Big Data Boosts the Development of China Fitness Industry - Take Keep app as an Example

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Abstract:
The paper is to explore the current research status of the use of fitness APP and clarify the influencing factors on using fitness APP。 With the development of social economy and the improvement of material living standard, people pay more and more attention to physical health, which accelerates the development of some sports software. Online fitness, which takes "Internet + fitness" as the core driving force, is a new driving force for the development of sports and fitness industry in the digital era. This paper takes a fitness app as a case for theoretical explanation, comprehensively uses the case analysis method and SWOT analysis method, discusses the contribution of big data in the fitness app, excavates the application status of the Internet in the whole fitness industry, and puts forward the promotion strategies for the high-quality development of the fitness industry.
According to the research, the sports and fitness industry faces many difficulties and problems, such as insufficient investment in new technologies, single product, insignificant brand differentiation, lack of close online and offline integration, immature technology development, and lack of compound talents. After the analysis, the author puts forward reasonable development suggestions according to the current problems.

Keywords: *fitness , SWOT, internet, strategy, health*

1. INTRODUCTION

With the rapid development of the Internet, online fitness products and services with data analysis as the core have emerged at the historic moment, subverting the operation and management model of the traditional sports and fitness industry and forming a new digital fitness industry Intelligent technology has been applied to every link in the field of sports and fitness, and endowed the traditional sports and fitness industry, in order to provide users with more personalized, intelligent and scenario-oriented fitness services.As a new form of fitness, "online exercise" has gradually come into people's sight, and the demand for online fitness has increased.According to fitness app Keep, users exercised for an average of 20 minutes per session in the first half of 2020, nearly double the amount in 2019[1]. More and more users began to participate in sports through video frequency, live broadcast and other ways, which also made more portable sports equipment such as dumbbells, jumping rope, yoga mat and other hot sales.The public's demand for public health services is growing rapidly, and the sports and fitness consumer market continues to expand.In this context, based on the actual case of fitness APP Keep,

this paper analyzes its operation strategy and mode, as well as its analysis of user data, explores the integration of the new generation of Internet technology with block chain as the core and fitness APP, and finds out feasible plans for the development of the emerging fitness industry.And put forward some solutions according to the problems in the development of KEEP. This research has practical value for the development of fitness industry under the digital background.

2. METHOD

SWOT stands for Strengths, Weaknesses, Opportunities and Threats.The analysis is based on environment and competitive conditions which lists all kinds of main internal advantages and disadvantages as well as external opportunities and threats closely related to the research object through investigation.The decision-maker can develop the corresponding development strategy, plan and countermeasures according to the research results.The following is the SWOT analysis of Keep APP.

2.1. Strengths

2.1.1. Online to offline

O2O attracts potential consumers by establishing a bridge between the physical store and online platform, allowing consumers to experience physical goods in brick-and-mortar stores and then buy and pay for the product online [1].According to data released by China Internet Network Information Center (CNNIC), in the first half of 2020, the number of live e-commerce broadcasts in China exceeded 10 million, and the number of active anchors exceeded 400,000.The number of e-commerce livestreaming users grew by 44.3 million to 309 million[2], becoming an important driving force for the development of the Internet industry.Livestreaming has become a popular new media form, and the "livestreaming +" mode has become a new trend in the development of various industries in e-commerce."Home fitness" , following online activities such as live delivery, online office work and online learning, which have become an important part of people's lives.On this basis, Keep vigorously promotes the livestreaming of fitness classes. Fitness coaches or fitness enthusiasts on the app teach classes or share experiences through livestreaming. Compared with traditional video, livestreaming classes can more directly solve the problems of fitness enthusiasts when learning fitness movements, and make appropriate adjustments according to different needs of users. In addition, the form of live broadcast can let users with more sense of participation, can give real time incentive, give encouragement in the process of exercise, shorten the distance.It also makes the actions more standardized, which makes up for the drawbacks of users who can't keep up with the rhythm, and greatly enhances the user experience.

2.1.2. Information transparency

The blockchain system consists of a data layer, a network layer, a consensus layer, an incentive layer, a contract layer and an application layer.The data block of the data layer is mainly used to record time stamps and data to realize the storage and verification of user information.The network layer is mainly based on P2P protocol, distributed mechanism and verification mechanism to achieve transparent data transmission.Consensus layer is the governance mechanism of block chain.Consensus mechanism makes information data reach consensus;The contract layer is mainly intelligent contract, which automatically receives, stores and sends information without the participation of a third party, and the whole process can be traced. The incentive layer encourages nodes to participate in the work through various incentive mechanisms to jointly maintain system security. The application layer includes all kinds of applications that are closely related to real life. Based on protocols and algorithms at all levels, blockchain achieves data security, de-centralization and traceability, improves data processing efficiency, and ensures smooth operation of storage, transaction and payment operations on the application platform.

