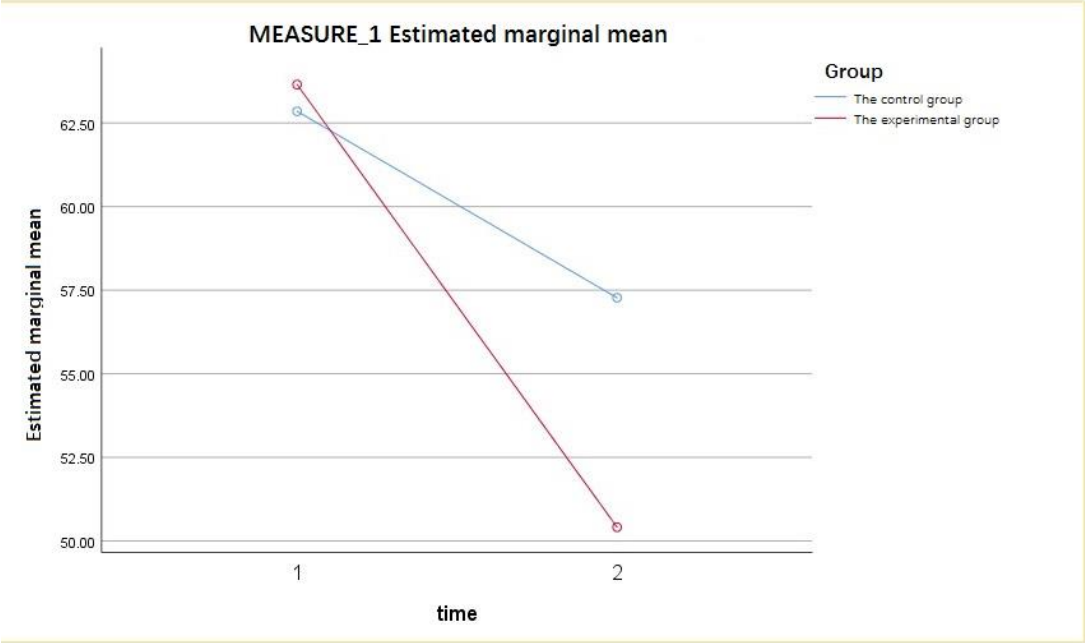

From the table above shows that before intervention experiment to shoulder width measurement of all the subjects, the control shoulder breadth 62.85 + 4.70, the experimental group shoulder breadth 63.65 + 5.79, after the experimental intervention, to shoulder width measurement, all the participants in the control group shoulder breadth 57.27 + 6.75, the experimental group shoulder breadth 50.41 + 5.94, shoulder width measurement data for repetitive measure analysis of variance, in the main body effect inspection, category and measured before and after the interaction (F = 48.37, P = 0), category and the measurement of the various indicators of the participants before and after improvement have significant difference of; Intersubject effect test (F=5.30,P=0.025<0.05) showed that groups had significant differences in the improvement degree of various indicators of subjects. The results show that both teaching modes are beneficial to the improvement of students' various indicators, and the intervention of the experimental group is more effective to the improvement of students' various indicators. Therefore, the course uses the platform to give after-class control feedback, which has a positive effect on the improvement of students' shoulder flexibility.

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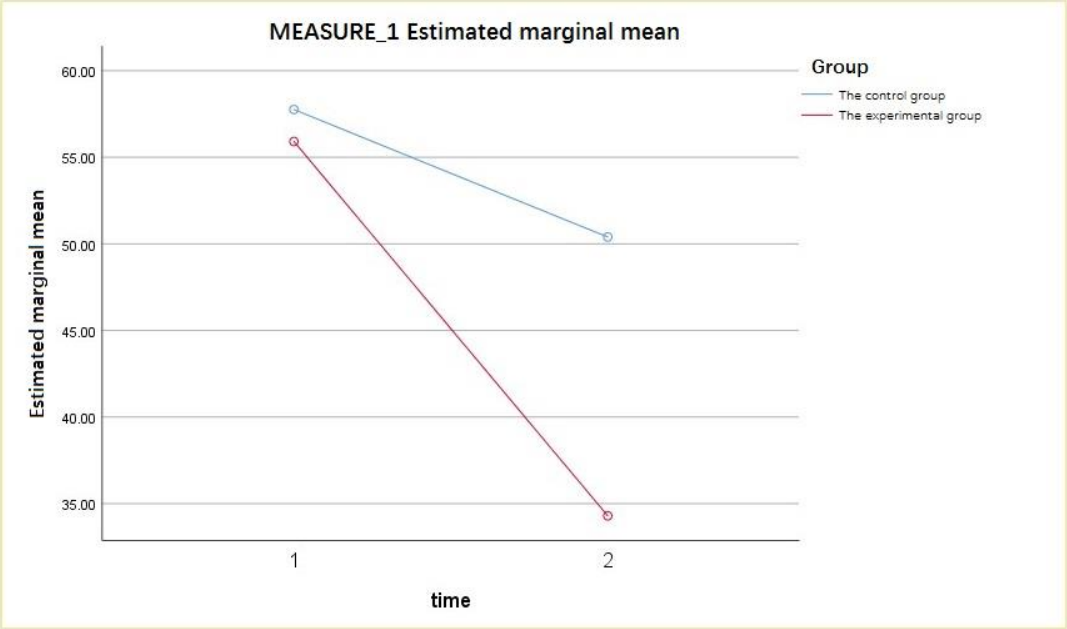

The table above shows that before intervention experiment to hip value measurement, all the participants in the control group hip value 57.75 + 7.22, the experimental group hip value 55.91 + 13.90, after the experimental intervention, hip after the value of all subjects on measuring, control group hip value 50.30 + 9.90, the experimental group hip value 34.30 + 9.30, repeated measurement data of the measured hip value variance analysis, in the main body effect inspection, category and measured before and after the interaction (F = 89.69, P = 0), category and the measurement of the various indicators of the participants before and after improvement have significant difference of; Intersubject effect test (F=13.58,P=0<0.05) showed that groups had significant differences in the improvement degree of each index. The results show that both teaching modes are beneficial to the improvement of students' various indicators, and the intervention of the experimental group is more effective to the improvement of students' various indicators. Therefore, the course uses the platform to conduct after-class control feedback, which has a positive effect on the improvement of students' hip flexibility.

