

## Research Article

# Design of College Physical Education Curriculum Based on Mobile App Development Platform

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Received 5 April 2022; Revised 16 May 2022; Accepted 30 May 2022; Published 17 June 2022

Academic Editor: Akshi Kumar

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As a new term, mobile client app is common in the software market and has mature commercial cases, while for mobile client app of educational content, it is relatively new. The purpose of this paper is to design the sports curriculum app in line with the current university. This paper uses the research method of questionnaire to investigate and analyze the current situation of the organization and management of sports activities and public sports facilities of college students in Taian. Based on the analysis of the influence of sports app on college students' sports behavior, it constructs the theoretical framework of school campus sports management system with app as the carrier. The experimental results show that about 41% of the students in the city use sports app, mainly including running app and fitness app. It can have a significant and positive impact on students' physical activity and sports motivation, but it has no significant effect on students' choice of sports. Through the realization of the physical education teaching function of the campus sports app, students can get rid of the restriction of venue, organization form, and time and make students exercise independently under the guidance of science and system. This design has very important practical significance.

## 1. Introduction

Nowadays, the coverage of wireless network is more and more wide. The network has existed in our life all the time and is imperceptibly changing our way of life and thinking [1]. In such a background, terminal devices such as smart phones and tablets that can connect to the Internet anytime and anywhere have been sought after by people and gradually increase their share in the electronic product market [2]. The mobile client platform originated from the demand of commercialization and the rise of e-commerce brought about the vigorous development of the Internet. Considering people's habits and e-commerce, the mobile client was born with consent [3]. In the field of education, the mobile client started late. The reason for the small number of early education mobile client platforms is the high technical difficulty, funding, and cost. Now the popularity of mobile networks and the large use of mobile devices provide good conditions

for the development of education customers [4–6]. App is the abbreviation of English application, which is usually a third-party application software program applied to mobile terminals, especially smartphones [7–9]. It is the main means for mobile phones to improve functions and provide users with richer experience. The application program of college physical education course is a third-party application software program specially serving for school physical education teaching, assisting, and guiding teachers and students to carry out interactive learning and exchange, cultivating teachers and students to establish the concept of “health first” and leading a healthy lifestyle, which is compatible with wearable devices [10–12]. According to relevant survey data, classification of mobile app stores, and future development trend, there are many sports applications at present, mainly including sports guidance, sports testing, and services [13]. At present, there is no application program that specifically serves for school physical education teaching

and guides teachers and students to carry out interactive learning and exchange [14]. The research and development of the application program of college physical education course has the following significance: first is to improve the quality of education and teaching. Second is to improve the efficiency of teaching management [15, 16]. Third is the formation of students' lifelong sports consciousness. Lifelong learning refers to the continuous learning process that every member of the society runs through the whole life to meet the needs of social development and individual development [17]. Smart phone is a double-edged sword. Correct use of smart phone can not only bring convenience to students' life but also help students' learning. In some subjects, mobile app has been used in laboratory management and classroom teaching. At present, more and more students begin to participate in sports, and students' demand for guidance of physical exercise is increasing [18]. In the process of students participating in sports activities, the demand for sports app is increasing. The guiding role of sports app in students' exercise process has become the main source of information for students to participate in sports, and many fitness software and running software have become students' coaches [19]. In this environment, the development and management of school sports activities combined with the Internet and mobile app has become more and more important. Through these ways closely related to students' life, we can carry out school physical education. The development and management of students' sports work and the management of public sports facilities can serve students in a convenient and efficient way and improve the overall level of school sports development.

Our previous home video basic surgical skill courses required a lot of teachers' time and resources and were limited by delayed feedback and technical difficulties. As a result, Green CA combines the course with the mobile application platform. Their purpose is to describe this application and the satisfaction of learners. Materials and methods: a step-by-step skill module was established by combining teaching design with mobile platform. Two groups of students, graduating medical students and incoming surgical residents, participated in the independent learning platform, participated in two to four experiments, and completed a survey of their experiences. The results of the survey were summarized, and the comments were analyzed by content analysis. Results: 50 students submitted videos of assigned tasks and completed peer review [20]. Learners reported on positive experiences, especially in the peer review phase, structured home practices, ease of mobile submission and review of videos, and ongoing immediate feedback. Content analysis reveals the educational concept of learners' participation in platform design. Conclusion: learners are satisfied and easily use the mobile technology teaching platform, which retains the basic content, educational theory, and organizational structure of our previous effective surgical skill courses [21]. Ozata et al. aim to define and better understand the opinions and preferences of business school students on mobile marketing education application design. In order to achieve this goal, an interpretative hybrid method is used to study the design and collect data in order.