Blockchain technology is the core of promoting the digitalization of the sports and fitness industry. With the promulgations of sports industry policies, the information resources of the fitness industry need to be allocated through blockchain technology to promote the information reorganization and business process upgrading of the fitness industry, so as to improve the operation efficiency of fitness apps. In particular, "decentralized" distributed ledgers, where all nodes can record accounts and have the ability to send and receive information. In this way, the real-time transmission of information between different apps is realized. Keep App can obtain users' information on other platforms, such as users' watching records of sports games on Hupu app or browsing records of videos on Youtube, analyze users' preferences, and realize the browsing of training videos and the generation of sports analysis.[3] At the same time, Information transparency can also ensure that the platform and users direct offline transactions and booking payment.Without the intervention of a third party, the APP itself realizes the openness and sharing of information.

2.1.3. Database

Since the launch of Keep on February 4, 2015, the total number of users has exceeded 100 million, and the number of subscribers has exceeded one million[4], covering many parts of the world.Some simple features such as personal data recording, action history, body state and heart rate can be acquired   easily by recent technologies[5] ,so that the Keep app has acquired a huge amount of user data and constructed user portraits through data analysis techniques.

KEEP APP collects a large amount of user information, makes statistics and analysis of relevant data, and finds users' browsing records and fitness preferences on the APP. Combine the information with the network marketing strategy, so as to achieve user customization, and provide the basis for further revision or re-formulation of the network marketing strategy.

In the period of rapid development, Keep App attracted a large number of users through a large number of free courses and fitness plans, and accumulated user data.Through data analysis technology, the platform can provide users with personalized fitness plans based on their basic information, such as height, weight and age.In addition, by tracking users' browsing history, fitness frequency and exercise preference on the app for a long time, the user plan can be modified and different contents can be recommended on the home page of the platform. For example, age 25, first-tier city, white-collar, no

fitness experience.For such a newly registered user, Keep will quickly match people similar to him in the database and recommend him a suitable personal fitness plan based on his browsing history on other platforms.

On a large scale, a sedentary lifestyle has become a daily routine for young people, so KEEP has compiled a set of fitness programs that can be used in the office to meet the needs of specific groups.

2.2. Weaknesses

2.2.1. single product

Keep's products are relatively simple, and its services mainly focus on buying fitness equipment, fitness equipment, and paid fitness videos and courses in the mall.But nowadays, fitness videos and marketing numbers are popping up all over the place.The software market still hasn't got rid of the phenomenon of serious homogenization although divided.

Therefore, it is difficult to persuade users to pay bills without certain self-advantage and innovative consciousness.Compared with some social software that consumers commonly used , the marketing model of KEEP is too simple. In terms of user experience, the lack of some body health knowledge, the points for attention during the exercise, for the specific fitness module of a certain population, results in the decrease of user viscosity.

In its early days, KEEP's platform design and marketing strategy were very successful cases.Nowadays, users are easy to feel monotonous when facing different fitness software. The reason is that there are many similarities between mainstream fitness software and there are no innovation points different from other sports software, and the differentiation is not obvious.When designing the content of apps, many fitness brands often copy the model of other software, such as fitness video, live fitness, mall, community, etc., copy and paste their core products, and follow the over-used marketing strategy instead of focusing on their own brands. As a result, users are not as interested in this kind of fitness software as before, and even have resistance.

2.2.2. Insufficient investment

The digitalization degree of fitness products is low, and the precision of equipment is not enough.Keep steps with mobile phones to record the user to calculate the number of calories consumed, but the application scope is very limited, ball games, such as playing basketball, volleyball, or other anaerobic exercise, can only simple estimate based on past data, this is obviously not scientific, and users in the process of movement under the influence of other factors,It will make the data inaccurate.As a software for exercise and fitness with

movement record, step counting is not sensitive, which is greatly different from the actual situation, which will reduce user recognition.For example, KEEP has not invested enough in sports bracelets, which are very popular today. It is unable to properly connect the APP with some sports products.

