The construction of the mobile Internet platform to the teenagers' minority culture communication

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Abstract. The rise of mobile Internet has comprehensively promoted the progress and development of today's society. On the premise that our material life is greatly satisfied, our personal spiritual life is more and more rich. The minority culture, which represents the trend of their individuality, emerging from the youth group in the new era is expanding its influence, and the spread of the minority culture also marks the recognition and respect of the youth by the whole society. Mobile Internet platform has made great contribution to the spread of minority culture, and it is an important way for minority culture to be spread by the masses.

Keywords: Teenagers; Minority culture; Mobile Internet platform; Transmission

1   Introduction

With the rapid development of the current society and the increasingly developed information flow under the guidance of modern science and technology, the renewal and transformation of social culture are also constantly accelerated. Various cultures are meeting and colliding at different levels, the old culture is declining, and the new culture is emerging, gradually forming a diversified cultural society. Then comes the individualization of cultural consumption, especially among the adolescent groups, which is reflected in various cultural subdivisions, that is, among the adolescent groups some from the same or similar interests, hobbies or conduct and the group of the group culture, also known as minority culture. [1] Minority culture is born and develops due to personalization, which has become the trend of the production, dissemination and consumption of minority cultural products.

2   Overview of minority culture

2.1   Characteristics of minority culture

Minority culture is a concept corresponding to mass culture. The core reason why minority culture can be generated and spread rapidly in the group of teenagers at this age level lies in the highly personalized growth and development of contemporary teenagers. The personalized development of teenagers is affected by a variety of factors, such as family environment, educational environment, personal personality and hobbies. At the same time, the Internet plays a

positive role in the personal development of contemporary teenagers with its obvious characteristics of intuitiveness, convenience, interactivity, virtuality and openness. With the help of Internet technology, teenagers' personal sentiments, ideals, personalities and values can be directly expressed, and it is easier to gather a group of people with similar values and interests together, thus promoting the formation of minority cultural circles and determining the characteristics of minority culture.

2.1.1 The cluster

The basic condition for the formation of minority culture of teenagers is the gathering of small groups with similar values and interests. From inside the small group, the group members of the minority culture has a high recognition and other small on the outside culture sense of rejection, as teenagers niche cultural groups more closed, group members a sense of belonging is higher, led to the outside world into teenagers niche cultural circle of barriers is higher, affect adolescent small cultural transmission.

2.1.2 Knowledge

Compared with the universality and general knowledge of mass culture, minority culture of teenagers often has certain knowledge or skills. Due to the particularity of youth minority culture, it often involves some obscure or even unpopular knowledge or skills, such as: Hot street hip-hop culture, through a "This is hip-hop" network program, let us see the dance culture now pursued by teenagers, at the same time let us understand the history behind the youth hip-hop and expressed ideas, more let us marvel at the youth hip-hop that superb dance skills. Therefore, minority culture participants need to rely on a certain amount of soft power capital to enter the field of minority culture and occupy a certain position. [2] In the process of the spread of minority culture, knowledge has also become one of the reasons affecting its spread.

2.1.3 Change

The rise and development of youth minority culture is closely related to its audience or participants. Individual participants are not only the organizational core of youth minority culture, but also the practitioners and inheritors, which requires long-term attention and investment to minority culture, and is also the main factor to continuously absorb new participants to maintain the stability of minority culture groups. Once the investment degree is reduced or changed, the minority culture group will shrink, and the minority culture of teenagers will also shrink or even disappear. This variation or instability will also affect the lasting effect of minority culture in the spread of teenagers.

2.2 Difficulties and needs of minority culture transmission of teenagers

At present, teen minority culture relies on the mass communication mode of mobile Internet technology to spread, and expands the influence of teen minority culture through social platforms, video media display platforms, Internet search platforms and other mobile applications.

2.2.1 There is a shortage of core communicators of youth minority culture

Most of the participants in the minority culture of teenagers enter through pure liking or personality choice, so it shows that the external transmission power is increasing rapidly. But in the youth minority culture internal transmission power is insufficient, is still the youth minority

culture transmission fatal injury. [3] The number of high-level core communicators in minority youth culture determines the attraction to external communication, and also determines the cohesion of participants in minority youth culture. Youth minority culture not only needs to expand the communication channels, but also needs the Internet platform to give corresponding training to the participants in the minority culture, so as to ensure the vitality of youth minority culture.

2.2.2 Low density and low quality of minority culture among teenagers

The contents of minority culture communication of teenagers are mostly displayed in the form of words, pictures, videos, audio, etc., and they are mostly spread spontaneously by scattered participants, resulting in the transmission density. Content is fragmented and of low quality, lacking integration. Therefore, there is a lack of professional Internet platform to carry out standardized and standardized communication of minority culture of teenagers. Help the minority culture of teenagers to build their own knowledge system, so that more people can quickly understand and realize the true meaning of culture.

