

Original Paper

Feasibility Analysis and Scheme Design of Library Information Literacy Education Game APP

Guoqiang Liu^{1*}

¹ Library of Tianjin Polytechnic University, Tianjin, 30038, China

* Guoqiang Liu, Library of Tianjin Polytechnic University, Tianjin, 30038, China

Received: April 8, 2018

Accepted: May 18, 2018

Online Published: May 23, 2018

doi:10.22158/wjer.v5n2p198

URL: <http://dx.doi.org/10.22158/wjer.v5n2p198>

Abstract

The article outlines the concept of information literacy and the background of national information literacy education. Under the current situation of national information literacy education, it proposes a new idea of information literacy education game APP, analyzes its feasibility, and finally designed the implementation plan for information literacy education game APP from four aspects: establishes a development team, design principles, scenarios and levels design, promotion and evaluation.

Keywords

Library, information literacy education, game APP, game design

1. Introduction

In the increasingly advanced information-based social environment of the Internet, the widespread use of various social media has brought a series of strange articles that are endlessly popular. Due to the limited ability to discriminate information, a large number of unreliable articles not only occupy a large amount of time for the users, but also cause users to blindly convince the views of these articles and aggravate the sense of life lost. Therefore, it is imperative to improve the national information literacy. In the process of educating citizens about information literacy, it is worth exploring how libraries can assume their due responsibilities in social development and how to achieve more effective information literacy education.

2. Information Literacy Overview

The concept of information literacy was raised during the development of book search skills in the United States. In 1974, Paul Zurkowski, chairman of The US Information Industry Association, defined Information Literacy (IL) for the first time as “the ability of information decision-making to use

various information tools and primary sources of information to provide answers to practical questions”. Includes three levels of cultural literacy, information awareness, and information skills. In 1989, an American Library Association Presidential Committee on Information Literacy Final Report issued by the American Library Association (ALA) defined information literacy as: Ability to judge when information is needed and how to get information, how to evaluate and effectively use the required information.

On February 5, 2015, the Association of College and Research Libraries (ACRL) formally approved the “Frame work for Information Literacy for Higher Education” as an updated document of the “Information Literacy Competency Standards for Higher Education” established in 2000. The “Framework” believes that IL will expand the scope of student learning and integrate with other academic and social learning objectives, so it gives an expanded definition of IL: IL is a group of integrated capabilities that includes reflective discoveries of information, understanding of how information is produced and evaluated, and the use of information to create new knowledge and participate in learning groups appropriately.

3. Background and Status of National Information Literacy Education

In 1994, the newly revised “Public Library Manifesto” pointed out by The United Nations Educational and Cultural Organization (UNESCO): The public library is the regional information center. It provides users with all kinds of knowledge and information quickly so that everyone in the community can get library services; The design of the public library’s network must take into account the relationship with large, middle, and elementary school libraries. No matter whether it is a public library or a university library, it can use the “Framework for Information Literacy for Higher Education” as its guiding principle, adopt effective ways and methods, and participate in the education of national information literacy with agility and efficiency.

The status of national information literacy is mainly reflected in: (1) The awareness of national information is weak. The sensitivity of citizens to information is not high, and the ability to filter information and verify information through channels needs to be strengthened. (2) The technical environment of IL is not mature. The resources of public libraries are not abundant, and the digital resources of university libraries are not fully open to the society, and they have not played a full role in all kinds of digital resources. (3) The IL education object is simple. The audience of the public library does not have a lot of expansion. The audience of the university library is only for college students and does not go down to the citizens. (4) IL education is not widely publicized and it is not popularized. Due to limitations in support forces and approaches, libraries of various types cannot fully publicize their IL education functions.

4. Feasibility Analysis of IL Education Game APP

As can be seen on most library websites, IL education is mostly conducted in traditional forms such as training, lectures and reports. The biggest downfall of these forms is the loss of flexibility. Due to various objective and subjective factors such as time, effort, and traffic, many people cannot accept these educations and lose the initial heart of IL education. At the end of 2017, the wave of winning prizes in a knowledge contest has risen quietly. The participants of the event have revealed that all kinds of libraries can use this form to popularize IL education. With the popularization of smart phones, the rise of various kinds of APPs, especially game APPs, has a wide audience and low usage requirements, making it a great possibility to transform IL education into a mobile game APP for national promotion.

The IL education game APP designed by the library aims to improve the user's information literacy, and uses information knowledge and skills as the core. By providing an Internet environment, the user can turn the IL education into an interesting thing, virtually improve the user's IL skills. The value of IL education game APP is mainly reflected in: (1) Decomposing the original boring information retrieval knowledge into each link of the game, in the process of happy playing games, stimulating the interest of the user to learn information knowledge; (2) Game interlocking, from easy to difficult, not only can provide the basic entrance of IL, but also allows users to grasp how to identify information and verify it, and further serve their own life; (3) The game can set a ranking or reward. For example, a certain number of VIP users are set according to the score. These users may increase the number of borrowed books within a limited period of time and update the score ranking regularly. These reward activities will effectively promote the frequent use of APPs by users and greatly benefit the improvement of IL learning; (4) After the game has been statistically analyzed, it is beneficial for each design gallery to intuitively understand the user's IL level, and at the same time, a more targeted learning plan can be formulated.

Based on this, it can be inferred that mobile game APP can be a powerful tool to enhance users' IL ability, and open up a new situation for IL education.

