

Children's social APP design based on octagonal behavior analysis

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Abstract: Objective To explore the application of octagonal behavior analysis method in children's social APP design through relevant theories and achievements of gamification design, so as to provide more perspectives for improving social fun. The method starts with the theory of octagonal behavior analysis, and explores the eight core driving forces that trigger different types of child users' behaviors. This paper summarizes the types of children users of social apps, puts forward design mechanisms and methods suitable for different types of children users, and based on this, the design conclusion of children's social apps based on the innovative design of octagonal behavior analysis and gamification design theory explores the needs of different types of children in social interaction and provides corresponding solutions. It also provides referential ideas for the design of children's social apps

Key words: octagonal behavior analysis; Social APP; Children's social networking;

1. Gamification in children's social apps

1.1 Characteristics of children's social apps

Children's social apps are designed to meet the requirements of children's daily social interaction, as well as to guide children's healthy learning, life and growth.

At present, there are few social apps dedicated to children, not only because of the particularity of children as a group -- their exposure to electronic devices largely depends on their parents' attitudes, but also because of the huge risk of children's exposure to online social communication. Early social platforms for children rely on games, such as Moore Manor launched by Taomie and Obi Island launched by Hyoda, which were once popular. These games promoted children's social interaction in the process of running. Today, most of the apps on the market for children's social networking still focus on games, and social networking is mostly in the form of incidental functions.

1.2 Gamification design of children's social apps

Gamification refers to the use of game elements and game design techniques in non-game contexts. The particularity of game elements and mechanism Settings can mobilize the enthusiasm of users and give users psychological satisfaction, so as to improve the user experience including satisfaction, loyalty, participation and so on.

Social interaction is an innate skill of children, and game is a "catalyst" that can help children get familiar with each other faster, and is a way for children to play and interact with each other and express themselves. Some scholars pointed out that in the process of designing children's social games, it is necessary to highlight the three factors of children's self-value realization, meeting children's social needs and paying attention to identifying PTR (the bottom line of parents' aversion). The gamification design of children's social apps is also closely related to these three factors: children's social interaction is different from adult social interaction, the former needs correct guidance from the outside world and personalized development.

2. Driving force analysis of children's social behavior

Wei Yanli et al. combined the octagonal behavior analysis method with Richard Batu's game player types to summarize the needs and different types of learning software users. Some researchers believe that the needs of children's mobile phone use are knowledge needs, entertainment needs, emotional needs and self-expression needs. When children use mobile phones to socialize on the Internet, they also involve the above four needs. The author combined octagonal behavior analysis, corresponding children's social needs with core driving forces, and summarized the following three types of children's social APP users: achievement socializers, learning socializers, and social socializers. Achievement socializers pay attention to the accumulation of titles and the attention of others when socializing, and will compare themselves with other users; Learning socializers tend to act as explorers, spending time in their own areas of interest, learning and collecting information in the process of exploration. Social socializers like to communicate with others and show themselves, and pay attention to the expression and transmission of emotions.

For different types of child users, different driving mechanisms are needed to guide them. Achievement socializers need a healthy competition mechanism to guide them, so that children can understand their own strengths and weaknesses and see the bright points of others in comparison with others. Learning socializers need a platform to learn and explore, give enough creative space, and cultivate children's self-learning ability. Social socializers are mostly children with lively personalities (or active on social platforms), who have a strong desire to express themselves and need a relatively free communication space. The mechanics for the three different types of users are shown in Figure 1.

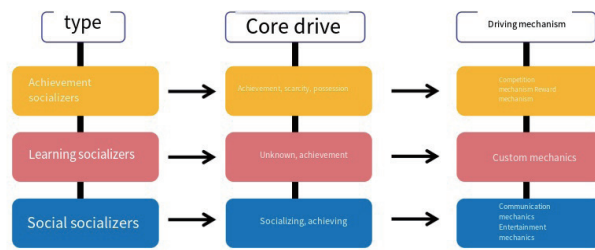


Figure 1. Driving force and driving mechanism of social APP users

3. Design application cases

Star Search is a social software designed for children aged 8-14 years old. On top of the most basic functions of social software, it broadens the way for children to make friends -- learning to make friends can guide children to make healthy social contacts while meeting the needs of different types of social contacts.

