

Differentiated Competitive Strategy and Industry-Leading Path of Online Education Platform: Take ZuoYeBang as an Example

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Abstract: In recent years, China's online education industry has ushered in rapid development driven by policy support and technological innovation, but the market competition in the industry has also become increasingly fierce. This paper takes the company as the research object and systematically discusses how it achieves industry leadership through its unique strategy, as well as the construction path and implementation effect of its differentiated competitive strategy through case analysis, comparative research and quantitative data analysis. The study found that through the three core strategies of technology tooling, sinking market penetration and closed-loop software and hardware ecology, ZuoYeBang has successfully created an exclusive competitive advantage, which in turn promoted the simultaneous increase of user base and business value, and achieved continuous growth in market share. At the same time, in view of potential risks such as policy adjustment, acceleration of technology iteration and low-price competition in the market, this paper also analyzes the coping strategies such as content transformation, data compliance upgrade and supply chain diversification, which provides a replicable strategic framework for EdTech enterprises to respond to policy supervision and optimize technology paths, and provides a theoretical reference for the sustainable development of the industry.

1 INTRODUCTION

China's online education industry is under the triple drive of policy guidance, technological innovation and surging market demand, and has ushered in new development opportunities. At the same time, with the continuous advocacy of the country's concepts of educational fairness and quality education, policy supervision has become stricter, and industry competition has become more and more intense. In this context, major online education platforms have explored differentiated development paths in order to occupy an advantage in market competition. As an industry leader, ZuoYeBang has risen rapidly and achieved remarkable results by virtue of its unique competitive strategy and technical advantages. According to statistics, in 2024, the market share of the online learning machine under ZuoYeBang will

be as high as 33%, and its products have covered 90% of the prefecture-level cities in the country, which not only reflects the strong penetration of the job gang in the market but also reflects its precise regional positioning and product strategy.

The purpose of this study is to explore how ZuoYeBang can achieve a leading position in the education technology industry through differentiated competitive strategies, so as to provide a useful reference for the transformation and upgrading of online education platforms. The research focuses on three core dimensions: technology application, market positioning, and ecological synergy. In terms of technology, relying on the self-developed "Galaxy Model" and DeepSeek-R1 inference model, and using cutting-edge technologies such as OCR, speech recognition and natural language processing, ZuoYeBang has realized full-discipline correction

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and personalized weakness diagnosis, greatly improved the response speed of problem solving, and continuously optimized the AI model through data feedback to provide users with accurate and efficient learning assistance (Chen, 2022). In terms of the market, by aiming at the sinking market, ZuoYeBang has formulated a low-price strategy and a regional adaptation plan, and launched learning hardware products that meet the local consumption level, forming a wide range of market coverage and user groups. In terms of ecological collaboration, ZuoYeBang has built a closed-loop operation model of "tools, content, and communities", and through multi-channel linkage such as online apps, live courses, and offline agents, it not only realizes the exchange of hardware and software data, but also enhances user stickiness and brand loyalty.

In addition, in order to more comprehensively analyze the unique advantages of Job Bang in the fierce market competition, this study also compares the strategic choices of ZuoYeBang's main competitors. Different from the practice of some competitors focusing on live courses and standardized teaching content, ZuoYeBang pays more attention to the practice of technical tools, and naturally guides users from "searching for questions" to a complete closed loop of "learning-practice-testing" through functions such as photo search. This development model supported by technology, with market segmentation as the starting point, and ecological construction as the path, has not only won the reputation of users for the ZuoYeBang, but also provided new ideas for the transformation and upgrading of the entire industry (Liu et al., 2022).

In summary, this study aims to explore its successful experience in technological innovation, market segmentation, and ecological construction by integrating the industry background, policy environment, and specific practices of the job gang, and further analyze its response strategies in the future to cope with the multiple challenges of policy, technology, and market. This research not only helps to reveal the development of online education platforms in the new era, but also provides valuable theoretical and practical references for other education enterprises.

2 DIFFERENTIATION STRATEGY ANALYSIS

In the fierce competition of online education, ZuoYeBang has built a differentiated competitive

advantage that is difficult to replicate with its unique technological innovation, market positioning and ecological synergy model. From the analysis of technology, market, ecology and service model, it can be seen that its strategic layout has formed effective competitive barriers in all links, ensuring the continuous improvement of user experience and brand loyalty.

First of all, the technical differentiation of ZuoYeBang is reflected in the in-depth application and instrumental innovation of AI large models. After the integration of its self-developed "Galaxy Large Model" and DeepSeek-R1 inference model, it has achieved a breakthrough of 99.9% accuracy and problem-solving response speed within 1 second, which is significantly better than the industry average. According to the data of the C-Eval rankings, the Galaxy model leads the 2023 evaluation with a comprehensive score of 73.7, especially in the social sciences (86 points) and humanities (71.6 points), far surpassing Mengzi (71.5 points) and GPT-4 (68.7 points), as shown in Table 1. This technical advantage is directly translated into the improvement of user experience, and the average daily call volume of its OCR photo search function has exceeded 30 million times, and users have extended from a single search behavior to learning diagnosis and consolidation of wrong questions, forming a closed-loop of the whole process of "learning-practice-testing", and building a high-frequency use scenario with an average of 68 minutes per day (Ma and Anekiti, 2024).

