

An Analysis of Online Education Business Model Taking "Yuanfudao" as an Example

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ABSTRACT

While the offline education business is blocked and stagnated during the outbreak of COVID-19, the online education business, which is on the rise, once again ushers in the greatest growth potential. China's online education industry has been booming in recent years and has received long-term attention and support from national policies. The K-12 online education platform with "Yuanfudao" online education as a typical example has gradually explored and established a business model suitable for its own development in the broad market. With great potential in China's K-12 education market, the technological support of the Internet will certainly bring reform opportunities to education. Taking "Yuanfudao online education" as a typical example, this paper makes an in-depth analysis of its business model, extracts the commonness of online education business model, and provides references and suggestions for the future development of online education.

Keywords: Yuanfudao, online education, educational innovation, K-12 education

I. INTRODUCTION

Education is always a key link in social development. The more developed and powerful a country is, the more it places education in the key position of its national development strategy. In the report of the 19th National Congress of the Communist Party of China, the policy of "giving priority to the development of education" was widely concerned, and the concept of online education was put forward for the first time. Recently, the large-scale outbreak of COVID-19 epidemic has caused severe damage to all kinds of offline education around the world. However, it has pushed online education to the forefront again, ushering in a new round of high-speed development of online education, which was already on the track of rapid development. By January 2020, the cumulative number of users of Yuanfudao online education in China has exceeded 400 million, and it is the first unicorn company in the field of K-12 online education in China. Therefore, in the new era and the new background, this paper takes "Yuanfudao" online education company as an example to analyze and discuss the business model of online education.

II. OVERVIEW OF ONLINE EDUCATION DEVELOPMENT

Online education, also known as "E-learning", also known as distance education, refers to online learning with the help of network tools.

By 2020, China has frequently launched standardized policies and guidelines for online education, and further standardized and guided online education platforms in the policy dead zone. As can be seen in "Fig. 1", data from the 44th "China Statistical Reports on Internet Development" released by China Internet Network Information Center (CNNIC) show that by June 2019, the scale of online education users in China had reached 232 million, an increase of 31.22 million from the end of 2018, accounting for 27.20% of the total Internet users; the scale of online education users in the whole year was expected to reach 259 million [1]. China's online education market is huge and sustainable. The online education platforms in China are mainly divided into three categories: B2C, B2B and C2C, with B2C as the main platform. B2C online education products are mainly divided into early childhood education, K-12 education, quality education, higher education, vocational training, study abroad, children's English, adult English, minority language, language tools, and comprehensive platform and so on. The online education platforms have initially occupied various segmentations, with different sources and fierce and complex market competition [2]. From this point of view, online education has ushered in a golden era of development. Both offline institutions and online platforms are developing into online education platforms, and the "Internet + education" model has become a vane for the development of the education industry.

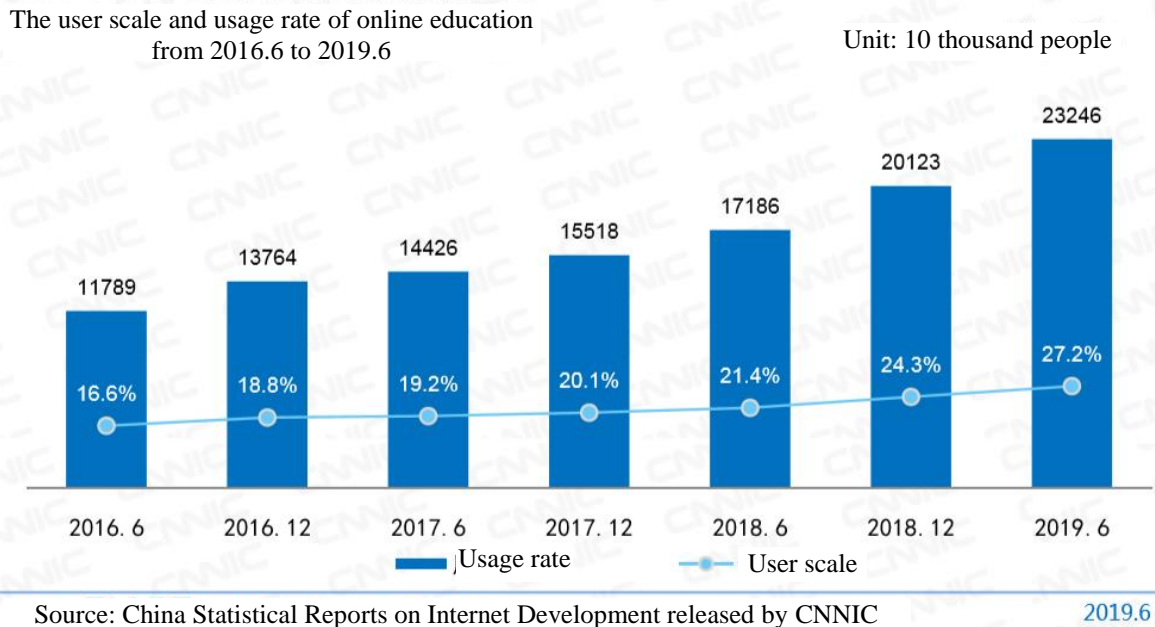


Fig. 1. The user scale and usage rate of online education.