2.2.3 Poor effect of minority culture communication among teenagers

At present, the communication mode of youth minority culture is scattered, and the transmission power is not concentrated enough. It is often "a hammer in the east and a stick in the west", and it is difficult to maintain the heat. For example, exhibitions, competitions, TV programs and other forms need to invest a lot of time, energy and even money to hold, which brings great pressure to the participants of the minority culture of teenagers. In particular, the minority culture of teenagers lacks the support of centralized network platform and is more difficult to be recognized by mainstream media, which directly affects the communication effect of minority culture.

To sum up, the youth minority culture communication platform needs to deepen the comprehensive application of mobile Internet, multimedia technology and other high and new technologies, so as to become the main front for the comprehensive and professional presentation and promotion of youth minority culture, and also a teaching platform for the training and learning of youth minority culture participants. It is also an experimental platform to strengthen the cross-boundary cooperation and collaborative innovation between minority culture of teenagers and different fields.

3 Internet Technology and mobile Internet

The continuous development and update of Internet technology. Promoted the progress of the whole society. And the emergence of mobile Internet technology, the application of the Internet technology is infinite amplification, more convenient into our life and work. Mobile Internet technology is the Internet technology and mobile communication technology perfect fusion, users are using mobile phone, PAD, or other wireless terminal equipment, through the high rate of mobile network, in the moving state (e.g., in the subway, bus.) at any time, anywhere access to the Internet to get information, to use business, entertainment and other network services. [4] Compared with traditional Internet technology, mobile Internet technology has the advantage that it can access the Internet and use corresponding network services anytime, anywhere and

in a mobile state. The emergence and development of mobile Internet cannot be separated from the development of mobile terminals, especially mobile intelligent devices, which greatly improves the comprehensive performance of mobile devices, and also supports the application of wireless access networks with larger bandwidth, higher spectrum, larger coverage area, lower latency and more diverse services on mobile terminals. The composition of mobile Internet can be summarized into four parts: mobile communication network, mobile Internet terminal equipment, mobile Internet application and mobile Internet related technologies, as shown in Figure 1.
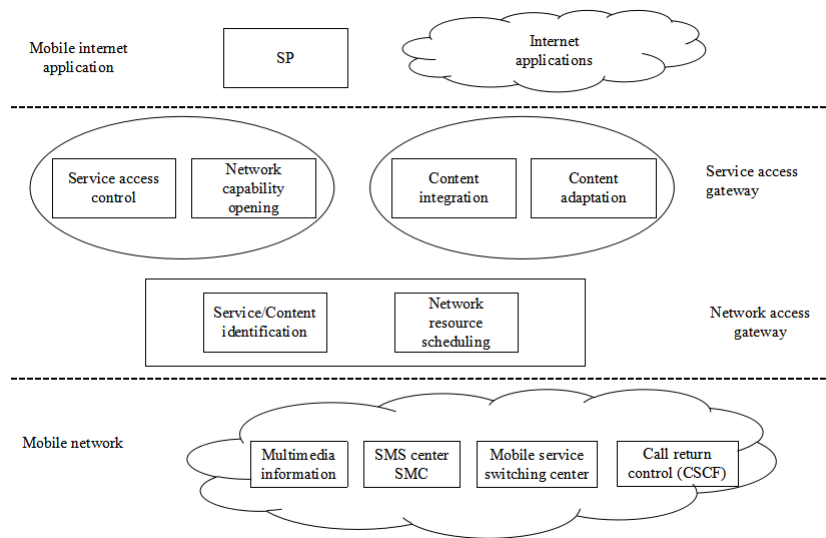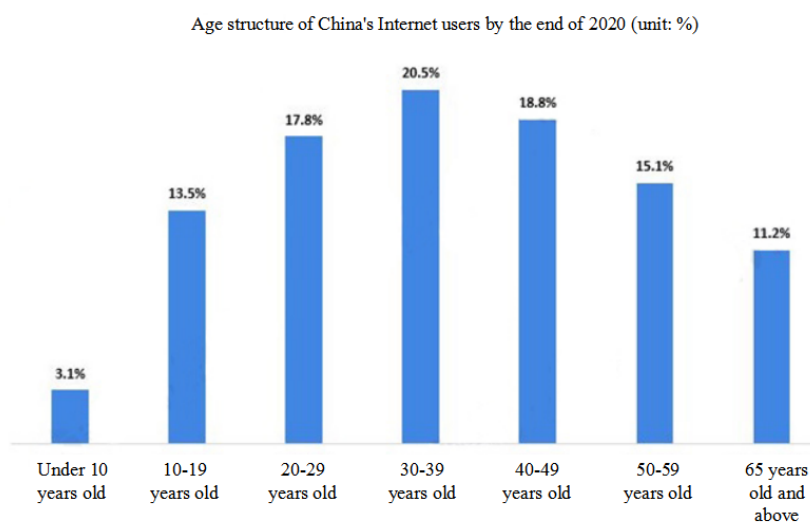