2.2.3. Insufficient personal customization

Nowadays, consumers have an increasingly strong demand for personalization, and they want businesses to provide different services from others.When registering the software, users need to fill in basic personal information such as gender, age and so on, and the APP will give different sports preferences for users to choose to enter the main page, and the system platform will automatically match the basic information of users with the database to recommend different sports videos.But on the other hand, because the user's plan is based on the existing user data in the database, the content recommended to the user is not personalized.For example, KEEP will make a daily meal plan according to members' fitness status. However, in the plan section of each meal, there are only recommended kilocalories of food intake, rather than scientific and personalized recipes that match users' fitness goals.There is also no strategy in the exercise plan to deal with unexpected conditions, such as physical discomfort, muscle strain, etc.In addition, to enhance users' sense of belonging, KEEP has created a virtual community on its own platform   where users can share their fitness experience, feelings or daily life, and see other users' shared content on the platform, similar to twitter.The platform recommends different community topics based on users' preferences and what they are viewing.The same problem is that the community topic discussion is not personalized enough, and the topic content shared or pushed by users is not accurate enough, and users are not interested in it

2.3. Opportunities

2.3.1. potential customers

According to the user profile of Keep, its users are mainly between 18 and 32 years old, accounting for 73.1% of the total.[6] Most of the users are young people born in the 1980s and 1990s, and white-collar workers and students account for the majority of the total users.Only 5.5% of users are over 35 years old.Traditional fitness industries, such as gyms, tend to ignore middle-aged and elderly consumers and find it difficult to provide services for them. However, Keep can make full use of its online advantages ,adding fitness and health courses such as square dancing teaching videos and Taijiquan courses to grab market share of middle-aged and elderly people.Can also start in the diet, for the elderly users to recommend health recipes.Also through the bracelet and other electronic products, real-time

measurement of blood pressure, heart rate and other data of the elderly, prevention of disease, and according to the data put forward the corresponding diet, work schedule.

2.3.2. Government support

In recent years, the government is vigorously promote the national fitness, in October 2020 by the State Council general office issued "about strengthening the construction of the national fitness facilities in the opinions of the development of mass sports" clearly pointed out that in the Internet online together, organize the masses to actively carry out sports activities, make the health of the national fitness community, the full implementation of the file content.In addition, according to the 13th Five-Year Plan for the development of Sports, the number of people who regularly take exercise will reach 435 million by 2020, and the total size of the sports industry will exceed 3 trillion yuan[7].As a fitness software, KEEP also receive a lot of policy support. The government has significant tax incentives for this type of business

2.4. Development strategy

2.4.1. Improve Personal customization user experience

Provide professional personalized service. In terms of the exercise plan, the accuracy can be improved to each part of the user's body, such as shoulder, arm and other specific parts. At the same time, a hierarchical system can be established to set up primary, intermediate and advanced training programs, which can be recommended according to the user's training intensity.In addition, professional programs can be introduced for people who are not well enough to relieve the muscle discomfort caused by long office life.Keep can also add a nutrition item column, which will work with experts to recommend suitable food combinations in the daily plan based on users' daily training status and training goals.In terms of community topics, when logging in to the software, Keep can accurately push the content of interest to users according to user information, and strengthen the information sharing between users and other applications.

2.4.2. Improve user engagement

Keep can increase daily sign-in mechanism, through the integration of the sign in the cumulative number of days increase, This way not only increases user stickiness, but also allows users to experience benefits, increase potential user community members and improve the probability of users opening members. In addition, a rating mechanism similar to social software accounts can be established, and users can obtain different titles according to the total length and intensity of

training.During the upgrade process, a progress bar is set up to show how long it will take to earn a new title, motivating users to exercise every day and upgrade their account.

2.4.3. Carry out product publicity through multiple channels

In recent years, short video has developed rapidly and become a mainstream form of entertainment. Many brands use short videos to impress people with music and graphics in just a few seconds.Keep can use some short video platforms to advertise its brand value. Otherwise, Keep cooperate with some network anchors with huge fan bases for content marketing. Use big data to disseminate information to target users and attract new users with star effect.   At the same time, it can also lay a foundation for the expansion of the international market by promoting publicity through various platforms and cooperating with famous stars and fitness experts to improve their popularity.

3. CONCLUSION

With the development of social economy and the improvement of material living standard, health has become one of the main goals people pursue in life.In the condition that most people have limited knowledge about safe and efficient fitness training, and maintaining a medium/long term training plan requires both motivation and monitoring[7], KEEP has a huge space for development.This paper analyzes the development advantages and opportunities of KEEP in detail,such as the database and the potential customers and lists the problems existing in the development of KEEP, such as single product, insufficient capital investment, etc.The above problems can be solved by improving private customization services, increasing user reward mechanism, multi-platform, multi-form marketing and other ways.

Fitness software is the product of the combination of Internet technology and traditional industry, in line with the law of economic development, research on the problems existing in its development and put forward countermeasures for the development of China's sports and fitness industry has important social and economic value[8].

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