Industry Analysis on Online Education

Renjing Lu

School of Business, Yangzhou University, Yangzhou, 225127, China
njlurenjing@163.com

ABSTRACT. This paper aims at sorting out the underlying business logic of online education industry -- customer acquisition cost, user conversion and user retention, exploring the driving forces of online education industry change -- impact of COVID-19 and policy support, emerging internet capabilities and applications, demand for educational resources with high quality. Competition analysis is carried out on several well-known online education platforms such as TAL, GSX, VIPKID, Koolearn, Ape Coaching and Job Help. Strategy group map is drawn based on the two variables of customer acquisition cost and teaching mode. Then the paper demonstrates superior understanding of industry key success factors and executes the overall assessment of the current and future attractiveness of the industry.

KEYWORDS: Driving Forces, Strategic Group Map, Key Success Factors, Customer Acquisition Cost, Sink Market

1. Introduction

Online education has grown rapidly in recent years. According to data from China Website Center, in 2019, the number of users of China's online education was about 0.259 billion. The China Research Institute of PwC predicts that the number of users of the online education in 2020 will exceed 0.3 billion (GuoMeng, 2020).Online education, under the influence of COVID-19, merits a watchful eye— the penetration rate of the sinking market and online market. The major online education companies, generally speaking, are still in the stage of grabbing the minds of students and parents, and fighting for the traffic bonus and market share. In this paper, several typical K12, kindergarten through twelfth grade, online education companies in China—TAL, GSX, VIPKID, Koolearn, Ape Coaching and Job Help—are selected for industry analysis and evaluation, mainly including the following four aspects: driving forces of change, strategic group map, key success factors of online education industry and assessment of industry future attractiveness.

2. Driving Forces of Change in Online Education Industry

Driving forces are the major underlying causes of change in industry and

competitive conditions, which have the biggest influences in reshaping the industry landscape and altering competitive conditions (Gamble, 2018). Industry or competitive conditions change over time because there are some powerful driving forces pressuring or enticing industry participants—supplies, customers, rivals—to alter their action in important ways.

2.1 COVID-19 and Policy Drivers

Under the impact of the COVID-19, schools and educational institutions have suspended offline collective teaching, at the same time policy support and demand growth have promoted the development of the online education industry. On the one hand, the ministry of education called on the state and local governments to actively promote online education to ensure that "classes are suspended without suspension". On the other hand, there is a essential need for students to learn and take part in after-class counseling. During the period of COVID-19, students are forced to migrate their study to the Internet on a large scale, which leads to an increase in the user demand intensity of online education. At the government's urging, a number of online education companies are offering free courses to the public, and traffic has surged in a short time.

The impact of COVID-19 and policy support have significantly contributed to the change of the online education industry. According to QuestMobile, the number of daily active users of education app reached 127 million after the Spring Festival in 2020, an increase of 46% compared with that before the Spring Festival. In February 2020, the number of weekly active users increased significantly, with the number of TAL, Job Help and Ape Coaching reaching 615.9/7408/3.781 million, which was 7.1/7.96/6.13 times that of January 2020, and 49.67/21.05/16.58 times that of February 2019 (Zhu, 2020). The above data shows that, the user traffic flooding online in a short period of time brings about the rapid popularization of user awareness and a large number of user growth. As a result, penetration rate of online education industry is expected to get accelerated.

2.2 Emerging Internet Capabilities and Applications

With the development of emerging Internet capabilities and applications and the continuous iteration of technology, online education has become more advanced, more convenient, more diverse and shared. For instance, the official media-"Central video" 5G new media- has teamed up with online education platforms of TAL and DAO to launch high-quality courses, which contributes to the sharing of resources and communication of industry. TAL has introduced AI into online education to create a personalized learning system. In a word, the teaching experience of online education is expected to be improved with the continuous optimization of online live broadcasting and interactive technology.

2.3 Demand for Educational Resources with High Quality

Due to the unbalanced distribution of educational resources and the scarcity of high-quality resources, the public's demand for high-quality teaching resources has become an important driving force for the reform of online education industry. Online education can help change the limitation of time and space in traditional offline teaching mode and make the best use of high-quality teaching and research resources.

The demand for educational resources with high quality may accelerate the penetration of the sinking markets- markets in cities, counties, towns and rural areas below the third tier (Luo, 2020). Compared with first-tier cities, lower-tier cities have scarce education resources. The demand for educational resources with high quality exceeds supply of offline education resources. Online education is the optimal solution. In recent years, the scale of online education users in the sinking market continues to grow. Mobdata displays, the share of users in the online education market has increased from around 52% in 2018 to around 57% in 2019. In September 2019, most notably the proportion of users in the third-tier cities and below reached 70% (Zhu, 2020).