First of all, 168 business school students were surveyed to determine their learning style. There are five factors in learning orientation questionnaire: vision, hearing, dependence, cooperation, and reading and writing learning style. In the second phase of the study, they conducted semistructured in-depth interviews with nine graduate students to better understand their preferences and explore their views on mobile applications. After the coding process, three themes emerged: learning style, content, and tools. In addition to these themes, eight motivations for using the mobile marketing education application were identified [22].

This paper first analyzes the theory of app design related to sports management and sports management, which lays a firm foundation for the research of this topic. Sports management is a management activity in the field of sports. It has the basic meaning, characteristics, and nature of management and is mainly used in sports industry management [23]. Through the investigation of the current situation of university sports activities in a Taian, we design the questionnaire, follow the basic procedures and requirements of the questionnaire research methods, draw up the research questionnaire, and on this basis, build the school campus sports management system with app as the carrier. It is a theoretical framework. This paper focuses on the design of the app client of campus sports management and constructs the communication platform between school sports managers and students. The experimental results show that about 41% of the students in the city use sports app, mainly including running app and fitness app. It can have a significant and positive impact on students' physical activity and sports motivation, but it has no significant effect on students' choice of sports. Through the research of this paper, it provides the theoretical basis for the establishment of the platform and provides a useful reference for later application in practice.

## 2. Proposed Method

### 2.1. Overall Design of Mobile Client Platform

*2.1.1. Design Idea of Mobile Client Platform.* The purpose of building the mobile client application platform is to facilitate teachers and students to improve the utilization rate of curriculum resources, acquire the required knowledge resources, and realize the real-time and timeliness that the traditional classroom does not have. Mobile client platform has interactive function. Teachers communicate, evaluate, and feedback with students through the platform to help teachers improve teaching and promote communication between teachers and students. As a client platform built on the cloud server, it is an Internet-based teaching resource and sharing platform, which plays an important auxiliary role in the traditional classroom. For managers and learners, the author summarizes the following situations in the design:

- (1) Easy to use and simple when I design the mobile client platform, I fully consider the usage habits and characteristics of teachers and learners, optimize

the interface, simplify the operation function, and strive to get started quickly. The backstage service is mainly aimed at the optimization of managers, which simplifies the operation steps and editing steps of upload and enables better reediting of teaching resources

- (2) *Practical and Applicable Design of Mobile Client Platform to Assist Teachers' Curriculum Teaching Function Client.* It should be in line with the traditional classroom resource model and personal learning habits, with strong practicality. Applicability is aimed at students' habits of using other customers, so that students can get familiar with the operation feeling when using
- (3) The client structure of the model structure is the foundation of the mobile terminal development model. Hierarchies allow for better separation of functions. When the function module is improved, it can realize fast positioning and timely modification. Modular function design also brings clear structure, which is convenient for customers to improve and perfect in the future
- (4) Sharing according to the characteristics and development of mobile learning, cloud server resources are more suitable for sharing and transmission, not only to meet the use of students and teachers of relevant courses, but also to play a reference and guidance role for other disciplines

**2.1.2. Structure Framework of Mobile Client Platform.** According to the above design idea, in building the structure of the cloud service mobile client app platform, the following requirements should be followed for design, as shown in Figure 1.

*Smart mobile devices:* the mobile interface provides learners with a better sense of experience and learning experience. The interface design should conform to the principle of modern student innovation.

*Cloud server-side database:* cloud server is not an ordinary Internet server. It obtains dynamic data and sends it to the device through cloud data computing on the network. The access speed of ECS is faster and more intelligent, and the resource cache time of database is smaller, so the data exchange is more timely.

*Manager:* the administrator is in charge of all data of the mobile client app platform and has the authority to upload, download, modify, query, and add improved function modules.

*Streaming media data:* learning resources mainly stored in the cloud server, such as streaming media video, audio, courseware, course documents. Students can download, teachers can modify, delete, and other operations, while administrators can ensure the effectiveness and security of resources.