III. CASE STUDY OF ONLINE EDUCATION BUSINESS MODEL

A. Introduction to the case of Yuanfudao

Being gold-lettered signboard of the B2C online education platform, "Yuanfudao" online education has carried out seven rounds of financing since its inception. With large user scale and typical business model, it is of high analytical value. Therefore, among many online education platforms, this paper selects "Yuanfudao" online education for case analysis.

Founded in 2012, Yuanfudao online education company is the first unicorn company in the field of K-12 online education in China and the leading force in online education in China. Since 2012, Yuanfudao has successfully completed seven rounds of financing led by IDG Capital, Warburg Pincus, Hillhouse Capital, Tencent and other domestic leading funds and giant companies, with the company's valuation exceeding \$3 billion, according to public information. The company mainly lists the system matrix of five products including Yuanfudao, question database Yuantiku, question search Xiaoyuansouti, Xiaoyuankousuan and English learning app Zebra AI, providing users with multiple smart education services such as network teaching, exercise resources and solution analysis, etc. Since its inception, Yuanfudao has accumulated more than 400 million users, and led the formation of a sinking market layout, with teaching and research centers and branches established in 11 cities across the

country. With its quality and rich educational resources, fine management of the service attitude, in-depth development of the leading technology and long-term firm strategic vision, Yuanfudao has laid the foundation for the advantages in the K-12 online education wave.

B. Analysis of the business model of "Yuanfudao"

According to the characteristics of "Yuanfudao" online education, the paper divides its business model into four aspects: value proposition, user model, marketing model and profit model.

1) *Value proposition*: Value proposition, that is, the value perception brought by the products and services of an enterprise to users, is the interpretation and expression of the real needs of customers. The value proposition includes the knowledge value, the efficiency value, the economic value and the sociability value. The value proposition of Yuanfudao will also be analyzed through the above four aspects.

a) *Knowledge value refers to the platform that an enterprise provides the required knowledge or knowledge sharing to users*: As the most critical link in the online education business model, its key role is particularly obvious in the K-12 education field. K-12 education covers the nine-year compulsory education in China, including the key point of the college entrance examination. Therefore, in this stage of online education, in addition to providing users with after-school hobby teaching, its focus is on prerequisite of "score raising". Whoever has access to the best

educational resources to help students improve their score will lay the foundation for a successful online education career. In the context of Yuanfudao online education, the five platforms and educational resources owned by the company are all important manifestations of the knowledge value proposition. Its product matrix system covers all the stages of class attending, exercises, Q & A and review, forming an efficient and systematic learning loop. Its teachers are basically from 985 and 211 universities in China who are of high-quality and have rich teaching experience. Comprehensive service and quality resources have lay a solid foundation for the business model of Yuanfudao.

b) Efficiency value refers to improving the efficiency of users' knowledge acquisition, providing the most needed service for users in a short time, and meeting the core needs of them: Yuanfudao online education satisfies users' differentiated needs by differentiating teachers in grades, subjects, regions, needs and different teaching styles, enabling users to find their own learning channels and related services in a short time and meeting the requirements of efficiency value.

c) Economic value refers to providing users with cost-effective services: The pricing of Yuanfudao courses is based on the price of offline tutoring agencies. However, due to the cost advantage and user scale advantage of Internet teaching, it is usually much more cost-effective than offline tutoring agencies, which also opens up a broad education market for it.

d) Social value refers to the connection and development between users and people with the same interests, which is mainly reflected in teacher-student interaction and student interaction in the field of online education: On the one hand, during the online live teaching, students can interact with the teacher in real time by leaving comments on the discussion board or by voice, so as to enhance the classroom activity and improve the learning efficiency. On the other hand, if students have questions after class, they can discuss and answer their questions by "Xiaoyuansouti", "Yuantiku" or directly leave a message, thus forming an online virtual learning community. Social value is the added value of online education, which can be realized through the platform design and function of Yuanfudao.

