Interaction Designing Research for Children's eBooks

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Abstract. Book is not only a teacher on the way of children's development, but also a gate of learning knowledge. Essentially, good books play a significant role on the development of children's character and intellectual forming process. In the age of the Internet, mobile devices as a new carrier of literature, with its unique text, sound, images, video and other diversified forms involved in the creation and propagation of children's books, it has brought the development of eBooks more variability at the same time also a revolution for children's reading experience. This paper will combine the characteristics and problems of existing children's eBooks, analyzing the interactive design of children's eBooks.

Introduction

There is a big controversial on the age range of children group based on the existing studies, what can be make sure is that as the growth of the age children will obtain different learning ability in different periods, and in each stage they have appropriate reading requires and different ability to absorb knowledge. Therefore, if the research just uses only one method to study the whole childhood readers will produce larger error. So, this article will pay attention on subdividing the object of study, finally decided make children aged 4 to 6 as the research object. Children aged 4 to 6 have capable of control their attention in short time, they show strong initiative and curiosity to new things, also have the basic language ability, and get active on imagination. They can use their own imagination to describe things, such as the tree is not necessarily to be green it can also be colorful like a rainbow, it must be the sun feels sad when it’s raining, etc. But this phase of children also very active at the same time, they can barely concentrate on one thing for a long time, so the traditional reading pattern is hard to arouse children's reading interest, and children's eBooks interactive features can solve this problem to a large extent. EBooks improve the reading interest of children through letting themselves exploration and at the same time obtain the new knowledge in book.

Methods and Results

Analysis of the Current Existing Children's eBooks

A child's world is fresh and colorful, full of imagination. They are sensitive to bright colors and images, so the traditional children's books are also combining the form and picture to tell a story. With the coming of digital age, children's literature transformed from printed books to eBook gradually, even there are some books only have the electronic copyright. According to the iPhone APP store's existing applications help us find problems easily.

First of all, most of the children's eBooks just simply become electronic version of book which added a reading function replacing parents' company. Compared with traditional printed books there is no significant breakthrough. But for this stage of children can hardly complete reading behavior without the watchful eye of parents. So such kind of eBooks essentially did not contribute to raising the quality of children's reading in.

Secondly, instead of drawing their attention on the books' plot, the children' eBooks have overused dazzling bright colors so that misinformed readers on the sensory stimuli. There are, I think, children attention were scattered. On the part of the color choose in visual system, too
preference on high purity bright-color may cause confusion in the types of color application, and such color neither beautiful nor conducive to the development of the child's vision.

Finally, it is worth mentioning is the problem that children's eBooks interface design make audience feel tired when reading it. One of the most positive purpose for user interface design is to optimize the product experience, which means keep the work load of understanding the product to a minimize, especially for the target audience of this article reduce the cognitive load and visual load is very important. Children aged 4 to 6 have strong curiosity to explore new things, operating a work independently will bring them a sense of pride and a very strong initiative. But some of the eBooks operation experience on the market now are more like designed for adult, the books didn't personalize the interface towards a given user. Successful children's eBooks should be highly sensitive to user requirement that will let the message of interaction design transmit effectively.

The Research of Children eBook Interaction Design

The dictionary defines Interactive as capable of acting on or influencing each other. In the social life of human, interaction is the most basic and common social phenomenon. Traditional interaction generally refers to the direct, face-to-face, individual to individual, individual to group and group to group interaction. In the modern society the interaction has got into the human to computer interaction area, this non-traditional interaction can happen beyond the limitations of time and space. EBooks interactive, namely the mobile terminal and people exchange information effectively and convey accurate instructions. Today's children's eBooks mostly stored on the mobile devices, and the touch function of mobile devices brings children' eBooks a revolutionary development. Interaction design requires designers to understand the psychological and behavior characteristics of the target group, and let the attitude of reader change from the passive acceptance to active participants, so that information can deliver more effectively.

- Interactive games related to the story plot
  Children don't like adults have self-control ability, able to study boring knowledge independently and understand the complicated plot. Fun-loving is children' nature, it can either be a good point cut for children study or a disadvantage of their instinct. In order to make reading become an interesting thing, eBooks need to add some interactive game appropriately which match the plot of the story, the game can be answer questions to collect medals, some kinds of puzzles, finding difference or elements hidden in the middle of the interface and so on. Through the challenges involved in the game, they will increase the understanding of the story by trying to find the right solution to solve problem after failure. Though the game is relatively simple, but this form of interaction mean to emphasize on thinking interactive, through the playing process of such games make knowledge accept by children actively, and this is a pleasant and effective way.

- Voice prompt lead children reading
  Present there are a lot of studio focused on children's books on the market, the first great differences between traditional books and eBooks is that the function of voice prompt. Books for 4 to 6 years children should pay more attention to the development of the story line, professional dubbing reading material can show the story more lively when combined with the plot. Sometimes this kind of professional dubbing story can even make more positive influence than reading by their parents. At the same time children aged 4 to 6 are in the important stage of psychological development, because their living environment has become more open and they can contact with more new things in kindergarten or elementary school. Therefore in this period of children have more curiosity and plenty of imagination. By voice guide reading way can fully cause the attention of children, inducing them to explore the development of the story in the book.

- Different reading ways enrich the reading experience
  Children's eBooks provide more reading patterns, such as interactive reading, automatic reading and sleep reading and so on. Actually the most basic interactive action have already exist when we read a printed books, that is page-turns. The book become attractive with author's crafting a close relationship between figure to figure and plot to plot, which prompted readers flipping the pages. The function of eBooks' automatic reading pattern designed seemingly wiped out the opportunity of
letting the reader interact with works, but eBooks has more advantage in the interactive reading area. Interactive reading model as the name implies interaction between children and computer, which means the reader take part in the development of the story construction, and affect the overall development of the story more or less. For example, after reading a story, the system will ask young readers a question "How many cans of honey did baby bear eat in the forest just now?" It will provide several options "1. The baby bear ate up 6 cans of honey; 2. Back to the forest and see again carefully." And some stories will design two or three endings for children to choose according to the story. Such form of reading make readers have strong desire for participation, and stimulate children's initiative.

●Three-dimensional space to enhance visual effect

In terms of traditional readings, the three-dimensional book has been always win more popularity, children aged 4-6 show stronger curiosity about things than adults, they can form multi-dimensional understanding and knowledge of things through touch and multi-angle observation. Children's eBooks also can draw lessons from this way, although it can't be real stretch hand to touch, but eBooks can show things in all angles. For example, when a magic box of elf is introduced in the story book, it can be designed to let children observe the top and bottom or even the internal structure of the box by sliding the screen. This effect is very attractive for the target children. Through this tentative exploration mobilize the initiative of the children to read, gradually transfer the center of reading to the reader self, encourage young readers to show initiative independently.

Acknowledgement

Since the eBooks development, this kind of interactive electronic books have formed a certain scale, also bring out many professional production team. However, the concern of children's eBooks interactive research areas is more less than the speed of mobile device come into our daily life. The eBooks' transformation is still moving on and have to experience many complicated development process. Compared with the interactive eBooks abroad we have amount of children's eBooks, but there is few good work. Children's eBooks design should not be limited to let the printed books get into electronic books, it should encourage children to show their subjective initiative when learning knowledge. Printed books cannot give reader such kind of new experience of reading.

References