3. Strategic Group Map of Online Education Industry

In the online k12 education sector, the differentiation strategy layout of the industry is mainly reflected in class type, pricing, city distribution and customer acquisition cost. In this paper, two key variables - customer acquisition cost and class type as map axes are selected.

3.1 Customer Acquisition Cost(CAC)

CAC is the cost of acquiring a customer. According to the data analysis, the customer acquisition cost of several competitors in the online education industry is roughly VIPKID>TAL>Ape Coaching>Job Help>GSX>Koolearn (An, 2020). VIPKID provides 1V1 service, with the highest unit price of 4000 yuan(Huang, 2020). And tool-based online education platforms, such as Job Help, Ape Coaching, get a relative advantage with its own traffic. Since Koolearn has the foundation of offline student source and obvious brand advantage, its customer acquisition cost is significantly lower than the purely online teaching institutions.

3.2 Teaching Mode

At present, there are three teaching modes of online education: large class, small class and one-to-one class. Job Help, Ape Coaching, GSX are focused on the live broadcast of large class. While the traditional offline leading TAL, Koolearn is a variety of online teaching mode. The three mainstream teaching modes of online education have their own advantages and disadvantages in terms of cost structure,

teaching experience and word-of-mouth communication, as shown in the following table:

Table 1 Teaching model contrast among rivals

	Large class	**Small class**	**1V1**
Number of students	>50	10-50	1
Cost structure	The marginal cost of the lecturer is low	Better cost structure	High costs of marketing, teaching, customer acquisition
Word of mouth communication	Wide communication	Moderate	Limited
Teaching experience	Lack of interaction	Moderate	Personalized teaching experience
Typical representative	GSX,Job Help, Ape Coaching, TAL	Koolearn	VIPKID

Information source: Guangfa Securities Development Research Center

3.3 Strategic Group Map

Strategic group mapping is a technique for displaying the different market or competitive positions that rival firms occupy in the industry. A strategic group consists of those industry members with similar competitive approaches and positions in the market(Gamble, 2018). In online education industry, Ape Coaching, Job Help and GSX belong to a common strategic group because of the similar competitive position—moderate CAC and large class mode. The following table shows the operating income of rivals in 2019.

Table 2 Operating income of rivals in 2019

Rivals	TAL	Ape Coaching	GSX	Koolearn	VIPKID
Operating income in 2019	2.4 billion	6 billion	2.1billion	0.9billion	——

Data source: Wind

Revenue of Ape Coaching ranked first, TAL's revenue is similar to that of GSX,

both beyond the revenues of Koolearn. Draw circles around each strategic group proportional to the size of the group's share of total industry operating income. The strategic group map of online education industry displays as follows:
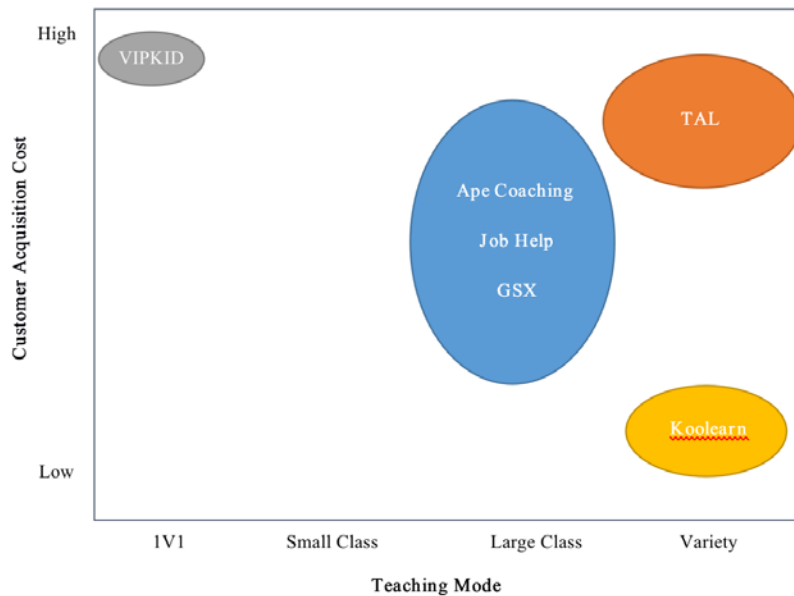

Figure 1 Strategic Group Map of Online Education Industry

From the above, VIPKID is more favorably positioned because it confronts weaker competitive forces. There is little competition between VIPKID and Ape Coaching because firms in groups that are far apart hardly compete (Gamble, 2018). Ape Coaching, Job Help are similarly positioned and are thus closest rivals. TAL is in the immediately adjacent groups of Ape Coaching, GSX and Job Help, so they are also close rivals. The competition intensity around such two groups is fiercest, by contrast, Koolearn is more attractive.