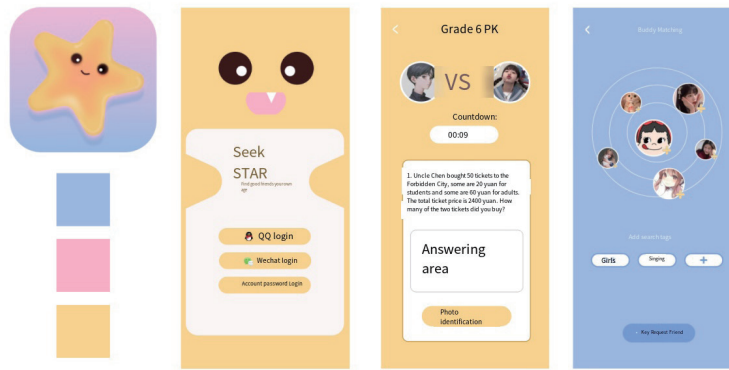


Figure 2. The icon of Starsearch APP and part of the page design display

The core function of APP is PK party. In PK party, users can engage in knowledge PK with other users. After defeating other users, they can get corresponding experience points. This knowledge comes from school textbooks, daily knowledge and professional knowledge, which can help children consolidate their schoolwork and expand their knowledge. In addition to the knowledge PK party, there are also leisure parties, which provide children with the space to chat and make friends. The product goal of the APP is to let children users socialize in learning and learn in socializing.

The app provides a highly free social platform and hot topics. Users can record and share their lives in the platform, and share their beautiful and life experience with other users in the dynamic circle. There are also star user recommendations in the APP. Users with higher activity and creation value will be given priority to recommend, so that children who want to get attention can achieve their goals through their own efforts. The supervision function can detect the user's negative text and audio records, and will remind and persuade the user in time. In serious cases, it will notify the associated parent account and intervene in time.

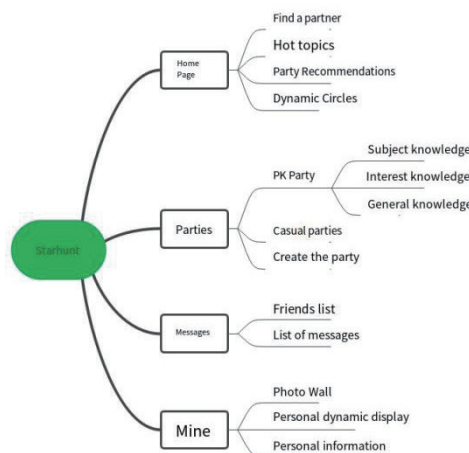


FIG. 3 Information architecture of Star Search APP

In the early stage of design, the author used interviews to identify 6 subjects (aged 8-14 years old) who fit the three social types mentioned above. After the design was completed, the 6 subjects were re-evaluated

A second test was conducted to verify the effect of this method (see Table 1). In this test, Likert scale was used to score. According to the obtained data, the average score given by the subjects is above 3, indicating that the subjects are basically satisfied with the proposed design scheme.

Table 1 Functional design score table

Features	# 1	No.2	No. 3	Number 4	No.5	No.6	Average Score
Knowledge PK	3	4	3	3	3	4	3.3
Finding Friends	3	3	5	5	4	5	4.1
Title Setting	5	2	4	3	5	3	3.7
Chat Rooms	3	2	4	4	4	4	3.5
Hot Topics	3	4	4	3	4	4	3.7
Regulatory Functions	4	3	2	2	3	3	3

Epilogue

In recent years, the household ownership rate of electronic products such as electronic watches, mobile phones and tablets has become higher and higher, making the behavior of children accessing the Internet more and more common and younger. For children, due to their immature physical and mental development, they are more vulnerable to adverse factors when socializing online. The design mechanism of children's social software based on octagonal behavior analysis can meet children's social needs, guide children's healthy development, and also provide new ideas for the innovation of children's social apps.

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