## 2.2. Functional Design

**2.2.1. The Function Orientation of the Application of College Physical Education Curriculum.** The specific functions of

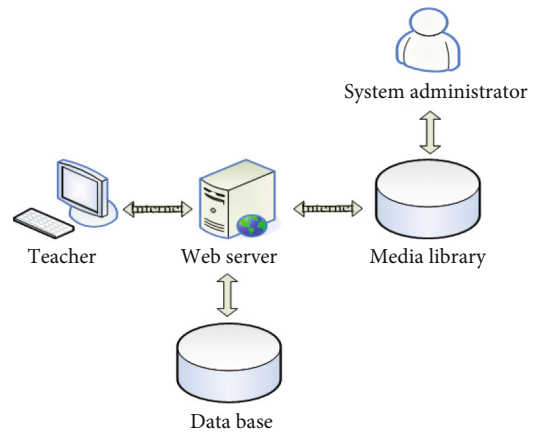


FIGURE 1: Design framework.

college physical education curriculum app can be further divided into the following aspects as shown in Figure 2.

### 2.2.2. Main Functions

- (1) *Operation Guide (Instruction).* The operation guide is guided operation, simple, and easy to learn and simple training for new users to operate and guide them to use the app quickly and skillfully
- (2) *User Registration/Login.* The user can log in to the app by using the account and password of teachers and students assigned in advance by the school's "educational administration management system," complete the real name registration, match and activate the relevant preset permissions, and obtain the corresponding information directly
- (3) *Access to Physical Education Curriculum Information.* Users can easily and timely access to the basic information of physical education teaching department and curriculum, such as curriculum setting, teaching plan, syllabus, credits, opening time, optional items, optional/selected number of people, course learning content, course assessment content, and method, as well as specific requirements for assessment. At the same time, it can also obtain the basic information of physical education teachers and teaching evaluation information, which is convenient for students to consult physical education curriculum teaching and provide support for students to fully understand physical education teaching
- (4) *Course Selection.* At present, physical education in colleges and universities is mainly based on club (optional course) and administrative class. The sports course app can provide users with choices and choose to set up schools in the form of clubs (optional courses). Students can choose projects, teachers, class time, etc., independently, according to the teaching information of sports educational administration, combined with their own interests and specialties, and complete the sports teaching process under the

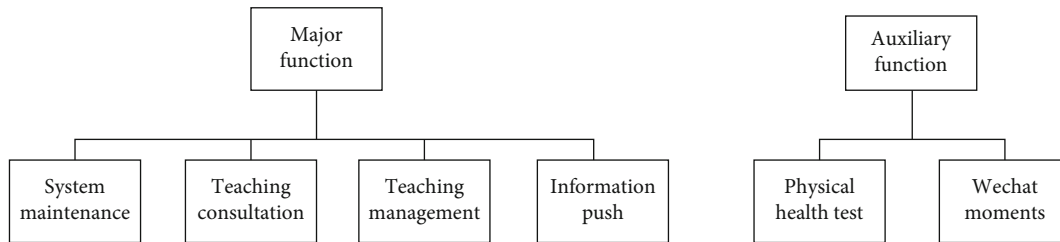


FIGURE 2: Function diagram of app system of college physical education course.

guidance of app. Select the school of administrative class teaching, students can find the class according to the system preset, and complete the physical education teaching process under the guidance of app

- (5) *Teaching Video*. On the app, teachers' teaching video can be played anytime and anywhere. Students can repeatedly learn technical skills and fully understand the learning content, action essentials, difficult points, tactical coordination methods, correction methods, and means of wrong actions, that is, to achieve the purpose of preview in advance, make up for the lack of traditional teaching after-school guidance, and effectively improve the quality of education and teaching
- (6) *Attendance*. Teachers can comprehensively evaluate students' performance and learning effect according to their attendance in class and other indicators. In the process of teaching, teachers can open the attendance function at any time and urge students to complete the check-in by using the app. The simple and quick attendance improves the teaching efficiency. At the end of the semester, app will count the attendance and grade the students according to the preset standards of teachers. Students can also query their own learning situation clearly, which provides the index reference for the final physical education course assessment and evaluation
- (7) *Management Teaching of Special Students*. The competent department can carry out classified management and assessment on the special students with physical disability, need exemption and delay due to illness and events through the sports course app, so as to grasp the situation of students at any time
- (8) *Information Push*. According to the weather change, school work arrangement, and other emergencies, the teacher will push the teaching information to the students accurately through the app in combination with the teaching needs. At the end of the semester, app can also count and push the assessment results. The app will also remind users to attend classes according to the settings and provide human-oriented services such as clothing, drinking water, and other health reminders according to the weather conditions

