

A Study on the Consumption Psychology of Young Chinese Parents Towards Children's Educational Apps

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Abstract: With the development of network technology, children's educational apps have gradually become an indispensable auxiliary tool in family education, especially in alleviating the pressure on young parents and promoting children's cognitive development. This study delves into the consumption psychology of young Chinese parents towards children's educational apps, providing a basis for app developers to optimize their products and promote the development of children's education. The study was conducted through a questionnaire survey targeting young parents aged 26-35, and 40 valid questionnaires were collected through social media platforms. The survey covered aspects such as the parents' considerations for choosing apps, functional preferences, information access channels, concerns, and willingness to pay. The results show that content quality is the most important factor for young parents when selecting children's educational apps. When purchasing apps, privacy protection is the most concerning issue for parents. In addition, user experience, changes in children's interests, content update frequency, and app performance are the main factors affecting parents' continued use of the apps.

Keywords: Consumption Psychology, Parents, Educational Apps.

1. Introduction

In today's era of developed networks, children's educational apps are showing a continuous development trend. More and more young parents will purchase some children's educational apps on the Internet to reduce their own pressure, making children's educational apps gradually become an important auxiliary tool in family education. It can not only educate their own children but also reduce the burden in their work and life.

As the Internet becomes more and more popular. People's attention to children's educational apps continuously increases, and the number of users of children's educational apps is growing significantly on a large scale. According to relevant data, the overall user scale of early childhood education apps is nearly 125 million, and the tendency of younger users is extremely remarkable. Users aged 26-35 account for nearly 80%. There are some famous children's educational apps, such as "Zuoyebang", "Xiaoyuan Souting", "BabyBus". These apps are extremely widely used in primary and secondary school education and have a large user group, reflecting that parents have a high degree of acceptance and demand for such apps.

Some enterprises of children's educational apps have achieved very good economic returns. Taking BabyBus as an example, the company mainly obtains income through advertising cooperation and

promotion. From 2018 to 2022, the company's revenue from advertising cooperation and promotion accounted for more than 70%. In 2019 and 2022, Baidu's contribution to operating income accounted for 57.12% and 50.74% respectively. In 2020, the revenue was 497.8 million yuan. The company will also license audio and video to third-party online audio and video media such as YouTube and iQiyi to obtain income. In 2020, the company earned 130 million yuan in this way. The BabyBus app creates children's enlightenment digital products in a wonderful and interesting way with the concept of "happy enlightenment" through digital creation and diversified operations. The app was established in 2009 and has now served 700 million families worldwide. It has now occupied an important position among children's educational apps. For another example, Hongen Education was established in 2016 and became a US-listed company with a market value of 1 billion dollars in just four years. The reason why this company can achieve such extraordinary achievements is that it applies complex 3D games to the design of online education products. Its product Hongen Literacy has been ranked first in sales for a long time among Chinese education apps on the Apple App Store.

At present, young parents in China generally have received a relatively high level of education. Their educational concepts for their children are more modern and diversified. They are actively seeking various innovative educational methods and resources. Children's educational apps can provide more convenient, interesting, and personalized characteristics compared to traditional classroom education, meeting the diverse needs of these young parents for their children's education. At present, the fast-paced life and greater work pressure make parents' time relatively tight and it is difficult for them to fully devote themselves to their children's education. Children's educational apps provide a very good solution, allowing children to learn in fragmented time and also saving parents' time. Therefore, young parents are more willing to consume children's educational apps. Understanding the consumption psychology of Chinese young parents towards children's educational apps can not only enable app developers to improve products and meet market demands but also promote the development of Chinese children's education.

