

# Research on the Use of Social Software for Square Dance Teaching for the Elderly—A Case Study of Tangdou APP

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**Abstract**—In the context of aging, the "touching the net" behavior of the seniors has attracted widespread attention, they are no longer in the "marginal" position of the Internet society, and gradually begin to use various smart products in the process of rapid development of science and technology, so this is also of great research significance. This paper takes China's No. 1 square dance teaching social software "Tangdou APP" as the research object, and discusses the use and behavior of the elderly group on the software. On the one hand, it is expected to sort out the development history and functional settings of the software platform to analyze whether the design concept of the software platform is realized and the characteristics and needs of the elderly group. On the other hand, it can understand the social behavior of the current elderly group in the virtual space from a theoretical perspective, explore the media practice of dance learning, sharing and interaction carried out by users using "square dance", and understand the daily activities related to the basic social needs of the elderly with a practical paradigm.

**Keywords**— Elderly groups, square dance, usage behavior, seniors economy.

With the development of science and technology, global integration, media integration, communication networking, and information fragmentation, Internet technology gradually plays an important role in the daily life, leisure and entertainment of the elderly group, and intelligent products are gradually applied to this group. On August 31, 2022, according to the 50th Statistical Report on Internet Development in China, as of June 2022, the size of China's Internet users reached 1.051 billion, of which 11.3% were aged 60 and online. The Internet has enriched the lives of older people in their later years, not only allowing them to cross the digital divide, but also enriching their inner worlds.

In 2020, the Ministry of Industry and Information Technology issued the Universal Design Code for the Aging of Mobile Internet Applications (APP). After the introduction of the standard, mobile phone software covering all aspects of clothing, food, housing and transportation, such as video, shopping, chat, taxi, news, have been adapted to aging according to the habits and needs of the elderly group. How to narrow the digital divide of the elderly in the Internet field, help them solve technical problems and enhance their subjective well-being has become an important and urgent practical issue.

## I. RESEARCH BACKGROUND

Since the fifth census in 2000, China has entered the aging stage, and since then the proportion of the total elderly population to the elderly population has been continuously increasing. Data from the seventh population census in 2020 shows that the elderly population has reached 264 million, accounting for 18.7% of the total population. According to the standard of 65 years old, the number of elderly people in China increased from 88.21 million in 2000 to 190.64 million in 2020, an increase of 1.16 times; the proportion of the elderly population increased from 6.96% in 2000 to 14.2% in 2021.

In recent years, China's population has continued to grow, driven by factors such as increasing life expectancy and declining fertility rates. In the context of rapid social and economic development and continuous improvement of productivity level, population aging is a stage that must be experienced, which not only has a direct impact on China's overall consumption structure, but also accelerates the pace of development of the aging industry, and the use of the Internet and intelligent technology by the elderly has become a hot issue in the whole society.

## II. THE INTRODUCTION AND FUNCTION SETTING OF TANGDOU APP

### 2.1 Tangdou APP

Tangdou APP, formerly known as Tangdou Network, was originally a life portal, officially renamed Tangdou APP in 2015, and also transformed from a website to a mobile client application. Later, the developer Beijing Little Sugar Technology Co., Ltd. aimed at the core user - the elderly group, mainly around the content of square dance teaching, and the software also became China's first square dance teaching software.

As a software dedicated to serving the elderly, it has more than 200 million users, more than 4,000 offline activities organized through the APP every month, and more than 500,000 offline users participate in it every month, becoming the favorite community of dancers across the country to learn dance for free, discuss and communicate.

Tangdou APP has more than 2 million video content, and free to more than 100 million platform users to provide free

teaching services, the software has more than 90% of the country's square dance masters and square dance works, in order to make square dance more "grounded", platform operation is simpler, users can download dance videos for free, but also choose a variety of playback forms, such as one-key slow play, mirror playback and other functions. The process of learning square dancing is both fun and easier.

Compared with other sports software, Tangdou APP has distinct features and advantages. For example, it is a software that integrates dance teaching and online social networking, not only can you learn a variety of square dances for free, you can also record dance clips and publish short videos, and you can also form your own dance team. At the same time, this software is designed for middle-aged and elderly people, and the brand positioning of "allowing middle-aged and elderly people to get health and happiness through Tangdou APP" is very clear. According to QuestMobile, as of August 2022, half of the users owned by the Tangdou APP are over the age of 50, according to statistics, reaching 3.12 million, and are far ahead of the "king of fitness" Keep among the elderly.