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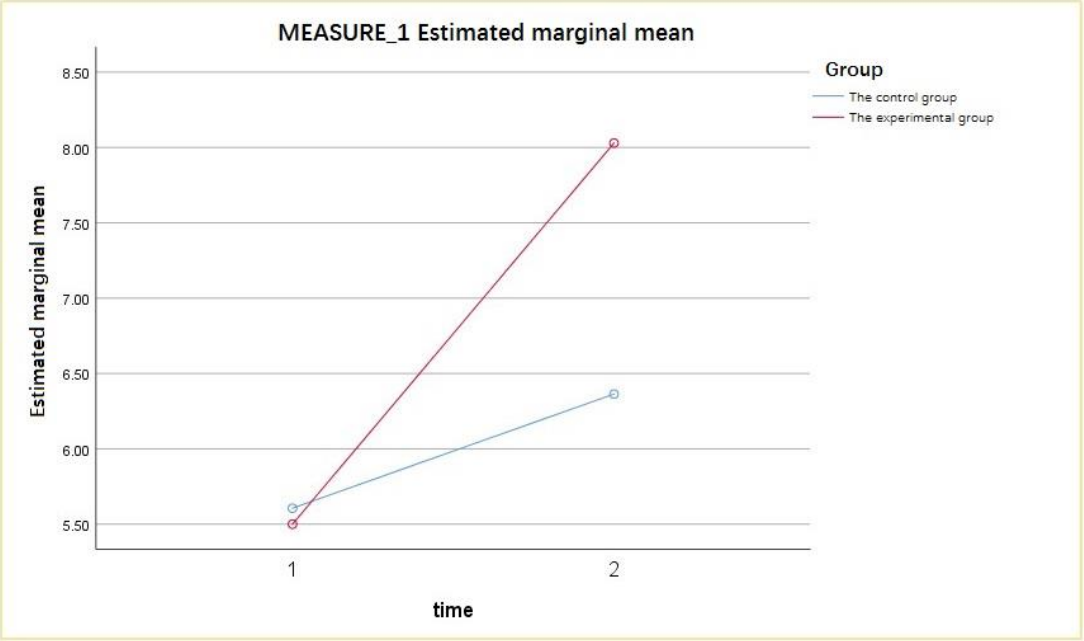

From the table above shows that before intervention experiment measurement for all participants to coordination, control group coordination 5.60 + 1.20, the experimental group coordination 5.50 + 1.18, after the intervention, the coordination of all subjects on the measurement, control group coordination 6.30 + 0.93, the experimental group coordination 8.03 + 0.97, repeated measurement data of the measured coordination analysis of variance, in the main body effect inspection, category and measured before and after the interaction (F = 105.04, P = 0), category and the measurement of the various indicators of the participants before and after improvement have significant difference of; The inter-subject effect test (F=9.828,P=0.03<0.05) showed that the improvement degree of each index was significantly different between groups. The results show that both teaching modes are beneficial to the improvement of students' various indicators, and the intervention of the experimental group is more effective to the improvement of students' various indicators. Therefore, the course uses the platform to give after-class control feedback, which plays a positive role in improving students' coordination ability.

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CONCLUSIONS AND RECOMMENDATIONS

The conclusion

Synology NAS technology is introduced into the physical art course, which also provides an opportunity for the reform of physical education teaching.

Synology NAS technology is introduced into the body art course to strengthen after-class control feedback to a certain extent.

Synology NAS technology is introduced into the body art course, which plays a significant role in improving students' personal quality and ability, and is conducive to maintaining students' interest and enthusiasm in course learning.

Suggest

The forms of after-class control and feedback can be diversified

According to the actual situation, for example, the students of the body art course have a large difference in foundation and the total amount of video homework of the body art course is large, one by one feedback will reduce the teaching quality progress of the whole class. On the premise of getting more and more familiar with the platform, students can be selectively arranged to upload videos -- for students with weak foundation, teachers can give after-class control feedback as much as possible, which can improve the teaching quality of the whole class.

Limitations of teachers' one-button function of looking up homework

The terminal for students to upload videos is a private hard disk. If teachers want to check the total number of cycles, there is no one-click function. It is recommended to remind students in advance to indicate the name of the file, which includes the date of uploading, so that teachers can check the total cycle completion amount.

References

[1] Chen Yongrong. Exploration of Expanding Primary School Physical Education Learning Evaluation under the Internet Environment [J] Educational Information Technology, 2018,12

[2] Guo Jie, Liu Wenjie, Fu Chengcheng. Construction and implementation of university physical education teaching management platform from the perspective of Internet + [J] Information and Computer, 2018,15

[3] Li Yong, Feng Wei. Discussion on Higher Vocational Physical Education Model Based on "Internet +" [J] Vocational and Technical Education, 2018.26