2. Literature Review

With the continuous development of children's educational apps, many scholars have conducted in-depth research on the use of these apps. Scholars analyzed the preschool education app market and user preferences, suggesting a focus on traditional culture and a mix of free and paid content to meet parental and child interests. They noted the importance of parental attitudes towards children's app usage and the market's growing demand for educational apps, recommending developers create diverse, engaging content that aligns with consumer expectations [1]. Xia and Liang found that parents of preschool children have a high acceptance of educational apps, with a preference for language training and a desire for improved app design, such as reduced advertising. They proposed that educational apps should be more child-friendly, with enhanced screen time management and more transparent information on instructor qualifications and content quality. The researchers recommended government regulation of the app market, collaboration between companies and educational institutions for quality app development, and rational parent choices in app selection for their children [2]. Some scholars also conducted a survey and research on the use of apps for early childhood education. Liu analyzed the impact of educational apps on young children, identifying both benefits and drawbacks. She found that while these apps enhance learning with their interactive features, issues such as poor usage habits and a lack of parental guidance persist. Recommendations include parental education on app usage and the need for industry standards and oversight [3]. According to the article by Kim and Chen, they also present a unique perspective on consumer psychology in children's educational applications. Kim and Chen present a unique perspective on consumer psychology in children's educational applications. They analyzed the use of educational apps among Chinese families, emphasizing the necessity for a balanced view of their advantages and

potential risks. They stress the value of collaboration between schools, parents, and developers to guide responsible app use. The study provides parents with practical advice on cultivating positive app usage habits and choosing high-quality educational content, while also highlighting the role of kindergartens in establishing these habits. It advocates for a holistic approach to digital education that includes children, parents, and technology, offering significant insights into the evolution of early childhood education and digital learning [4].

The primary school application education app plays the same important role as the early childhood education app. Relevant scholars have analyzed the current situation and strategies of these apps. Lin Xiantao analyzed the impact of primary school education apps, noting their widespread adoption and positive effects on learning, but also identifying secondary negative effects. He suggested strategies such as personalization, value cultivation, limiting excessive entertainment, and enhanced app supervision to address these issues [5].

Not only are there studies on the use of preschool education apps, but relevant scholars have also conducted studies on the influence of mobile education apps on users' wishes. Ding, Ma, and Cao found that factors such as immersion, perceived usefulness, and perceived ease of use directly influence users' intentions to use mobile education apps, while interests, personalization, system quality, and subjective norms have indirect effects. They also indicated that gamification can boost engagement and emphasized the importance of system quality and personalization for user satisfaction, offering insights into mobile education app design and operation [6].

Among children's education apps, science and technology education apps occupy a very important position. Liu, Sun, and Sun investigated the current state of science and technology education apps, noting their comprehensive content but a predominant focus on foundational knowledge over inquiry-based or integrated learning. They suggested that these apps should better align with learning patterns, utilize data intelligence, and blend disciplines for a more effective educational experience. The researchers recommended respecting learning laws, enhancing data utilization, optimizing application scenarios, and improving interactivity to foster subject integration and stimulate learning interest [7].

There have been great changes in the consumption of children's education in China. One research discusses the expansion of the children's consumer market in urban China, driven by the one-child policy. This policy has created a generation of only children with significant spending power, leading to increased educational consumption and integration of extracurricular activities and tutoring services into children's lives. The essay highlights the financial burden on families due to the marketization of education and the resulting inequality in access to educational resources, as the costs of "shadow education" services are not affordable for all [8].

Although there are many scholars in this field, few scholars or articles have studied the consumer psychology of Chinese young parents on children's education apps.

3. Methodology

This study adopts a survey to gain an in-depth understanding of the consumption psychology of young Chinese parents towards children's educational apps. The research subjects are young parents residing in China, aged between 26-35, with at least one child aged 0-12. This age group was chosen primarily because they generally have a higher acceptance of new technologies and educational apps, and they are the main decision-makers and consumers of children's educational apps.