5. Implementation Plan of Library IL Education Game APP

5.1 Building a Development Team

The development of the game APP is a systematic project involving many aspects such as content design, sound effects, artworks, programming, and game testing. It requires the cooperation of talents in many fields. There are three main ways to form a team: First, a multi-sectoral team can be set up within the library to take charge of the planning, design, maintenance, and version upgrades of the entire game. Secondly, technical assistance from other departments within the school can be strongly sought. Students of relevant majors participate in the planning of this project. This is also a good opportunity for students to exercise their professional skills and acquire knowledge of information

literacy. Third, the bidding of game companies, especially with socially influential game companies, which will help the social promotion of APP.

5.2 Establish Design Principles

(1) Define the audience and goals of the game to ensure that the game is targeted. The first step in designing a game is to establish the goals of the game, such as what knowledge of IL is expected to be embedded, and what capabilities to train the user. In addition, the game audience needs to be clarified, such as whether it is for college students or community residents, in order to design game plots and levels. For university libraries that are open to the public, audiences can be diversified and targeted to suit each group's game APP.

(2) Both interest and education are balanced, and the purpose of the IL education is achieved in an atmosphere of entertainment. The reason why the download of the game APP is so large is that it is interesting, and it can quickly attract the attention of users and arouse their great interest. Lynn Vanleer once criticized certain IL education games as "a chapter of the library's usage guidelines". It was not interactive and not interesting enough. For example, at the end of 2017, the hottest game of knowledge contests, the novel point is live online, and there are incentives to share funds. Simply listing the topics will lead to a serious loss of interest and there will be no broad audience base. How to maximize the playfulness is a very important point in the APP.

Therefore, at the beginning of the game design, it is necessary to think about how to integrate the important knowledge of IL into the game, and also to make the game interesting and playful through virtual story plots and diversified forms of interaction.

5.3 Plot and Level Design

(1) The appeal of game story design. The story design is the core of the game. The exciting storyline and the rich performance form can make people brighten up and increase the attractiveness and playability of the game. It can draw on the creativity and plot display methods of the current popular games to present the IL education game app with a reasonable high-profile story, a sense of design, and a perfect sound effect that matches the plot. This is presented to the young people, creating a high reputation and at the same time attracting more users download and use.

(2) The level of difficulty of the checkpoints. First is to ensure that the game interface is simple and easy to operate, to avoid users losing patience in the familiar interface. Second is to consider the diversity of the audience. Different audiences have different requirements for use. In particular, community residents whose knowledge of IL is zero-based must guarantee the simplicity of their game content. Based on the provision of certain knowledge and skills, they can gradually improve their skills in information application and achieve efficient goal of IL education. In the process of designing a level, a small number of test players can be recruited to face different types of audiences, helping designers to grasp their rationality.

(3) Richness of IL knowledge. The ultimate goal of the game is to popularize the knowledge of IL, and to integrate these knowledge in the game story, and advance game levels according to the level of

knowledge. No matter whether it is a university library or a public library, combining the resources of their respective libraries, they can achieve the best use of various resources. For example, university libraries can promote rich digital resources, information retrieval skills, etc. Public libraries can popularize their collections and lending services to citizens.

(4) Game feedback. First, you can design a help note, or a video of game clearance. Second, if conditions permit, design reward rules that can effectively convert traffic into actual users and increase user stickiness.

5.4 Promotion and Evaluation

(1) Before the promotion, APP has been published on the application store of the mobile phone system include IOS and Android to ensure that users can download smoothly and install correctly. Two-dimensional codes of two terminals are made separately so that the files can be quickly downloaded by users.

(2) The popularity of the game APP cannot be separated from the most important one. In addition to college students, it is particularly important to consider how to make community residents and other people enjoy the utility of game APP. Currently, the popular promotion method is the use of WeChat, Micro Blog, QQ space and other convenient social APP to spread. Simply add a key share in the game app settings to easily implement this feature. Compared with college students' use of new media to facilitate sharing, the community residents must increase their promotion efforts in a targeted manner. With the support of government forces, they can use street offices, neighborhood committees, and other social organizations to effectively promote.

(3) After the promotion, there will be a certain number of user groups. At this time, the APP needs to be evaluated. It mainly evaluates two aspects: First, whether the learning effect is as expected, further exploring the plan to achieve the goal of high-efficiency in terms of actual results. Second, the user's satisfaction and participation, collecting opinions and suggestions, checking the gaps, continuously improving, and guarantee the update of APP. You can achieve accurate and effective assessment through questionnaires, online submission, and contact with the technical department of the design hall.

6. Conclusion

As the main platform for developing IL education, the game APP is a new way to carry out IL education. In the informatized society where almost all of the smart phones are hand-carried, with the help of the game medium to achieve better results in IL education, it is even more critical that game APP can be more effectively disseminated to citizens and achieve universalization. Within the scope of universities, based on the existing forms of IL education, the game APP can be used as a key supplement to fully achieve the goal of efficient education. For other citizens, the public libraries play a key role. The game APPs designed for them need to be promoted. At the same time, the APPs designed by a university library should also give full play to its social functions, collaborate in various aspects, and jointly build a comprehensive and systematic IL education system.

References

- Association of American Universities and Research Libraries. (2015). Framework for Information-on Literacy in Higher Education. Han, L. F. et al. (Trans.). *Journal of Academic Libraries*, 2015(6), 118-126.
- Behrens, S. J. A. (1994). Conceptual analysis and historical overview of information literacy. *C-college & Research libraries*, 55(4), 310-315. https://doi.org/10.5860/crl_55_04_309
- IFLA. *IFLA/UNESCO Public Library Manifesto*. (1994). [EB/OL]. [1994-10-29]. [2013-11-25]. Retrieved from <http://archive.ifla.org/VIUs8/unesco/eng.htm>
- Lynn Van, L. (2006). Interactive Gaming VS. Library Tutorials for Information Literacy: A Resource Guide. *Indiana Libraries*, 25(4), 52-55.