In five years, the company has secured four rounds of investment and has become one of the most popular fitness and wellness apps in China. In 2015, the founding team launched Tangdou APP in Beijing as a square dance forum. After the App is launched, the user usage data is analyzed, and the user needs are constantly approached, and new sections are developed while improving the function, which has gradually become a mature middle-aged and elderly social platform, covering a wide range of fields.

## 2.2 Feature settings

Tangdou APP has set its sights on the field of square dance content services, and the developers realize that the elderly have problems such as strong sense of loneliness, low sense of social participation and low sense of identity in the context of aging. The platform also pays attention to the spiritual needs of the elderly for entertainment and life, and the silver-haired "new traffic" group enters the public eye, and the platform obtains ultra-high traffic through this dividend. Therefore, the developer took square dance teaching as the starting point to vertically cultivate the content of the elderly community platform, hoping to allow users to strengthen their health, leisure and entertainment, and learning and communication through hobbies.

As a vertical dance teaching software with middle-aged and elderly people as the core users, the developer deeply understands and studies the user's motivation and habits, and constantly optimizes the operation process and simplifies the use steps. While meeting the actual needs of users, it can also achieve user learning and social purposes in a combination of online and offline methods.

### 2.2.1 Dance teaching section

Tangdou APP belongs to the vertical video software in the field of square dance, strictly controls the content and quality of square dance video, ensures the quantity and ensures the quality of quality, and also ranks first in the market with 90% of the square dance video resources on the whole network.

Tangdou APP has a wide variety of dances. There are six types of dance types: square dance, fitness, pop dance, pas deux, ethnic dance, and performance dance, on the basis of which 35 types of dances such as 16 steps, 32 steps, aerobics, and sailor dance are subdivided. After users enter the homepage and directly click on the type of dance they are interested in, a large number of high-quality professional dance teaching videos will appear, and in the process of browsing the video, they can freely adjust the functional sections, such as: like, favorite, download, send flowers, share friends and other functions. At the same time, you can also choose to use functions such as slow play, mirror, AB cycle or screen projection to TV for video, which is convenient for users to learn and practice.

### 2.2.2. Social platform section

Based on algorithm recommendation, the relationship between users and users, users and platforms is connected with content, and Tangdou APP gradually forms a stable and healthy social environment, allowing more users to get attention, communication, interaction and companionship through the platform. According to the data, about 400,000 people produce content through Tangdous every month, and users spend more than 33 minutes a day.

Users can also record and upload learning results through the shooting port, and the work will be synchronized to the user's homepage and pushed to platform friends, and can also be uploaded to the community to carry out social activities such as liking and sending flowers with other dancers. In addition to online competition, offline activities are also very rich, users can turn on the "people nearby" function, match with the surrounding dance team, and learn and communicate together. Users can not only produce square dance content on the platform, but also share dressing tips, food tutorials, friends gatherings and more.

## III. THE USE BEHAVIOR ANALYSIS OF THE TANGDOU APP

"More time, less pressure" is the current situation of most of the elderly, most of them are in retirement, and life pressure is less, so the simple to learn and physical exercise function of square dance has become their best entertainment, sports, and they have also become the main group of square dance lovers. Through the data of the use of the Tangdou APP by the elderly-haired people, the author summarizes the user's usage behavior into five categories, namely: receiving information, paying attention to fitness, online social networking, use participation, and self-realization.

### 3.1 Users receive information during use

Receiving information refers to the reception of information that the elderly expect to obtain on the Tangdou APP for sports and fitness, square dance learning and so on.

Tangdou APP as a square dance teaching vertical intelligent application software, self-made massive dance teaching video content suitable for middle-aged and elderly people, has a wealth of dance teaching resources, teaches users to learn dance, and is equipped with a large number of well-known professional dance teachers, 98% of the nationally renowned square dance original dance teachers are settled on

the platform and contribute and produce high-quality content, teachers can also conduct remote commentary, guidance and teaching on user dance videos online. In addition to the large number of videos and strong originality, the rich variety of square dance videos is also a highlight to attract the audience, Tangdou APP has a total of 6 categories, subdivided into 35 types of dance, to meet the learning needs of users for multiple types of dance. As a result, users can learn not only professional and original square dance, but also a variety of dance types.

### *3.2 Users pay attention to sports, fitness and other functions*

The elderly are more concerned about health and wellness, and can obtain dance knowledge and skills through the Tangdou APP, so as to improve their physical fitness and realize their fitness needs.