- (9) *Extracurricular Teaching of Teachers and Students*. Guide students to communicate with teachers online through app, and teachers can provide extracurricular guidance according to different situations of each student to further improve teaching effect and teaching quality. Teachers can also arrange homework or exercise objectives through app. After students submit homework or achieve exercise objectives, teachers can guide and evaluate students' exercise duration, exercise frequency, exercise energy consumption, etc., so as to realize the effective connection of physical education content in class and out of class

### 2.2.3. Auxiliary Functions

- (1) The student physical fitness test sports course app can carry out the national and school test work, guide the students to understand the relevant national policies, and the notice arrangement of the school related work. Students can carry out the test according to the arrangement of the school, complete the check-in, confirm and record the effective scores after the test, and complete the test task. After the test, students can inquire their own test results and evaluation, urge them to actively participate in physical exercise, develop good exercise habits, and improve their physical health
- (2) The school sports exchange sports course app connects like-minded individuals through the app platform to realize the social function of online team building and offline extracurricular sports activities. They can share their extracurricular sports participation through app or WeChat friends circle, realize mutual encouragement and competition among groups through Internet "sun exposure," guide users to establish lifelong sports awareness, and improve students' dependence on college sports curriculum app
- (3) The school sports information release sports course app can timely push the achievements of the school sports work, the introduction of outstanding sports figures, sports news reports, sports meeting information, and other information to the users, so as to achieve the purpose of promoting the school sports work, inspiring the hearts of teachers and students,

and building the campus culture. The app also has the function of regularly pushing scientific fitness knowledge, fitness skills, sports nutrition, and other information to guide users to form a healthy sense of life

### 2.3. Mobile Client App Platform

#### 2.3.1. Client Management

- (1) “Campus safety management platform” is a modern campus safety management platform that provides network and information collaboration through mobile phone text messages, the Internet, etc., so that parents can keep abreast of students’ various performances in school and can directly contact head teachers and schools at any time. The security of the security management platform is an extremely important part of the Internet. The administrator carries out daily management in the background of cloud service database to maintain the normal operation and data security of the client. Cloud database vulnerability may cause data disclosure. The administrator should avoid the paralysis caused by the network vulnerability and ensure the normal use of the mobile client
- (2) When using the database, the operation and management personnel of the database shall not only ensure the upload, download, and browse of the data but also update the data in real time, operate under reasonable circumstances, establish the authority, back up the database, etc.
- (3) One aspect of resource development is included in resource management, preserving resource investments through smaller additional investments, lowering the investment to dispose of current resources, and developing needed new capabilities at lower costs than disposing of existing resources. The resource management administrator is responsible for collecting the required teaching streaming media resources and courseware documents, selecting the content suitable for teaching, and uploading it to the cloud service database. The authority of teachers has the function of uploading and sharing. The responsibility lies in the continuous enrichment of teachers’ resources to ensure that students can obtain efficient learning content. Teachers should increase teaching resources and enrich teaching content according to students’ mastery and classroom reflection

*2.3.2. User Management Function.* Manage users of mobile client platform, including administrators, teachers, and learners. According to the different permissions and levels, the management level is divided into three categories: front-end administrator, back-end administrator, and content administrator. The front desk administrator is responsible for the layout, layout and interface design of the front desk content, and the display and optimization of the front

desk and summarizes the experience of the front desk functions. The backstage administrator is mainly responsible for the optimization, supervision, and upgrading of backstage data client functions and for maintaining database security and daily database backup. The content administrator is responsible for uploading, modifying, deleting, adding content, viewing messages, and communicating with students. The main members are course teachers.

*2.3.3. Resource Management.* Resource management is to manage the data in the database. According to different attributes and formats, it can be divided into five categories: video resources, audio resources, graphics, streaming media, and PPT and PDF courseware. These five resources have different effects. When using the client program, learners choose the right resources according to their own needs.