Fig. 1. Mobile Internet technology architecture diagram

The main difference between the mobile Internet and the traditional Internet is the difference between the access to the network and the terminal. Mobile Internet is mainly applied on mobile terminals, and the network access mode is cellular mobile communication network access to the Internet. Therefore, the choice of terminals is mostly based on mobile phone model access to the Internet. Mobile Internet has gone through four stages since its inception. (1) In the embryonic stage, the mobile Internet to WAP(wireless Application Protocol) application mode, for 2G signal band mobile phones to provide Internet application services. In the second stage, WAP protocol of mobile phone can be used to access the corresponding WAP portal website, so it is widely used in GSM, CDMA, TDMA and other networks. (2) Growth stage, mobile Internet with the deployment of 3G mobile network and into the growth stage, mobile Internet access bandwidth has been greatly expanded, and tD-SCDMA communication protocol, but also improve the mobile Internet in the smartphone application. [5] (3) Rapid development stage, during this stage, mobile Internet technology develops rapidly with the explosive emergence of smart phones. With the rapid and rich functions of smart phones, the demand for mobile Internet services increases greatly, which promotes the update and progress of mobile Internet technology. (4) In the stage of comprehensive development, mobile Internet technology is once again accompanied by the deployment of 4G mobile communication network in China, and a technological breakthrough has been achieved. The speed of mobile Internet has been greatly improved

to meet the Internet application services of different mobile terminals. In the next stage, the function and performance of smart phones have become more and more powerful, and at the same time, smart wearable devices have joined the ranks of mobile terminals.

With the issuance of 5G commercial licenses in June 2019, China has officially entered the commercial era of 5G communication technology. 5 g communication technology, the application of mobile Internet technology has realized the qualitative leap, will expand the application scope of the mobile Internet technology to industry, agriculture, energy, and so on social basic pillar industry, not only to resolve interpersonal communication, more people and things, and to solve communication problems, to "all" the Internet trend of development in an all-round way.

According to the survey, the total number of Internet users on mobile terminals in China is as high as 897 million. Among the users, the number of users under the age of 18 has soared, with teenagers accounting for nearly 17%, as shown in Figure 1. China's mobile Internet users spend an average of 5.72 hours online per day. Therefore, mobile Internet has natural advantages for the spread of minority culture among teenagers, as shown in Figure 2.

Age structure of China's Internet users by the end of 2020 (unit: %)

Source: CNNIC Prospective Industry Research Institute

Fig. 2. Age structure ratio of Chinese Netizens

The spread of mobile Internet technology on youth minority culture also presents three advantages: (1) It opened up a new way of social reduces the communication cost, greatly reduce the efficiency of the telephone, SMS before, for young minority cultural communication and interaction between participants provides convenient, also increased the outside world understand their channels. (2) It provides a more convenient platform for the display, mobile Internet higher visibility and a higher degree of personal, youth small culture give players more opportunities to show themselves, in the form of video, audio, images, and so on to show that teenagers content and characteristics of minority culture, to speed up the participant's own emotional sharing and circulation, Greatly expanding the stage for participants to show and express themselves. (3) It improves the utilization rate of fragmentation time. All kinds of information and

content of the minority culture of teenagers can be displayed on the terminal page through the Internet search engine in a very short time, and the knowledge can be learned and understood by using the fragmentation time. Mobile Internet applications also have the function of accurate push, which is to screen and screen the content according to personal preferences and then push it to the terminal page, so that people can quickly and systematically understand and master the knowledge and content of minority culture of teenagers.

4 Design of youth minority culture communication platform based on mobile Internet

4.1 Function Modules

The youth minority culture communication platform based on mobile Internet takes the youth minority culture as the communication and promotion goal, analyzes the needs of three categories of users: core communicators, youth minority culture communicators and youth minority culture audiences, and divides the platform into six modules: Cultural introduction module, cultural display module, cultural teaching module, cultural interaction module, cultural recommendation module, and cultural creation peripheral module. The platform module architecture is shown in Figure 3.
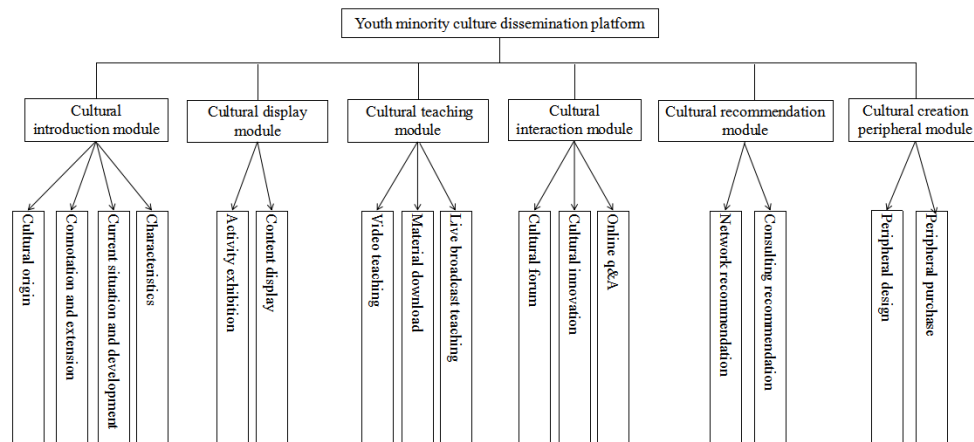