For this study, the questionnaire was distributed using Wenjuanxing as the platform, which has a broad user base and efficient data collection capabilities. The questionnaire was distributed through social media sharing. The questionnaire was widely distributed online through the two platforms of Weibo and XiaoHongshu, using the QR code and links provided by Wenjuanxing. The distribution period was set for one week, from September 11, 2024, to September 18, 2024, to ensure sufficient

time to collect a wide range of samples. During the distribution period, 54 questionnaires were returned, of which 40 were valid questionnaires. These questionnaires had complete answers and did not show obvious regularity in their responses.

Among these 40 valid questionnaires, the survey covered aspects such as the respondents' gender, education level, occupation, family situation, and their considerations for choosing children's educational apps, functional preferences, information access channels, concerns, and willingness to pay. It was found that in this valid sample, males accounted for 42.5%, and females accounted for 57.5%, indicating a slightly higher number of female participants in the survey. Among these young parents, 50% have only one child, and 60% of the parents have used children's educational apps. The survey indicates that when choosing children's educational apps, they focus the most on content quality with over 90% of the responses, followed by brand reputation and user reviews. Among these respondents, 41.67% are very willing to pay extra for high-quality children's educational apps. When consuming and purchasing apps, respondents value personalized learning paths and interactivity the most. Privacy protection has become the most concerning issue for young parents when purchasing these children's educational apps. These young parents have made some suggestions for these children's educational apps, such as personalized learning paths, interactivity, and content update frequency. The results of this survey help developers of children's educational apps to better understand user needs, optimize product design and functionality, and enhance user experience. At the same time, it can provide a reference for parents when choosing the right children's educational apps, helping them better guide their children's learning and growth.

4. Results

In the questionnaire survey designed for this study, when asked about the main considerations when choosing children's education apps, over 91% of respondents considered content quality, indicating that users place a greater emphasis on the richness and quality of content in children's education apps. Following that is brand recognition, accounting for 50%. The importance of user reviews and recommendation systems is relatively low, with 37.5% and 33.33% respectively.

Regarding what concerns the respondents the most when purchasing children's education apps, privacy protection is the top concern, with 66.67% of the respondents expressing this worry. Content quality and the concern of children becoming addicted to the apps are also significant, with 62.5% and 58.33% respectively. These respondents are not very concerned about the price and app stability, with these two factors accounting for 29.17% and 37.5% respectively.

When investigating which factors young parents believe will affect their continued use of children's education apps, user experience is the most important factor affecting the continued use of children's education apps, with a proportion reaching 58.33%. The change in children's interests is also an important factor, accounting for 66.67%. Content update frequency and app performance also have a certain impact on continued use, with 41.67% and 37.5% respectively.

5. Discussion

In this study, the survey questionnaire collected the main considerations of the young Chinese parent group when choosing children's education apps. The results show that content quality is the most important factor, followed by brand recognition. The importance of user reviews, recommendation systems, price, and interface design is relatively low. Such survey results are formed because the high attention to content quality reflects the young parents' emphasis on children's education. They hope to promote children's cognitive development and learning interests through high-quality educational content. High-quality content usually means scientific, systematic teaching methods, and rich educational resources, which are the most valued by young parents when choosing apps. The

relatively high attention to brand recognition may be related to consumers' trust and recognition of the brand. Well-known brands often mean higher quality assurance and better after-sales service, which play an important role when parents choose children's educational products. These results have some positive impacts on society. For example, the emphasis on high-quality content helps to promote children's education apps to provide more scientific and systematic teaching resources, thereby improving children's learning outcomes. The emphasis on brand recognition helps to promote fair competition in the market and encourages companies to enhance their brand value and service quality. However, these factors will also bring some negative impacts. Overemphasis on content quality may lead to neglect of other aspects of user experience, such as interface design, which may affect the user experience. Ignoring user reviews may reduce user interaction and community building, which is not conducive to the long-term development of the app. To improve these drawbacks, children's education app developers should continue to focus on the quality and scientific nature of the content, constantly updating and optimizing teaching resources to meet the needs of young parents. Developers can also improve the accuracy of user reviews and the practicality of recommendation systems by optimizing algorithms and user interfaces.