- (1) Video resource education technology-related professional course video resources, including teacher course video and course content video, adapt to different clients to watch and browse, code for different clients, upload to cloud service database, and play on multiple platforms. In addition, it is optimized for the user’s device and built-in HTML5 player, with different playback effects
- (2) Audio materials of courses related to audio resources can be downloaded directly to mobile devices for playing
- (3) Graphics and pictures include learning pictures, structural pictures, and other pictures containing learning information, aiming to present intuitive content
- (4) Streaming media data streaming media generally refers to the content in the form of video and audio with multiple media fusion, and video resources account for the vast majority. At the same time, according to the learning needs, the mobile client provides online browsing and high-speed download functions
- (5) PPT and PDF resource mobile client provide the function of viewing PPT online. Based on HTML5 technology, it is suitable for browsing on mobile devices. As a common document format, PDF reading also provides online reading and downloading. Finally, it realizes the browsing of multiplatform courseware

### 2.4. Technology of Mobile Client Platform

*2.4.1. C/S Development Architecture.* C/S structure is a popular technology in the development of mobile device software in recent years. The separation of client and server and the rational allocation of resources, can give full play to the advantages of software and hardware and improve the user experience. The client’s devices are parsed through the network and presented in the form of messages.

On the one hand, the C/S structure has the characteristics of bearing light load data. The server processes the data and presents most of the content to the mobile device, which greatly reduces the pressure on the server. When the client runs in the mobile device, it automatically looks for the matching server, sends out the request, waits for the server to answer, and finally sends the result. Modularization and layering make the data between layers transparent and realize data exchange in a centralized way. The server program and the client program divide the work, and the data is better reflected in the mobile device. There is no data conflict between the two in the whole process, as shown in Figure 3.

### 3. Experiments

**3.1. Questionnaire.** According to the needs of this study, we should understand the current situation of college students' sports activities in Taian, design the questionnaire, follow the basic procedures and requirements of the questionnaire research methods, draw up the research questionnaire, modify and enrich the content of the questionnaire on the basis of expert consultation and tutor guidance, and determine the questionnaire; test the validity of the questionnaire according to the steps, implement the questionnaire survey, and use the retest method. The reliability of the questionnaire was tested.

**3.2. Questionnaire Validity Test.** In order to ensure the validity of the questionnaire, a qualitative questionnaire validity test was carried out. First, a questionnaire expert validity test form was prepared according to the needs. After the preliminary formulation of the questionnaire content, the opinions of experts and scholars were widely solicited. According to the suggestions and opinions of students and teachers, the necessary modification and improvement of the questionnaire were carried out, and the final draft was made. The validity of the questionnaire should be tested by the experts who are engaged in the research of school sports management and who are in charge of the related subjects. The validity of the questionnaire after correction is shown in Table 1.

As shown in Table 1, in the questionnaire validity checklist, the very effective percentage is 60%, and the particularly ineffective is 0. This indicates that the overall questionnaire is still effective.

**3.3. Questionnaire Distribution and Recovery.** There are four undergraduate colleges in Taian, including Shandong Agricultural University, Shandong First Medical University, Taishan University, and Taishan College of Science and Technology. This study investigates the students of these four institutions. After the establishment of the questionnaire, Shandong Agricultural University, Shandong First Medical University, Taishan University, and Taishan College of Science and Technology are distributed through the way of online distribution and on-site distribution. A total of 550 questionnaires were issued, 480 were issued by the stars, and 70 were issued on site. The recovery rate of 542 samples was 98.5%. Among them, 530 were valid questionnaires,

and the effective rate was 97.8%. Among them, 153 students are in the first year, 155 students are in the second year, 146 students are in the third year, and 76 students are in the fourth year (randomly assigned).

**3.4. Reliability Test of Questionnaire.** The reliability of the questionnaire was verified by retest. From the first respondents, 30% of them were randomly selected, and about 160 of them were investigated twice. SPSS was used to test the correlation  $R$  of the final statistical data of the two samples. The test results showed that  $R_1 = 0.723$ ,  $R_2 = 0.735$ , and the correlation  $R$  value was 0.70-0.80, which indicated that the survey results had a high reliability.

**3.5. Mathematical Statistics.** According to the purpose of the study, SPSS was used to calculate the  $R$ -coefficient correlation of the two samples after the retest and to test the reliability of the questionnaire. The Microsoft Excel software was used to calculate the data and obtain the relevant data, and the data were compared and analyzed with the methods of routine processing, standard percentage conversion, and correlation coefficient statistics, and the SPSS23 statistical software was used to carry out descriptive analysis,  $t$ -test, and Chi-square test.

### 4. Discussion

#### 4.1. A Current Situation of Physical Education in Colleges and Universities

**4.1.1. Satisfaction Survey of Physical Education Curriculum.** As for the survey of the satisfaction degree of the students of the physical education course in Taian, the content, items, teaching methods and means, sports facilities, and assessment methods of the physical education course are shown in Figure 4.