At the same time, its technology patent reserve also further strengthens its advantages. ZuoYeBang has more than 200 patents in the fields of OCR, speech recognition and natural language processing, and its OCR response speed is 30% faster than that of competing products. The data exchange between hardware and software forms a positive feedback mechanism, and the average daily usage time of learning machine users is 68 minutes, which is much higher than the data performance of competitors in about 45 minutes (Aurora Mobile, 2021).

Empowered by technological advantages, homework help's market positioning strategy presents dual characteristics of precise focus and scene extension. Taking photos and searching questions can meet the demand of instant answering questions. The live class and the double-teacher class can solve the pain points of systematic learning, while the intelligent question bank and the wrong question book function are deeply bound to the after-school review scene, and the scale is expanded through technology-driven low-cost operation (Huang, 2024).

Table1 : C-Eval Global Model Comprehensive Exam Evaluation Ranking Table

Name	Issuing Authority	Submission time	Average	Average (Hard)	STEM	social science	humanities	other
Galaxy	Zuoyebang	2023/8/23	73.7	60.5	71.4	86	71.6	68.8
Mengzi	LangBoat	2023/8/25	71.5	48.8	62.3	87.2	76.8	68.6
ChatGLM2	Tsinghua&Zhipu.AI	2023/6/25	71.1	50	64.4	81.6	73.7	71.3
UniGPT2.0	Unisound	2023/8/28	70	52.8	65.7	78.7	67	72.9
360GPT-S2	360	2023/8/29	69	42	59.4	82	70.6	72.9
InternLM-123B	Shanghai AI Lab & SenseTime	2023/8/22	68.8	50	63.5	81.4	72.7	63
GPT-4	Open AI	2023/5/15	68.7	54.9	67.1	77.6	64.5	67.8
AiLMe-100B v2	APUS	2023/7/25	67.7	55.3	65.4	72.3	71.2	64

Source: C-Eval Leaderboard

In terms of the market, ZuoYeBang achieves differentiated competition by precisely targeting the lower-tier market. Its learning machines are priced starting from 1,999 yuan, significantly lower than those of iFLYTEK (over 5,000 yuan), which aligns with the purchasing power of cities below the third tier. Data from 2024 shows that ZuoYeBang's sales in the lower-tier market account for 70%, with localized textbooks adapted to 260 versions, covering 95% of the country's regions. In contrast, TAL focuses on high-end courses in first- and second-tier cities (with a user growth rate of 18%), while Yuanfudao mainly offers online live-streaming courses (covering 80% of first- and second-tier cities). ZuoYeBang, however, holds an advantage with a 45% user growth rate in the lower-tier market and a 32% hardware penetration rate (compared to 10% for TAL and 8% for Yuanfudao) (Mobile Education Platform Zuoyebang, 2020).

Furthermore, ZuoYeBang has further consolidated its market position through a full-channel coverage strategy. It leads in sales in the 2,000-3,000-yuan price range on JD.com and Tmall. Offline, it covers 90% of prefecture-level cities through agents, forming a conversion chain of "low-price attractions - hardware binding - service value-added". Its user segmentation operation strategy has also been highly effective: the P series (cost-effective), T series (mid-range), and X series (high-end) product matrix meets different needs, with a paid user conversion rate of 32% (industry average is 25%), and a year-on-year increase of 15% in repurchase rate (Pan and Mao, 2025).

In terms of ecological collaboration and service models, ZuoYeBang has established a closed-loop

ecosystem centered on "tools + content + community". Besides its core learning machine product, ZuoYeBang has successively launched a variety of educational hardware such as smart learning desks, error printers, and word cards, forming a complete product matrix from basic to high-end models, covering the needs of different users from preschool to high school. Relying on the Zuoyebang APP, which has a monthly active user base of 170 million, the platform has realized functions such as photo search for questions, video Q&A, and parent-end learning situation reports. Through data intercommunication between hardware and the APP, a feedback mechanism from user behavior to product optimization has been established. Data shows that 70% of learning machine users also use the APP's question bank. This cross-scenario product interaction not only enhances user stickiness but also forms a positive data feedback loop, further optimizing the AI model. In terms of community-based operation, ZuoYeBang has created a highly engaged user community through methods such as parent-end point redemption, real-time learning situation monitoring, and online live interaction (Liu et al., 2022). According to relevant survey reports, the parent-end participation rate of ZuoYeBang is as high as 80%, far exceeding the average level of competitors. This community-based operation model effectively enhances brand loyalty and user activity. The community-based operation strategy further strengthens the ecological closed loop. Additionally, the "hardware + lifetime membership" bundle (with a conversion rate of 28%) and the "trade-in" service (with a repurchase rate of

35%) have established a long-term retention mechanism, forming a competitive barrier (Gu,2024).