Fig. 3. Module architecture of youth minority culture communication platform

In the design of functional modules, the culture introduction module emphasizes the origin, connotation, characteristics, current situation and development of minority culture of teenagers, systematically displays the background and content of minority culture, so as to spread the integrated feelings and cognition to the outside world, and improve the fragmented and single communication content before. In the cultural display module, there is not only a detailed display of cultural content, but also the display of some activities, such as two-dimension exhibition, street dance competition, variety shows and cultural interviews, so that more people can intuitively understand and feel the real state of minority youth culture. In the cultural teaching module, corresponding teaching videos are provided, and online live teaching can also be supported, such as handmade, pet raising and other minority culture types. In the cultural interaction

module, more channels can be opened to make it easier for the outside world to participate in the minority culture atmosphere of teenagers. Cultural recommendation refers to the broadcast recommendation of upcoming group activities or content related to minority culture of teenagers. The last part of cultural creation is the secondary creation according to the characteristics of teenagers' primary and middle school culture, which is symbolized and signalized in culture, such as the puppets, pet key chains. Let the minority culture of teenagers better integrate into People's Daily life, improve the effect of minority culture transmission.

4.2 Database Design

The carrying and calling of contents in the youth minority culture communication platform based on mobile Internet cannot be separated from the design of the platform database. The platform uses Microsoft SQL Server2010 as the background database, uses ODBC data source manager, and provides the standard API interface to the database access. ODBC data source manager supports SQL statements, which can be used to implement specific operations for data source management. In the database of youth minority culture communication platform, the main data tables used include cultural introduction content table, activity exhibition table, video information table, network recommendation information table, peripheral purchase information table and so on. Through the detailed design of the database and data table to ensure the normal operation of the platform function.

4.3 Implementation of overall design of the platform

The youth minority culture communication platform based on mobile Internet adopts ASP.NET programming design, the system assembly language is C#, and the overall framework of the platform adopts B/S three-level architecture design. The first layer of the platform is the content display page, which realizes human-computer interaction through Web technology in the form of browser Web page, which facilitates users to log in and use on mobile terminals and improves the adaptability of different platforms. The second layer of the platform is the logical layer, which realizes the association between the front page operation and the back-end database. The third layer is the data access layer, which can add, delete, modify and view data. The three-level architecture reduces the dependency and high power consumption of each level of the platform, makes the platform more compact, facilitates function optimization and upgrade, and reduces the operating cost of the platform. [6] Figure 4 shows the overall architecture of the platform.
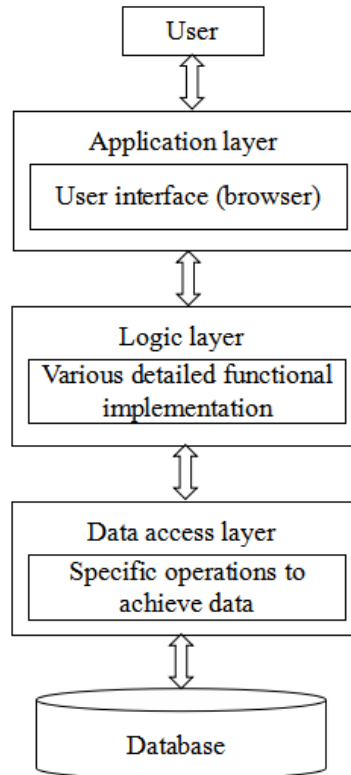
Fig. 4. B/S structure of the three-layer youth minority culture communication platform

5   Conclusion

The construction of youth minority culture communication platform based on mobile Internet plays an important role in youth minority culture communication. Teenagers niche culture dissemination platform combines the mobile Internet, multimedia technology, database technology and a series of techniques, can be comprehensive, professional and promotion of youth culture the main niche, can help more people like teenagers niche culture for further study and understanding, as well as small cross-border cooperation in the field of culture and different provides the opportunity.

Acknowledgments

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