At present, the satisfaction of the current situation of school physical education is not high, and there is a certain gap between the development of students' skills and physical ability and the expected teaching effect. It is necessary to carry out a purposeful investigation on the current situation of college physical education in Taian. Through the summary of the current lack of school physical education curriculum development, Internet technology was used to build a new school physical education management media. The construction of management media is conducive to the interaction between teachers and students, the construction of sports resources, and the more scientific evaluation of sports curriculum.

**4.1.2. Analysis on the Degree of College Students' Participation in Extracurricular Sports Activities in Taian.** Only 31.4% of the students take part in extracurricular physical exercises three or more times a week, and more than one-third take part in one or two times a week, as shown in Table 2. According to the frequency standard of participating in sports activities, nearly one-third of the students have reached the frequency standard of sports for the sports population. If we add weekly physical education, most of the students have reached the standard of physical education

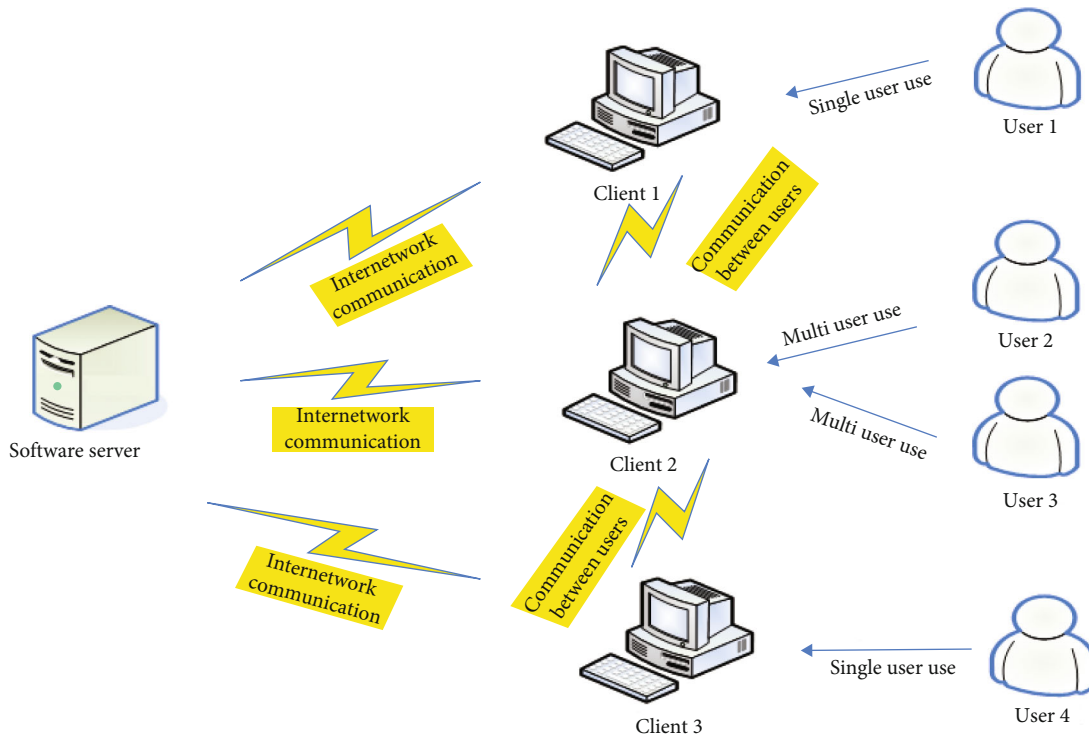


FIGURE 3: C/S architecture.

TABLE 1: Questionnaire validity checklist.

Effective degree	Content validity		Construct validity		Overall validity	
	Content validity	Percentage	Number	Percentage	Number	Percentage
Very effective	3	60%	2	40%	3	60%
Effective	2	40%	3	60%	2	40%
Commonly	0	0%	0	0%	0	0%
Invalid	0	0%	0	0%	0	0%
Especially invalid	0	0%	0	0%	0	0%

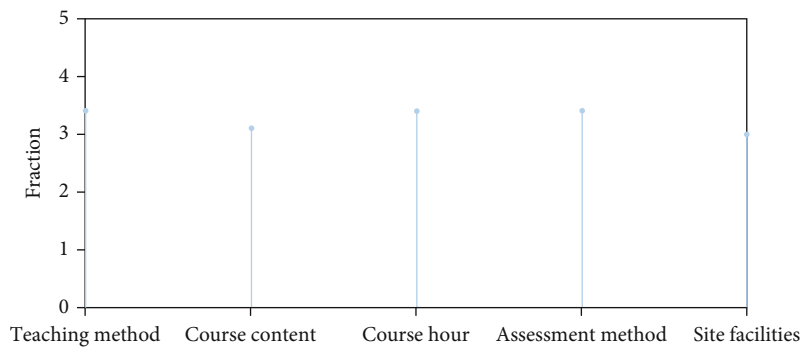


FIGURE 4: A schematic diagram of the satisfaction of college students' physical education curriculum in Taian.