Overall, ZuoYeBang has formed a distinct competitive advantage through precise layout in the three major areas of technology, market, and ecological services. Its technology toolization strategy not only improves teaching efficiency but also builds a solid data barrier; while its low-price strategy-centered layout in the lower-tier market successfully breaks through the geographical limitations of traditional educational resources; at the same time, the "tools + content + community" closed-loop ecosystem brings lasting user stickiness to the brand. It is precisely this multi-dimensional coordinated development model that keeps ZuoYeBang at the forefront of the highly competitive online education market, providing a referenceable development path and valuable experience for other educational platforms.

3 POTENTIAL CHALLENGES AND RESPONSE STRATEGIES

As a leading enterprise in China's education technology sector, ZuoYeBang has performed outstandingly in the smart hardware market and with its differentiated corporate strategies. However, the potential challenges it faces are becoming increasingly prominent. Firstly, it is confronted with policy risks from the state. One is the deepening of the "Double Reduction" policy, where the Ministry of Education further restricts "hidden subject training" in 2024, requiring that educational hardware content must not include subject-based problem-solving videos, which directly affects the iteration of ZuoYeBang's "AI Question Bank" function (where the proportion of subject-based content in the original function was 65%). The second is data security reviews. The Personal Information Protection Law stipulates that educational enterprises must pass "security assessment and certification" when storing user data. According to relevant data from the Cyberspace Administration, ZuoYeBang was summoned twice in 2024 due to cross-border data transmission issues. To address these policy risks, ZuoYeBang can take corresponding measures. Firstly, it can transform its course content. For instance, it could launch non-subject-based courses such as "Science Experiment Classes" and "Programming Thinking Classes" in 2024, increasing their proportion from 15% to 40%. Secondly, it can upgrade its data compliance. For example, it could

invest 120 million yuan in building a localized data center and obtain ISO 27001 certification, ensuring a 100% compliance rate for user data storage (The Fly, 2021).

Secondly, ZuoYeBang also faces technical risks. One is the risk of outdated AI models. The average iteration cycle of large-scale educational models has been shortened to six months (with an average industry R&D cost of 50 million yuan per cycle). According to industry reports, the comprehensive score of ZuoYeBang's Galaxy Large Model dropped from 73.7 in 2023 to 70.2 in 2024. The other is the fluctuation in the hardware supply chain. In Q2 of 2024, the main control chip for learning machines (MediaTek MT8696) had a 30-day delay in delivery due to insufficient capacity, resulting in a direct loss of 300 million yuan in sales. To address these technical risks, ZuoYeBang can take corresponding measures. Firstly, it can engage in technical alliance cooperation, such as jointly establishing the "Intelligent Education Joint Laboratory" with Tsinghua University and the Institute of Automation of the Chinese Academy of Sciences. In 2024, they jointly published 23 AI patents, reducing the single-point R&D cost. Secondly, it can diversify the supply chain, such as introducing Rockchip and Unisplendour as backup chip suppliers. In 2024, the procurement cost decreased by 18% (Zhang et al., 2021).

Finally, ZuoYeBang also faces market risks. The first is the impact of low-price competition. ByteDance's "Dali Education" launched a learning machine priced at 999 yuan (with a configuration comparable to ZuoYeBang's P series), causing the user churn rate in the lower-tier market of ZuoYeBang to rise from 8% to 15%. The second is the decline in users' willingness to pay: in 2024, the average budget for educational hardware per K12 parent dropped from 2,500 yuan to 1,800 yuan, and the return rate of ZuoYeBang's learning machines increased by 5% year-on-year. To address these market risks, ZuoYeBang can take corresponding measures. Firstly, it can introduce differentiated value-added services, such as launching a "hardware + lifetime membership" bundle (priced at 2,499 yuan, including 1,200-yuan worth of quality courses), which increased the conversion rate to 28% in 2024 (industry average 12%). Secondly, it can implement user retention plans, such as offering "trade-in + data migration" services for existing users, raising the repurchase rate from 20% to 35%.

4 CONCLUSION

This article employs the case analysis method to examine how ZuoYeBang has achieved industry leadership through a differentiation strategy. It concludes that ZuoYeBang's leading position stems from the synergistic effect of three core strategies. The first is the toolization of technology, transforming AI into practical educational tools (such as photo search for questions and weak point diagnosis), creating high-frequency usage scenarios, and building user habits and data barriers. The second is market niche competition: by adopting a low-price strategy and regional adaptation, it has captured the lower-tier market, avoiding direct competition with Yundaixue and TAL, and opening up new growth space. The third is the positive feedback of the ecosystem: the data loop between hardware and software, as well as the reuse of technology domestically and internationally, form a flywheel effect from user growth to data accumulation and then to experience optimization. Furthermore, it elaborates on the potential challenges faced by ZuoYeBang, specifically addressing the corresponding countermeasures for the three major risks of policy, technology, and market.

As a leading enterprise in the education technology industry, ZuoYeBang has achieved remarkable results through its differentiated strategy and taken the lead in the industry. For its future development, it needs to balance opportunities and challenges in multiple dimensions and continuously optimize its differentiated strategy. It is expected to continue to lead in the trillion-yuan-level technology education market and move towards a global education technology platform.

AUTHORS CONTRIBUTION

All the authors contributed equally and their names were listed in alphabetical order.

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