After the coronavirus pandemic, people are paying more and more attention to physical health, the demand for fitness is increasing, fitness-related industries are booming, urban gyms are becoming more and more popular, and marathons in cities and regions are increasing. Compared with young people, the organs of the body of middle-aged and elderly people have different degrees of aging, coupled with the influence of underlying diseases, the body's response ability and mental vitality are reduced, and the tolerance of exercise is declining, and they are more inclined to choose sports that combine health and wellness. Square dance greatly meets the needs of the audience, not only can ensure a certain amount of exercise, but also strong operability, small difficulty of movement, and no need for additional professional equipment, just go to the sports venue regularly, dance with the lead dance, you can achieve fitness needs. At the same time, the square dance repertoire is updated frequently, and the new dance is not only difficult and challenging, but also entertaining and interesting, and can fully mobilize the enthusiasm of the participants. Therefore, most of the elderly choose square dancing, a sport with obvious advantages.

### *3.3 Users are willing to use the social functions of the Tangdou APP*

In the context of aging, the elderly feel lonely, lack of recognition, lack of companionship and other problems are becoming more and more serious. The rapid development of the Internet and the increasing popularity of new media have led to gradual changes in people's social forms and social habits, and the use of social media has gradually become an inseparable part of people's daily lives. Let people maintain and strengthen their social circle through the Tangdou APP, and improve their social status is the social needs of the elderly group.

On the one hand, it gathers people on the Internet, creating a community platform for the elderly, enabling them to strengthen learning and communication with their peers, and also meet more peer friends, and the elderly group can establish a relatively stable square dance hobby circle of friends and restart communication activities with others.

On the other hand, offline can increase the frequency of contact with partners with the same interests. Users can join

the online "Tangdou House" site and participate in offline learning exchange sharing meetings, friendship parties, performances and other activities through their site. As of April 2019, the platform has more than 20,000 Tangdou House sites, each centered around a dance group distributed in its vicinity, helping to organize more events such as social events and community service performances. As of April 2019, more than 4,000 offline activities have been organized nationwide through Tangdou, covering more than 500,000 offline users every month. By the end of 2018, Tangdou had covered 31 provinces, 33 prefecture-level cities and 854 counties across the country, involving more than 10,000 dance groups and millions of dancers.

### *3.4 Open up online and offline participation links*

Participation needs refer to the elderly group participating in online dance learning and publishing dance short videos in the process of using the Tangdou APP, and participating in offline square dance activities or competitions, so the audience has a high sense of participation.

The platform creates an original UGC content ecology by vigorously supporting content creators in the elderly group, while continuing to introduce and support professional teachers of various dance genres. And Tangdou has a very strong protection of original works, giving them great attention and respect, taking the lead in launching the square dance network audiovisual license, and taking the lead in providing copyright protection for square dance authors, thereby empowering the original creator and encouraging more and more original creators to continuously provide users with high-quality content. Square dancing is a practical and operational sport that allows users to learn to dance by watching instructional videos and recording videos to publish them. In this process, users not only have physical participation, but also intellectual participation, conceiving video content and constantly creating dances.

A clean and professional square dance platform not only provides rich learning resources to the audience, but also provides a production space where creative rights and interests are well guaranteed, so that users can continue to output high-quality content, and the audience's sense of participation is also increasing.

### *3.5 Users can achieve self-satisfaction*

Self-demand refers to the activity of users to interact with society and others through the activity of posting square dance videos, so as to gain self-confidence, stability, and social identification with themselves.

For the position that has left their work for many years, most elderly people are in an unsuitable and unacceptable state of life in a short period of time. Their professional knowledge, skills and life experience accumulated over the years are hoped to be passed on to future generations of young people, and self-realization is the ultimate embodiment of the spiritual and cultural needs of the elderly. The activity theory proposed by American developmental psychologist Robert Harveyst suggests that the elderly should also actively participate in



social activities, and only through participation can the elderly reconnect with themselves and maintain their vitality.

In the process of using Tangdou APP, silver-haired people can make their interests and hobbies more professional through the platform's short video resources, and share their learning results to "circles" or other social platforms, where they can receive comments from professional teachers and interact with other partners. They are willing to present themselves on social platforms, are willing to socialize with others, and expect to be approved and recognized by society. Positive interaction sessions enhance their self-confidence and sense of self-identity, and also meet their needs for self-actualization.

#### IV. THE STUDY HAS FOUND IT

##### 4.1 Tangdou APP user portrait

According to the analysis of the data provided by iResearch Index, there are mostly female users of Tangdou APP, and nearly 70% of such users are such users; Most of the users are middle-aged and elderly, and users aged 41 and above account for about 90%. Users are mainly distributed in the first, second and third tier of the central and eastern coastal areas and other economically developed areas, and the material living conditions are rich, so people pay more attention to meeting the needs of the spiritual world and physical health.