population. However, few students never take part in extracurricular sports activities. The enthusiasm of students to participate in extracurricular sports activities depends on their initiative. How to improve the initiative of students is one of the problems to be solved in school physical education.

When students take part in sports activities, the influence on their physical quality should be determined by the intensity and quantity of sports. 85.8% of the students have reached the time required by the sports population, as shown in Table 3. Generally speaking, most of the students can actively participate in physical exercise, which shows

TABLE 2: Questionnaire on the frequency of college students participating in extracurricular physical exercise in Taian ( $n = 530$ ).

	The 0 time	The 1-2 time	3 or more times	Unfixed
Number	40	226	167	96
Percentage (%)	7.6	42.7	31.4	18.1

TABLE 3: Extracurricular physical exercise time of college students in Taian ( $n = 530$ ).

	$\leq 30$ min	31-60 min	$\geq 60$ min
Number	75	341	114
Percentage (%)	14.2	64.1	21.7

that the students' love for sports is still very high. Statistics show that the overall exercise time of freshmen and sophomores is less than that of freshmen and sophomores, because freshmen and sophomores need to do morning exercises, and the main duration of exercise depends on morning exercises. On the contrary, junior and senior students have more spare time and do not need to do morning exercises, so their main sports activities rely on extracurricular physical exercises.

65.7% of the students' extracurricular physical exercise intensity has reached the standard of sports population, and 15.1% of them have low physical activity intensity, as shown in Table 4, which is carried out by walking for a long time and other low-intensity ways. It shows that there are still some students who have lack of theoretical knowledge and sports skills to participate in sports activities. In terms of exercise intensity, most of the students have reached the standard of sports population. According to the frequency, duration, and intensity of students' participation in extracurricular sports activities, about 30% of the students in the school belong to the sports population. In general, for the lack of exercise time, moderate intensity of exercise and exercise frequency are not enough, not to meet the national standards of physical activity.

4.1.3. Current Situation of College Students Using Sports App.

Through the analysis of the survey data, it is concluded that the number of college students using sports app is 328, accounting for 41% of the total number, and the number of people who have used sports app accounts for 28% of the total number. 69% of the students have contacted sports app, as shown in Figure 5, indicating that college students in Taian have considerable demand potential in this regard.

4.2. Mobile Client Platform Effect Display

4.2.1. User Interface of Mobile Client Platform. The mobile app icon of college physical education course is shown in Figure 6. The mobile phone login interface of IOS system is as shown in Figure 7. It is the interface when entering the mobile phone. After the content is loaded, the relevant functions of the client are displayed.

TABLE 4: Physical exercise intensity of college students in Taian ( $n = 530$ ).

	Fever	Sweating slightly	Moderate sweating	Mass sweating
Number	81	149	180	12
Percentage (%)	15.1	28.2	33.9	22.8

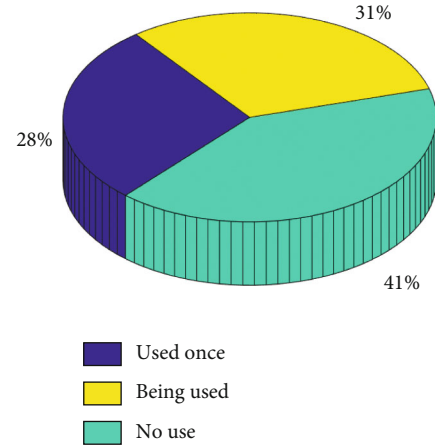


FIGURE 5: Use of sports app for college students in Taian.



FIGURE 6: Mobile client app icon.

The main function modules of mobile phone application include the following: sports course video, learning sports materials, health examination, extracurricular communication, teaching materials for weather warning, learning documents, and other modules. In addition, there are two-dimensional code download, video browsing, and other functions to facilitate students to access information resources.