2) *User mode:* User mode is a differentiated service according to users' different portraits and psychological needs. Here, the discussion is made from 3 aspects of user portrait, user psychology and user demand.

a) User portrait: The Yuanfudao online education is targeted at users in the "K-12" stage, which is the compulsory education stage from primary school to high school in China. Since its inception, Yuanfudao

online has accumulated more than 400 million users. The continuously updated K-12 students is its main guarantee, and since the Digital Natives born after 2000 or even 2010, etc. become the main source of students, the pro-internet users of post-80s and post-90s generation, etc. become parents, the resistance to online education is greatly reduced.

b) User psychology: Relative interests, collective norms, perceived costs and copyright consciousness significantly affect the willingness to pay for knowledge [3]. Therefore, this paper analyzes the psychological status of users from the above four aspects.

- Relative benefit is the most important factor affecting the willingness to pay. Therefore, when users consider paying, the expected utility of the product to users becomes their biggest motivation. Public information shows that teachers of Yuanfudao are mainly market-oriented teachers, most of whom have more than 5 years of teaching experience, with more than 70 percent of teachers with a master's degree or above. Teachers with a higher salary can earn 400,000-500,000 yuan annually. In addition, Yuanfudao has reached cooperation with domestic well-known scholars, famous question-and-answer programs and foreign well-known publishers, which greatly improve the level of educational resources and enhance the user trust.
- Collective norms also have a significant impact on users' willingness to pay, indicating that users' willingness to pay is influenced by the knowledge payment of the surrounding population. Yuanfudao carries out a wide range of publicity for their own products through various channels and paves way for the promoting of their word-of-mouth through quality teachers and curriculum evaluation, thus stimulating users' intention to purchase.
- Perceived cost means that when users think about consumption, they focus on the product price. The products of Yuanfudao prices from a few yuan to several thousand yuan, which fully reflects the product differences, providing a variety of price options for users. At the same time, compared with offline courses, its products have a very high cost performance, so the price advantage is significant.
- Copyright consciousness is beneficial to respect the intellectual work of content producers and provide support and guarantee for high-quality content. In the online education industry, copyright awareness is less involved, and teaching resources is its core meaning. However, it should not be ignored that there is still a need

to further raise awareness and strengthen construction in providing information protection and anti-theft of copyright.

c) *User demand:* The core user demand of "Yuanfudao" is "raising scores". According to iResearch's "Research Report on China's K-12 Online Education Industry", both parents and students have an urgent need to improve their performance under the pressure of school entrance examination and college entrance examination. In addition, educational resources are in short supply, and the admission rate of primary and senior students is basically 50%, and the fierce competition catalyzes the birth of extracurricular tutoring [2]. In addition, China's education resources are unevenly distributed, and high-quality education resources are mostly concentrated in first-tier cities. With the help of Internet tools, barriers to education resources can be broken, resources can be shared across the country and a sinking market can be formed.

3) *Marketing mode:* Marketing mode refers to the marketing mix included in the communication between enterprises and customers and the realization of product and service sales. The marketing mix of online education mainly includes products and services, marketing channels and product pricing.

a) *Product and service:* As a leading online education platform, ape tutoring products and services have distinct online education features and differentiated advantages, summarized as the following 5 points.

- The product system is complete and an online education ecosystem has been initially formed. As shown in "Table I", with the early "Yuantiku" and "Xiaoyuansouti" as the traffic and data basis, the "Yuanfudao" online education platform was established, initially laying the development pattern of the product. Later on this basis, the two major products "Xiaoyuankousuan" and "Zebra AI". K-12 offline education is mainly divided into four basic modules: teaching, exercises, exams and Q & A. Through "Yuanfudao", "Xiaoyuansouti", "Xiaoyuankousuan" and "Yuantiku", etc., Yuanfudao realized a full coverage of K-12 learning process, forming a one-stop K-12 education online service ecosystem.
- It has high quality and abundant educational resources and have achieved extensive cooperation in China and abroad. With a strong team of teachers, Yuanfudao has collected first-line teachers to teach, which provides quality assurance for online education. In addition, in addition to the basic teacher guarantee, it has also reached cooperation and exchange with

Zhou Guoping, Bai Xianyong and other Chinese academic celebrities, formed a strategic partnership with China's first-class educational and cultural program "The Brain", and established academic partnership with Oxford University and Cambridge University Press. These measures have established a strong educational resource context for Yuanfudao and provided a solid resource guarantee for its development.

- The form of online live teaching contributes to the realization of learning space and time freedom. In the "Yuanfudao", real-time live broadcasting mode is widely used for teaching, which breaks the space limit, realizes the national sharing of high-quality education resources, and helps to form a sinking market. In addition, if users do not have time to watch the real-time live course, they can also learn through the recorded course review function and ask questions in the discussion area, so the course also offers sufficient time freedom.
- Its emphasis on technical support contributes to management refinement. Focusing on technology research and development and innovation, Yuanfudao becomes the first online education company to establish AI research institute, sharing more than five independent research and development technologies with the industry, and providing technology enabling for online education platform.
- It provides a variety of options to achieve personalized learning. The Yuanfudao platform provides a variety of courses, equipped with a variety of teachers, and gradually realizes the accurate individual level and demand differences of the data assessment by use of intelligent algorithms, so as to make the teaching more refined and customized. Users can choose the most suitable teaching mode and teaching content according to their own preferences and habits, by drawing on the comments and scores of other users.

b) *Marketing channel:* The marketing channels of Yuanfudao in Xi'an Education can be classified into brand marketing channels and product marketing channels.