Such users are mostly middle-aged and elderly women with a relatively good urban economy (mostly in the central region and Guangdong), they have a certain consumption power, and at the same time control the financial power of the family, family stability, medium income, can master the basic use of smart phones, and will consider more cost-effective factors when consuming. They are very health-conscious and willing to invest time, energy, and even money in it. They have the hobby of square dancing and often find dance partners offline and meet up to dance. They love life and share life, they also love to socialize and are happy to output content on social platforms.

##### 4.2 The "age-appropriate" transformation policy has gradually landed

When the elderly use the Internet, the biggest problem they generally encounter is that compared with young people, factors such as weakened cognitive ability and memory effect degradation are the biggest problems affecting the use of some smart products by the elderly group, and they have a big difference from young people in terms of correct mastery and proficiency in the speed of use, and some software will add English to the interface use, which also increases the difficulty of the elderly group using the Internet. The speed of learning and adapting to the Internet is relatively slow, in addition to their own reasons, external help and guidance is difficult to give to the elderly in time, they often cannot find the right way, gradually lose confidence in use, and finally no longer use such products. Therefore, the network content and use functions accepted by the elderly should be simplified so that they can receive and use it.

The problem of "difficulty" in obtaining information for the elderly group has been noticed by the public, and the Chinese government has also improved its awareness and begun to gradually promote the transformation of various information services suitable for aging. In November 2020, the General Office of the State Council issued the Implementation Plan on Effectively Solving the Difficulties of the Elderly in Using Intelligent Technology, which deployed to promote and solve the problems of the elderly in using intelligent technology. In December of the same year, the Ministry of Industry and Information Technology issued the "Special Action Plan for Aging and Barrier-free Transformation of Internet Applications". These programs provide some practical and effective ways to deal with the problems of the elderly in the use of the Internet, intelligent technology and other problems, we must not only make intelligent technology meet the actual needs of the elderly group, but also think about whether such technology can have practical value.

As of April 2022, 325 websites and mobile applications have completed age-appropriate transformation in accordance with policy requirements to assist the elderly in using smart technologies. This marks that China has officially entered the stage of intelligent society construction. In the Internet era, age-appropriate transformation has become a new trend, but not all age-appropriate projects can be achieved.

In the context of the Internet+ era, age-appropriate projects must meet the needs of the elderly in order to be promoted. Many apps have been adapted to aging, and have launched a caring version, elder mode, etc., to help the elderly cross the "digital divide" through four major and four simple (large font, large icon, large button, large volume, simplified interface, simplified structure, simplified function, simplified operation). At the same time, the Internet and smart technology have created a broad space for us to use this platform to share the experience of smart life and obtain spiritual satisfaction.

In the process of aging society, the integration of the Internet and traditional industries will be the new normal. Internet companies use their platform advantages and data resource advantages to create a new life experience for elderly users. Enterprises that can explore and meet the needs of the elderly are also easier to seize the opportunity brought by this traffic change, such as: Tangdou APP takes square dance teaching as the entry point to attract target groups, and spreads and diffuses through the user's word of mouth, combined with the needs of the elderly group for sports and fitness, and the software settings have a clear interface, simple structure, complete functions, easy operation, and its service users have exceeded 200 million people.

##### 4.3 The seniors economy continues to make efforts

Seniors economy refers to the elderly industry, aging industry, which means that the phenomenon of social aging is becoming increasingly prominent, and a consumption industry exclusive to the elderly group has emerged. At present, the "seniors economy" is becoming a new growth point and an important part of China's national economy. The rise of the "seniors economy" stems from the government's age-

appropriate policies in recent years, which have built a platform for the "seniors economy" and brought vitality to the market.

Data show that 1/3 of China's total population is the elderly over 50 years old. The huge population size also has the same huge consumption potential, consumption level, economic market, and the widespread popularity of smart phones has also made more and more elderly people begin to try new ways of socializing. Silver group is an important force for the sinking development of mobile Internet, compared with the overall users of the sinking market, the elderly group in the post-epidemic era can better reflect their tendency to use the network, from the past will not use to later reluctantly use, and now proficient, they now use the Internet in the process, often focus on their own needs, in information acquisition, leisure, fitness, consumption and shopping and other aspects have more needs.

