A SWOT Analysis of Fitness Apps in the Context of Mobile Internet

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Abstract: In the era of mobile internet, the sport industry has realized the integrated innovation with the internet, and a large number of new sport internet products, represented by fitness applications (apps), have emerged. Taking *E-connection* as an example, this paper uses SWOT analysis method to analyze the internal strengths and weaknesses of fitness apps in the development process, as well as the external opportunities and threats it faces, and accordingly puts forward some suggestions for fitness app companies, with a view to promoting the development of fitness apps in the future.

1. Introduction

With the rapid development of mobile internet technology, mobile internet has become a very popular way of leisure and entertainment [1]. The market of mobile application is expanding constantly, and the radiation scope of mobile application is wider. A new product has entered the public's vision, namely fitness app [2, 3]. Fitness app applies technological achievements to sports, and adds various auxiliary functions to app, which not only brings higher benefits to app development company, but also helps to improve people's interest in fitness.

E-connection provides a community platform to encourage and raise awareness on sports and fitness. Its aim is for users to invite people in close proximity to do sports, ranging from an ambitious hike to a casual jog in the neighborhood. To improve their techniques, users may also view live internet broadcasts, which are hosted by fitness talents around the globe, in order to learn some effective ways of fitness. With *E-connection*, users can mark their locations to invite other users to do sports together. Thus, not only can they exercise for health benefits, they can also make new friends in the meantime. Additionally, users who are good at sports, or those who have experience in fitness, can become our mentors to share their expertise and skills.

Generally, a SWOT analysis serves to uncover the optimal match between the internal strengths and weaknesses of a given entity and the environmental trends (opportunities and threats) that the entity must face in the marketplace [4]. Taking *E-connection* as an example, this paper uses SWOT theory to deeply analyze the internal advantages and disadvantages, external opportunities and threats in the operation of fitness apps, and then puts forward some strategies and suggestions for fitness app companies, providing certain theoretical basis and practical guidance for the future development of fitness apps.

2. Advantage of fitness app

2.1 The necessity due to health concern

Nowadays, being fit is a global trend, especially popular in the United States. No matter how busy work gets, most people still maintain a habit of exercising every day. According to Fox News in 2017, an average American spends around $155/month on cost of gyms, private coach, nourishment and fitness equipment. It's even more expensive than they spend on study and daily work, which is 33% of a United States' family expenditure. As people put more value to fitness nowadays, they find more motivation to exercise by finding a circle of like-minded sportsmen.

In particular, the main target of *E-connection* are mainly two groups of people: firstly, teenagers aged between 12-18 form the largest group of our app users. Most of these users are students and they have more flexible schedule for sports and are more enthusiastic to make friends. Secondly, white-collar workers form the second group of users. They are known to experience high levels of pressure both from work and life, thus maintaining good health is crucial for their physical and mental wellbeing. Further, exercising is one of the most effective ways to relax and keep a healthy condition.

2.2 Safety concern

In the traditional gym, the number of customers outnumbers the available coaches or supervisors, which greatly increases the potential risk of accident caused by high-intensity exercise. In comparison, with *E-connection* that includes the function of recoding the instant heart rate, blood pressure and other reliable indicator of health conditions. As a result, users would be forced to stop and take a break to prevent unexpected accident.

Also, GPS must be used to ensure the users' safety. Sometimes they will invite the anchors or sports stars to do some sports, like running and playing basketball. Because they are not familiar with each other, it is necessary to have this GPS to know where they are going. When the location is not proper, it will remind the customers and avoid bad things happen.

2.3 Social-network building

In traditional setting without the support of the internet which connects users from different locations with same passion firm goal towards fitness, people may feel less motivated to maintain it as a habit. However, *E-connection* will be a platform connecting every single user and encourage them to share their personal experience, practical suggestions, or daily schedule on it. Instead of paying much for register fees at gym for assistance, every user can learn from each other or provide suggestions on it. In particular, user can invite other runners to run in the neighborhood on the platform. Users can submit their personal requirements for companion about gender, preferred time, location so that the internal intelligent retrieval system could work to match the runners with their preferred companions. In this way, users can make new friends and invite their companions to run together frequently to supervise each other and maintain health.

