Use of Smart Phone Sports APP in College Sports Education under Information Background

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Abstract. With the continuous evolution of information technology, China has entered the information age, the use and promotion of smart phone is the inevitable trend of information evolution, but also an important sign of the information era. With large quantities of uses of smart phones, a large number of mobile apps have appeared, and different APP types have emerged. Currently, mobile apps have been applied in various fields, and gradually promoted to the field of sports education (SE), and various sports apps have emerged. The purpose of this paper is to chase down the problems existing in the use of sports APP in college SE by studying the use of smart phone sports APP in college SE under the background of informatization, so as to achieve the deep fusion of sports APP and college SE, and continuously promote the quality of SE. Firstly, this paper gives an overview of sports APP and college SE, and carries out use experiments of sports APP on the basis of information intelligence algorithm, analyzes the use situation of sports APP in college SE, and puts forward relevant use strategies on this basis. The experimental results show that the use of sports APP in college SE promotes teaching efficiency, but there are some problems at the same time, which must be paid enough attention.

Keywords: Informatization Background, Sports APP, Sports Education, Information Intelligence Algorithm

1. Introduction
With the continuous evolution of scientific and technological level, especially information technology, the large-scale promotion and use of smart phones have emerged. In the meantime, a large number of various types of collection use apps have emerged. Sports apps are an important category of current mobile apps. At present, sports apps are widely used in People's Daily exercise, and with the continuous maturity and evolution of sports APP technology, they are gradually applied to college SE. The use of sports APP in SE can promote the reform of SE and promote the efficiency of college SE. However, there are still some problems in the use of sports APP in SE, which hinder the further evolution of SE. Therefore, it is particularly important to conduct in-depth investigation on the use of smart phone sports APP in college SE under the background of informatization.

Sports apps are mainly used for the recording of sports data and the analysis of sports conditions,
which can provide scientific guidance for users to exercise and Keep fit. Currently, there are a variety of sports apps in the market, including Keep, yue dong, daily yoga, Wake, etc. [1-2]. With the continuous evolution of informatization, institution of higher learning have achieved the full coverage of the network, which provides a good use environment for the use of sports APP in college sports [3]. As sports APP is unceasingly thorough along with the use in the university sports, scholars at home and abroad for sports APP conducted a series of research, through consulting a lot of relevant research data and carries on the classification, we found that due to the western developed countries by the rapid evolution of information technology, sports APP earlier in the use of institution of higher learning, so the research is more than our [4-5]. Current studies of sports APP focuses on its use scope, advantages and use effect on the study of these studies are mainly based on motion APP itself inherent advantage, without realizing movement APP and set specific areas, the results of the study is universal but lack of specificity, does not apply to all situations [6-7]. Therefore, from this point of view, there is still a lot of room for promotement.

In order to make up for the theory of blank, perfect the related research, this paper under the background of informatization smartphone APP in institution of higher learning sports teaching the use of carried on the thorough analysis and research, to promote mobile APP in scientific use of the SE teaching in institution of higher learning, realize the organic combination between the two, promote to promote the efficiency of sports teaching [8]. Firstly, this paper gives an overview of sports APP and college SE, conducts use experiments of sports APP on the basis of information intelligence algorithm, analyzes the use status of sports APP in college SE, and proposes relevant use strategies on this basis [9-10]. The research results of this paper show that the use of sports APP in college SE promotes teaching efficiency, but at the same time there are also some problems, which must be paid enough attention [11]. This research not only promotes the in-depth use of sports APP in SE, but also promotes the quality of SE and promotes the reform of SE. In the meanwhile, it provides a certain theoretical basis and reference significance for future relevant studies [12-13].

2.Method

2.1 Overview of Sports APP and College SE
APP is a kind of use software on mobile phones, which is mainly used in various mobile devices, especially in smart phones. According to the performance of sports apps, they can be classified into two categories, namely sports apps and fitness apps. Sports apps can analyze and process various exercise data of athletes. The data calculation is based on GPS positioning and speed measurement, and finally relevant data of fat consumption are obtained. Fitness apps are mainly used for making fitness plans. The use of mobile sports APP in college SE can make up for the shortcomings of traditional SE and show great use advantages, which are mainly reflected in the convenience, interactivity and scientificity of use, which is conducive to improving the teaching efficiency of college SE. At present, the ways to introduce sports APP in SE in institution of higher learning are mainly divided into the following four aspects. The second is the introduction of apps in sports; Thirdly, sports APP is introduced at the end of sports. The fourth is the introduction of sports APP in the supervision and evaluation of college SE. To sum up, the use of sports APP in college SE is gradually maturing, but at the same time, there are also some problems in its use, such as the lack of APP use skills and the shortage of mobile resources, etc., the emergence of these problems must cause us to pay enough attention.

2.2 Information Intelligent Algorithm
Information intelligence algorithm is to analyze the use data with the help of information technology so as to realize the in-depth analysis of the use performance of sports APP in college SE. Firstly, data features were extracted. The number of features extracted from the analysis data of the use of sports APP in college SE was set as n. These feature vectors together constituted an initial feature set \( F = \{ f_1, f_2, \ldots, f_n \} \), where n represents the initial characteristics of the specific number, because some little
impact on the results of the analysis of the data characteristics, so negligible, if a certain data feature is
selected, the data characteristic value is equal to 1, otherwise the data characteristic value is equal to
zero, so has the characteristics of the selected collection can make statements with the help of a binary
form, which is \( S = \{s_1, s_2, ..., s_n\} \), \( s_i \) value is equal to 1 or 0. The mathematical calculation formula for
the selection of data features of the use performance analysis of sports APP in college SE is as follows:

\[
S = \{s_1, s_2, ..., s_n\}, s_i \in \{0, 1\}, i = 1, 2, ..., n
\]  

In this paper, support vector machine algorithm is used to analyze and calculate the use
performance of sports APP in college SE. The specific calculation method of use energy analysis of
sports APP in college SE is as follows:

\[
f(x) = \sum_{i=1}^{n} \alpha_i \gamma k(x_i, x) + b
\]  

In this formula, the threshold \( b \) will have a direct impact on the analysis results of the use performance of sports APP in college SE, so they must be optimized to reduce the impact. It can be clearly seen from the above formula that the goal of feature selection and optimization and algorithm parameter optimization is to obtain the use performance of high-precision sports APP in college SE, and there is a certain degree of correlation between features and SVM parameters. Analyzing the use performance of sports APP in college SE can quickly realize the effective analysis of the use effect of sports APP.