The seniors economy benchmarks the elderly, but the entire industry is still in the ascendant. The demand for the new generation of elderly people is expanding, consumption continues to upgrade, and the market size is expanding rapidly. According to data from the Securities Times, the scale of China's pension industry will reach 9 trillion yuan in 2022, combined with the analysis of development trends, the economic consumption of this industry will continue to expand, and the scale of China's pension industry will rise to 12 trillion yuan in 2025.

#### *4.4 Networks for the elderly: eliminating loneliness and achieving happiness*

The trend of declining birthrate is a phenomenon that cannot be ignored in China's population development, and the rate of elderly living alone will continue to increase in the future. Children are absent, life is not accompanied by timely help and companionship, work is in retirement, and there is a lack of opportunities to participate in social activities. In the long run, the elderly are prone to fall into a state of loneliness and emptiness, and negative emotions will cause major harm to the physical and mental health of the elderly. To a certain extent, increasing the number of social media use functions of the elderly can improve their social support utilization, reduce loneliness, and achieve happiness.

On the one hand, the elderly group expects to communicate with others through the use of the Internet, and in the process, middle-aged and elderly people can restore some of the social ties that were once interrupted, transforming the traditional flat social network into a three-dimensional social network. In China, social media represented by WeChat is not only an important tool for people to communicate, but also plays a huge role in daily life, consumption and shopping, news and entertainment. With the increasing popularity and widespread use of social media, many elderly people are trying to use social media under the guidance of the next generation in order to increase communication opportunities with their families, and have begun to build their own circle of friends. Social media breaks down geographical restrictions, allowing family members to connect with each other anytime, anywhere, even if they are

far away or even abroad, through mobile phone video and other means. Tangdou APP has built a circle of interests and hobbies, and the way of dancing and making friends can not only enable the elderly to learn dance knowledge and skills, but also provide ways and conditions for the elderly to carry out social interaction activities, which also helps the elderly eliminate loneliness and emptiness. On social networks, the elderly group has increased the way of communicating with others through hobbies, and made new friends, slowly formed their own social circle, gained social recognition, and reshaped social identity.

On the other hand, the elderly group spontaneously posted square dance videos in the Tangdou community, shared daily life and other behaviors, and interacted with relatives and friends such as likes, comments, offline learning, and communication can enhance their sense of social participation and relationship identity. This kind of positive emotional connection and interaction will enhance the initiative of the elderly group to use the Internet, and also cultivate a more positive attitude to life, they are no longer full of resistance and fear of difficulties with the Internet and intelligent technology, actively participate in various social activities, create and operate their own interpersonal network, and constantly form a positive cycle, thereby promoting the improvement of subjective well-being.

#### *4.5 The elderly group pays more attention to word of mouth*

Acquaintance relationships are the main source of information for the elderly, as well as the first factor in their trading decisions and the best source of trust. Compared with young people with rich social channels and social behaviors, most elderly people are not easy to obtain information, and it is difficult to distinguish the real situation of information, so when they make decisions, the source of information is more inclined to listen to the advice of relatives, acquaintances or friends.

Tangdou APP makes good use of this feature, first grasping the square dance circle, a large offline hobby social circle, and gradually transferring online through offline. Offline square dance leaders are the core users of the software, and the platform uses circle communication to attract users to use their software and continuously produce original content with its strong interpersonal influence and communication power. Vertical software has a good reputation in social circles, so old users drive new users, offline dancing activities are transformed into online software use, and its users are increasing. Platforms and developers should pay attention to the power of word-of-mouth, and it is the key to establish trust between brands and users from the perspective of users and user needs.

## V. CONCLUSION AND DISCUSSION

Aging is a natural law, and in this intelligent era, we should not ignore the use needs of the elderly group. Both individuals and enterprises should actively respond and look forward to ushering in richer and more diversified functions and experiences. The elderly have also become an important group of smart product users, for the platform, the actual

needs and usage of users is an important condition for the survival of a product, how to provide users with high-quality services and constantly stimulate users to produce content, and create a sticky, complete and mature collective common circle, is an important cornerstone for the survival of high-quality products. The Tangdou APP has also achieved great success in meeting people's sports and fitness needs with the concept of "square dance teaching", bringing people a social way of "making friends with dance" and satisfying users' different experiences of sports and fitness. Its characteristics of "deep vertical function" also bring thinking to other elderly groups to apply the platform. However, with the development and progress of various intelligent products for the elderly, new problems and challenges have emerged, such as how to protect users' privacy and information, and how to stand out in the homogeneous competition in the market, all of which are worthy of our continuous exploration and thinking.

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