When purchasing children's education apps, the young Chinese parent group is most worried about privacy protection, followed by content quality and children's addiction issues. The concern about price and app stability is relatively low. The reason for this data is that in the digital age, personal information security has become a focus of public concern. Parents are particularly sensitive to children's privacy protection because children often lack self-protection awareness and are more vulnerable to online risks. Content quality is directly related to children's learning outcomes and mental health. Parents worry that the content in the app may not be scientific, healthy, or misleading, which will affect children's learning and growth. However, with the popularization of electronic devices, the problem of children becoming addicted to electronic screens has become increasingly serious. Parents worry that educational apps may attract children to use them for a long time due to excessive entertainment, affecting children's vision and social skills. These concerns have some positive impacts on social development. For example, the high attention to privacy protection helps to promote app developers to pay more attention to the security and privacy protection of user data, thereby improving the safety standards of the entire industry. The concern about content quality and children's addiction helps to encourage app developers to provide more scientific, healthy, and educational content while designing reasonable usage restrictions to prevent children from becoming addicted. However, there will also be some negative impacts. For example, overemphasis on privacy protection may lead to app developers being too conservative in product design, restricting the development of innovation and personalized services. App developers can take corresponding measures to improve, such as strictly following relevant laws and regulations, taking effective measures to protect user data security, such as encrypted storage and anonymization processing, and clearly informing users of privacy policies. To prevent children from becoming addicted, apps can design reasonable usage time restrictions and reminder functions to guide children to arrange their learning and entertainment time reasonably. Although parents are relatively less concerned about the price, developers should still consider the economic conditions of different families and provide reasonable pricing strategies to ensure that more children can enjoy high-quality educational resources.

Regarding the factors affecting the continuous use of children's education apps by the young Chinese parent group, changes in children's interests are the biggest factor affecting continuous use, followed by user experience, content update frequency, and app performance. The impact of price changes and other factors is relatively small. The reason for this result is that changes in children's interests are the key factor affecting the continuous use of children's education apps because children's attention and interests often change, which requires apps to adjust content in time to attract

children's attention. The high attention to user experience reflects parents' needs for app operation convenience, interface friendliness, and personalized services. A good user experience can increase the frequency and duration of parents and children using the app. Regularly updated content can maintain the attractiveness of the app, and high-performance applications can ensure the smoothness of the user experience. The advantages brought by this result are that the emphasis on changes in children's interests helps app developers to design more diverse and dynamically updated educational content to adapt to the constantly changing learning needs of children. The optimization of user experience helps to improve user satisfaction and loyalty, thereby increasing the user retention rate of the app. At the same time, these factors will also bring corresponding disadvantages. For example, overreliance on changes in children's interests may lead to too frequent updates of app content, thereby increasing development costs and maintenance difficulties. Ignoring price and other factors may put the app at a competitive disadvantage in the market, especially for price-sensitive user groups. Corresponding measures to solve this problem can include optimizing interface design and interaction processes to improve operation convenience and increase user stickiness. Update and adjust content in time according to changes in children's interests to maintain the attractiveness and fun of the content. Strengthen the frequency of content updates to maintain the freshness and diversity of content. Improve app performance to ensure smooth app operation and reduce the occurrence of carding and crashes.

6. Conclusion

This study indicates that when selecting children's educational apps, Chinese young parents pay the most attention to the content quality of the apps, while brand recognition and user reviews also have a certain impact. Privacy protection, content quality, and preventing children from becoming addicted are the most concerning issues for young parents in their purchasing decisions. The research also found that user experience, continuous content updates, and changes in children's interests are key factors affecting parents' continued use of the apps. Based on these survey results, app developers should focus on the richness and quality of content, while also paying attention to user privacy protection and enhancing user experience. By continuously optimizing the app's functionality and interface design to meet market demands, the healthy development of children's educational apps can be promoted.

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