3. Experimental Steps
In order to conduct an in-depth study on the use of smartphone sports APP in college SE under the
background of informatization, and finally draw a scientific conclusion, which must be supported by
experimental data, this paper carries out the use experiment of sports APP in college SE. The specific
experimental steps are as follows:

The first step is to determine the research object and research content. In this paper, 300 students
majoring in SE in the third year of undergraduate education in a university were taken as the research
objects, among which 216 were male students and 84 were female students. These 300 students were
asked to apply sports APP in the whole process of SE teaching. Mainly from the understanding of
sports APP and the use of the effect of experimental research.

The second step is the selection and use of research methods. In this experiment, several other
research methods are mainly used. First, the literature method is used to investigate and record
relevant data of the current motion APP with the help of network information and relevant data. The
second is the expert interview method, which interviews experts, scholars and teachers of SE to
understand the actual situation of the use of sports APP in SE, and sorts out the opinions and
Suggestions of different characters on the use of sports APP based on the interview. Third, statistical
methods of data; Use data software to analyze and sort out the obtained data.

Thirdly, data analysis and conclusion; On the basis of the above research methods, various survey
results and research results were analyzed and sorted out, and the conclusion was drawn on the use of
smartphone sports APP in college SE under the background of information technology.

4. Discuss

4.1 Experimental Results and Analysis
Using information intelligent algorithm, and combined with the experiment we can conclude that the
smartphone sports APP in the present university sports teaching has been widely used, compared with
the traditional sports teaching, sports in the sports teaching the use of APP has inspired the enthusiasm
of student sports study, greatly promoted the teaching effect and quality. The specific experimental
data are shown in table 1 and figure 1. The data in the figure is the result of author 1.

**Table 1. Students’ understanding and usage of sports APP**

| How familiar       | The degree of using | Number of people | Proportion |
|--------------------|---------------------|------------------|------------|
| Know very well     | Very skilled        | 129              | 43%        |
| General understanding | A skilled       | 101              | 33%        |
| Don't understand   | Not very skilled    | 42               | 14%        |
| Not interested     | Use fewer           | 28               | 9%         |

*Data came from the in-depth analysis of financial data in the experiment*

![Figure 1](image-url)  
**Figure 1.** Comparison of data before and after using the sports APP

According to the data in table 1, we can see that sports APP has been widely used in SE, and most students have mastered and used sports APP skillfully. Through the comparative analysis of the data before and after the use of the sports APP in figure 1, it can be clearly found that the indexes of all aspects have been promoted before and after the use of the sports APP in SE, which are mainly reflected in the sports fitness, teaching effect and interest in sports learning. These data show that the current use of sports APP in SE has achieved good results. At the same time, through further analysis of the data in the chart, we can find that the current use of sports APP in SE has not reached the ideal effect, which indicates that there are still some problems in the use of sports APP, which must be paid attention to.

4.2 *Use Strategies of Sports APP in College SE*

At present, there are a series of problems in the use of sports APP in college SE, which lead to its use is far from achieving ideal teaching effect. For example, as shown in figure 1, although it has achieved certain teaching effect, there is still much room for promotement. Through consulting relevant materials, it is found that the use problems mainly include teachers' insufficient use skills, lack of background supervision, and wrong positioning of sports APP in SE. Based on these problems, this paper puts forward the following use strategies.

First, conduct teacher training on sports APP skills and encourage teachers to use sports APP in teaching. Most teachers are still relatively unfamiliar with sports apps, and cannot master the use
methods of sports apps. In addition, some teachers hold an attitude of rejection towards new technologies and new concepts, and have poor initiative in independent learning use, all of which hinder the good use of sports apps in SE. For this reason, relevant schools can issue clear incentive documents, strengthen the training of sports APP skills, promote teachers' enthusiasm and skills in using sports APP, and constantly promote the use of sports APP in SE; Second, constantly strengthen the background supervision of sports APP. At present, there is a phenomenon of swiping or punching on behalf of people in the use of sports APP, which has not really changed the traditional mode of SE, and the use of sports APP is still floating on the surface. Therefore, in order to promote the in-depth use of sports APP, during the use of sports APP, it is necessary to strengthen the monitoring of background data, set up a number of use reference data, add more detailed data classification, and implement the use of sports APP in SE; Third, accurate role positioning of the sports APP. In the use process of SE, teachers must make it clear that sports APP is only an assistant to SE and cannot completely replace teachers' teaching.

5. Conclusion
To sum up, under the background of informationization, the use of smart phone sports APP in college SE can break the space-time limitation of traditional college SE, make up for the shortcomings of traditional SE, and show great advantages. The use of smart phone sports APP in college SE can realize the two-way interaction between teachers and students in SE, which not only promotes the convenience of SE, but also stimulates students' enthusiasm in learning SE, so as to realize the continuous promotion of college SE efficiency and quality. Therefore, teachers and schools must pay attention to the scientific use of smart phone sports APP in college SE, constantly reduce the problems in the use process, and meet the society's diversified demand for sports learning.

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