2.4 Convenience

Online app puts gym just a click away from people's lives, which means users save the waiting and commuting time before exercise. With this app, users could take advantage of their spare time nearly 20 minutes at home or any place to burn fat and relax themselves. In contrast, in the traditional model, they have to coordinate the time schedule available for both coach and consumer. Also, if they need to review piece of the class, they can review the video and even adjust the speed of video. In

addition, when they want to change fitness programs, they don't need to move to another gym or reschedule their time, but they can simply exit the interface and click another video.

2.5 Cost saving

Over 54 million Chinese paid gym membership fees in 2014, and for the second year in a row actual visits to the gyms exceeded 5 billion. Cost is saved in different parts of the process. Firstly, the app can be downloaded for free, and users can watch most of the videos on the platform for free. In particular, users could enjoy promotion activities like the free VIP service for the first month. Other costs including commute costs, locker costs, expensive health drink are also inevitable in the traditional model. Furthermore, customers are often enticed by the salesperson who keeps promoting fitness products at gym so that they may squander away money on unnecessary or costly products.

2.6 Diversified ways to earn profits

The main sales method of *E-connection* is live streaming. Mentors are required to make live streaming at least 2 hours every week. Audiences can give tips to the mentor if they think the streaming is interesting or useful. 40% of the earnings are going to our company and another 60% belong to the mentor. Paid streaming is another method. When a mentor gains a large amount of popularity, we will set special streaming time for him. During this time, he/she must provide much more qualified streaming and the customers should pay a little if they want to watch. But our members can watch them for free because they will pay for our membership every month.

After gaining enough attention, we can produce peripheral products of *E-connection*. They do not have to be expensive. A cap or a pair of sports shoes are suitable. The appearance of our products should be simple and clear. Our partner company will help us to sell the products. Besides, we are responsible to advertise for our partner company. If our advertisements are effective, our partner will pay us. But it will only be a few profits for our whole company.

3. Disadvantages of fitness app

3.1 The lack of site instruction

The instructor wasn't able to check every user's move and action so that users may inadvertently perform exercise wrongly, or even unsafely, which is especially risky for beginner. Most of the video published on the app may be only suitable for people who have already accumulate related exercise experience and who are able to withstand the intensity of the training. As a result, starters may find it difficult to keep pace and then the action transforms or not reaches a certain efficient point. What' worse, their enhanced incorrect muscle memory may transform the shape of the muscle and then prevent them from easily correcting their incorrect performance.

3.2 The loss of pairing service

To achieve one's full potential, or greatly meet customer's needs, it is better for people to get pairing service, including the low-fat food, exercising tools, the massage service, or medical equipment provided in the gym. Although these products may be more expensive to buy at gym, the convenience and benefits it brings will stay the same.

3.3 Influences from inappropriate devices

There are two features relying more on the devices, the location services and the health indicators. With the location service, safety of users during running with partners can be guaranteed, but the

feature may not work so well at remote areas in which more dangerous factors are exposed. Or, in the less severe situation, runners may get disconnected with the outside word but their location may still be traced. Furthermore, the innovative feature of the app, the intelligent recommendation of relevant sports items users may match with, is based on one's health indicators. However, the measure of health indicators is greatly influenced by the device. For instance, smart watch is obviously the preference compared to obsolete smartphone. Sensitivity of the measure system, the data processing of the system prevents the app from recommending the appropriate sports items to the users accurately and inform them about their health conditions in order to adjust their speed and intensity.