- Yuanfudao cooperates with the first-class TV educational and cultural program "The Brain", invites academic celebrities to communicate online, and establishes academic cooperative relations with Oxford University, Cambridge University and other publishing houses. In addition, it has also been reported by many well-known domestic news media, and its course

"Enlightenment Course on Classical Music" was selected as the key recommendation of "a learning power", forming a brand marketing system.

- In addition, product marketing such as gift package for freshmen, autumn system class and one-yuan gift package class, WeChat channel advertising and we media operation such as Douyin and Weibo have also expanded product popularity.

c) *Product pricing*: According to the course prices of ape guidance in 2020, the spring system course price for primary school and junior high school is in the range of 1200-1450 yuan, the spring system course price for senior high school has three price levels as 599 yuan, 799 yuan and 999 yuan, with 28-30 class hours, a class size of 30-60 people, and a general bundled service of mailing course materials home. This price is higher than the previous price, but it helps to maintain the high quality of teaching and service.

TABLE I. THE PRODUCT MATRIX OF YUANFUDAO ONLINE EDUCATION

Products	Product introduction	Product features
<i>Yuanfudao</i>	Online tutoring for all primary, middle and high school subjects	<ol style="list-style-type: none"> 1. Leading lecturers from top universities broadcasting lectures, live communication, offline download and unlimited playback 2. Class teacher answering questions in WeChat group real time, guiding the pre-class preview and after-class summary 3. Containing exclusive teaching auxiliary, classroom reports and other supporting learning resources 4. Data-oriented teaching and research system, smart management of learning, tests and question.
<i>Yuantiku</i>	Exercises on selected papers helping students to get over key and difficult points	<ol style="list-style-type: none"> 1. Containing past exam papers of all junior and senior high school years 2. Containing test papers and analysis of 100 elite schools, which asks for timing answers 3. Reporting learning results in real time for rapid assessment 4. Error automatic transcribing arrangement for convenient later review
<i>Xaoyuansouti</i>	Taking a shot and getting ways of solving a problem in seconds	<ol style="list-style-type: none"> 1. The massive question bank realizes the whole subject and full grade coverage of primary school, middle school and high school 2. Using AI technology to realize scanning problem solving 3. Adding the video lecture module 4. Allowing study material accumulation, convenient for consulting, learning and recitation
<i>Xiaoyuankousuan</i>	An artifact for homework correcting by parents and teachers	<ol style="list-style-type: none"> 1. Oral calculation practice, which allows answering by hand 2. The main user groups are primary school teachers, students and parents 3. Containing the class function, allowing class management and intensive learning
<i>Zebra AI course</i>	To learning thinking and English, 2-8 year-olds come to Zebra	<ol style="list-style-type: none"> 1. Mainly three curriculum systems of Chinese, English and thinking 2. Using AI technology as a tool for course development to provide interactive experience 3. For kids aged 2 to 8 4. The r & d team has a prestigious university background and the teaching system is scientific and effective 5. Exquisite teaching materials are included in the set

4) *Profit model*: The profit model refers to the process that the enterprise creates economic value for itself. The profit model of Yuanfudao can be expressed as "live streaming + courses + self-management". Its main source of profit is still live teaching, and teaching materials, personal guidance and testing, etc. bring other extended income. In fact, in the first two years the company had been suffering from loss. However, according to public information, the company had a revenue of about 1.5 billion yuan in 2018, and its revenue was expected to grow fourfold in 2019 with more than 1 million users and an 80% renewal rate. The key to its profit still mainly comes from the platform

technical support and the famous teacher effect, so in the AI technology research and development link and teaching quality monitoring link it is still necessary to increase investment support and attention.

IV. CONCLUSION

Based on the study of "Yuanfudao", a typical online education service product, this paper summarizes the four elements of its business model: value proposition, user model, marketing model and profit model. Value proposition includes knowledge value, efficiency value, economic value and social value. User mode includes user portrait, user psychology and user demand. The

marketing model includes products and services, marketing channels and product pricing.

At present, online education is in the period of development and exploration, and has initially formed a sinking market situation and online education system, which is favored by the capital market, and its development is very promising. However, it still has a lot of room for improvement in teaching mode and technological innovation. How to further adapt to students' personalized learning needs, conduct good interaction to achieve the optimal teaching effect, and how to use AI technology to help the reform and renewal of "Internet + education" is still a problem to be considered in online education.

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