4. Key Success Factors in Online Education Industry

Key success factors are the strategy elements, product attributes, competitive capabilities, or intangible assets with the greatest impact on future success in the marketplace (Gamble, 2018). The business logic of online education is to achieve low customer acquisition costs, high subscription rates, and high retention, so consider the following KSFs.

4.1 Customer Acquisition Efficiency

As online education companies become more competitive, CAC or customer acquisition cost is also rising in order to expand the market share. High CAC is not conducive to the profitability and operation of enterprises. For example, VIPKID continued to lose money for 6 years, while its unit price of CAC as high as 4000 yuan. For the online education industry, improving customer acquisition efficiency is the core of declining customer acquisition cost(Li & Zhang, 2019). For one thing, it is necessary to control the size of advertising and make full use of the emerging Internet applications to improve the efficiency of customers acquisition. Last but not least, word of mouth plays a role in introducing new customers.

4.2 Teaching Quality

The quality of teaching determines the rate of payment and retention of user. Excellent teachers are the guarantee of the company's teaching quality and research ability, which finally become an important reference for the transformation of user pay. GSX, TAL and Job Help take the strategy of famous teachers—most platform teachers graduated from top schools or having taught in the domestic famous high school with rich teaching experience.

4.3 Operational Efficiency

The operational efficiency of the online education industry involves ensuring the maximum ratio of teachers to students under the guarantee of teaching quality and service experience, input-output ratio of sales expenses, the conversion rate, retention rate and so on. Industry competition, actually, is the competition of enterprise operation efficiency. Only the leading enterprises can have sustainable ability of profitability, high-quality teaching team, high-level technological support and comprehensive strength in the middle and background.

4.4 Marketing Communication

The company's course promotion methods and marketing ability also affect the decision of users to pay for the course. There will be a large amount of traffic injection and the popularity of user awareness when the company has a strong marketing communication ability, so as to increase the penetration rate and cut down customer acquisition costs. The main way of marketing communication in the online education industry is word of mouth. Word-of-mouth dissemination mainly depends on the user's learning experience and the learning effect. Online education companies can improve the teaching experience through service innovation, such as providing personalized consulting services to enhance users' satisfaction, and promote word-of-mouth communication through brand optimization.

5. Assessment of Online Education Industry Attractiveness

The degree to which an industry is attractive or unattractive is not the same for all industry participants and potential new entrants. The attractiveness of an industry depends on the degree of fit between a company's competitive capabilities and industry key success factors(Gamble, 2018).

The COVID-19 can not serve as a long-term driving force which leads to future industry attractiveness. However, the demand for high-quality education in low-line cities will remain strong for a long time, because the balanced allocation of offline education resources will inevitably be limited by objective conditions. The attractiveness of the sinking market of online education will continue to increase.

The business model of large class model is better than small class model and 1 V 1 model. In the field of online education, the more attractive teaching mode is the large class with a large number of students in a single class, such as GSX with a number of 1700 students in one large class or the small class with strong bargaining power, such as Koolearn of DongFang. The three mainstream teaching modes of online education have their own advantages and disadvantages in teaching experience, brand building and word-of-mouth communication, and have different attractiveness to different user groups with different learning needs and payment abilities.

Relying on the basis of offline students, superior teaching resources and brand reputation, Koolearn and TAL have lower CAC than purely online teaching institutions. In the long run, the online education industry will be more competitive and the concentration of the education and learning APP industry will be further improved.

6. Conclusion

Overall, the COVID-19 has generated a short-term, concentrated increase in demand for online education. Under the promotion of the government, schools and enterprises, it is helpful to complete the user cognition and expand the user base in a short term. In addition, the penetration rate of the online education in the sinking market will continue to increase. The user model of online education can be regarded as a complete closed loop composed of four links: customer acquisition, conversion, retention and word of mouth. Among them, customer acquisition cost, conversion rate and retention rate of paid users are the key indicators that determine the steady growth and attractiveness of online education industry.

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