3.4 Limited exercise equipment

In order to optimize the effect of workout, it's expected to furnish users with professional exercise machine and other equipment like yoga mat, barbell, foam roller, and skipping road. These may not cost much or occupy too much space, but the lack of these equipment reduces the efficiency of workout and even hinder users from performing accurately. In particular, different requirements or goals of exercising especially require people to furnish with specific equipment. For example, training that aims to train a certain part or a group of muscle such as strength training and flexibility training require users to equip with special equipment including exercise ball, exercise band, kettlebell, and sandbag to achieve their aims.

4. Opportunities of fitness app

4.1 More people involved in exercise

From 2003 to 2015, average daily participation rates in sports and exercise rose by 3.6 percent. In 2015, particularly, 25.9 percent of our aimed group who are more active on the use of app, those aged 15 to 24, engaged in sports or exercise on a given day, compared with 18.5 percent of those aged 25 to 54 and 17.7 percent of those aged 55 and over. Their goals of exercise vary from one another, but most of them can be met on the app. For example, young lady exercise to lose weight, by burning off the calories by referencing the high-intensity weight loss training. Others who aim to shape part of their body can also match with our specific training like stomach muscles, thighs or hip.

4.2 Technology development

According to IDC, 101.9 million wearable devices were shipped in 2016, up by a strong 29 percent from the 79 million units shipped in 2015. Smart wearables like the Apple Watch and Microsoft's Hololens will greatly increase the accuracy of the health indicator collectors so users can change their exercise pace in a proper way. In addition, stronger location sensor capabilities which use multiple positioning methods will ensure user's safety and even detect the traffic in front of them to report any potential danger like bump, construction site, or cul-de-sac. Furthermore, in order to improve the user's experience, innovative user interface design is also important. Concise interface design, and the use of camera as a mirror to let users get the reflection as quickly as possible also make self-correction process more viable and convenient.

4.3 Policy support

In 2016, the "National Fitness Program (2016-2020)" issued by the State Council proposed that by 2020, the number of people who participated in one or more physical exercises per week reached 700 million, and the number of people who regularly participated in physical exercise reached 435 million. The development goal of the fitness industry which carries the task of 60% of sports output value, the large-scale industrialization process will start in 10 years, and the industrial scale will increase by 3

times in 10 years. However, due to the low barriers to entry, the strong regionalization and the high cost, traditional commercial fitness doesn't attract many people, giving a chance for fitness app.

5. Threats of fitness app

5.1 The existence of substitutes on the market

The barrier for the market of fitness app has a relatively low barrier because unlike the traditional profit model that relies on the assembly line and production technology, online apps rely more on the innovative idea that meets the demand for users, but the popularity and profit attract more competitors. After 2017, the growth rate began to slow down. On the one hand, the fitness app after the outbreak period gradually appeared homogeneous. The phenomenon of the loss of user interest and fewer financial support further cool down the industry.

5.2 Waste of resources

In fact, considering the benefits of the whole society and the scarcity of resources, gym greatly increases the efficiency of using the exercise equipment especially if users emphasize the quality of their exercise equipment which may cost much but can be split with other fitness lovers.

6. Conclusions

Taking *E-connection* as an example, this paper uses SWOT theory to deeply analyze the internal advantages and disadvantages, external opportunities and threats in the operation of fitness apps. The analysis results show that besides the advantages of health concern, safety concern, cost saving etc., fitness apps also have the disadvantages of lack of site instruction, loss of pairing service, device and equipment concern. As for external environment, it not only has opportunities of more fitness person, technology support and policy support, but also faces threats from competitors and waste of resources.

In view of the above analysis, this study puts forward the following strategic suggestions for the development and operation of fitness app companies: (1) Cooperate with offline physical gym to achieve win-win relationship between online fitness apps and offline physical gym. (2) Make full use of wearable technology, collect user's motion data through intelligent wearable equipment, and then analyze data with app software, so as to get accurate and effective exclusive sports prescription to avoid potential safety hazards. (3) In addition to young people, fitness apps should also have in-depth understanding of the elderly and children, add sports columns suitable for them on the platform to meet their fitness needs, so as to expand the user group of fitness apps.

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