4.2.2. IOS Platform App Content Interface. As shown in Figure 8, you can view streaming media, courseware, and other resources about the course. In order to adapt to the students' operation habits, the simplified operation is carried out, and the knowledge points of physical education course are consolidated better. The video picture is intuitionistic, which is easier to inspire students to construct and master



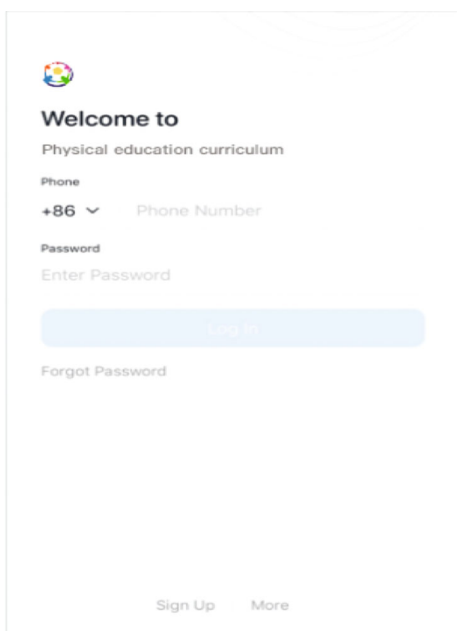


FIGURE 7: IOS login interface.

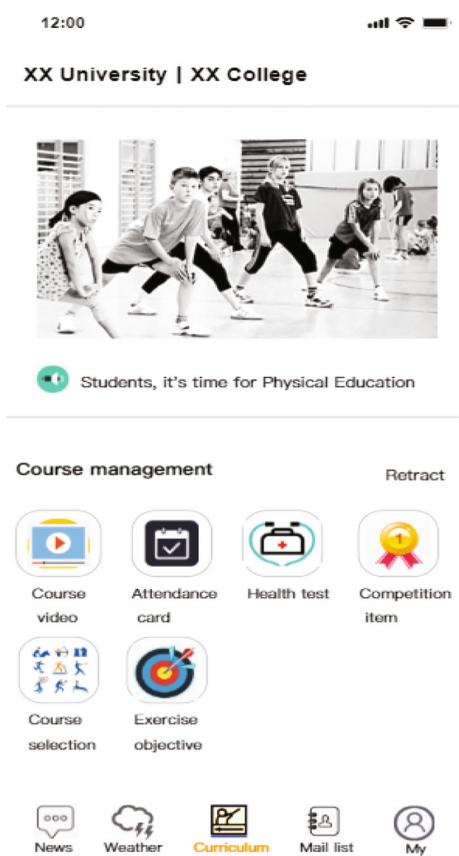


FIGURE 8: App content interface.

sports knowledge. In the design of mobile phone client application software, the playback effect suitable for mobile phone operation interface is fully considered.

The mobile phone opens the app's video playing interface, which is suitable for mobile browsing. Students can directly watch the course video materials, etc. It is easy to operate and play the course video anytime and anywhere.

## 5. Conclusions

The continuous development of network information technology has a great impact on the physical education in colleges and universities. In the process of the reform of physical education in colleges and universities, we should use the network information means, proceed from the actual situation of students, combine the characteristics of physical education, constantly update the teaching means, promote the development of physical education in colleges and universities, and strive to improve the physical quality of students. At present, people pay more and more attention to physical education and health. College physical education curriculum app will come into being in the near future, providing convenient and effective education and teaching services for teachers and students.

First of all, this paper analyzes the theory of sports management and app design related to sports management, which lays a solid foundation for the research of this topic, and designs a questionnaire. Following the basic procedures and requirements of the questionnaire research methods, this paper formulates the research questionnaire, modifies and enriches the content of the questionnaire on the basis of expert consultation and tutor guidance, and determines the questionnaire; following the steps, the validity of the questionnaire was tested, and the reliability of the questionnaire was tested by retest.

By using the methods of literature, questionnaire, and mathematical analysis, this paper makes an investigation and analysis of the current situation of the organization and management of the students' sports activities and the satisfaction degree of the sports class in Taian and analyzes the influence of sports application on the students' sports behaviors. On the basis of investigation and research, the theoretical framework of school campus sports management system university-based on app is constructed. This paper focuses on the design of the app client of campus sports, realizes the supervision of all levels of sports authorities on the related work of school sports, and constructs the communication platform between school sports managers and students. In order to improve the level of school sports management, promote college students to better participate in physical exercise and provide useful reference for the application of campus sports app in practice.

## Data Availability

No data were used to support this study.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

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