

Crossing the Digital Divide: The “Digital Dilemma” of the Elderly and the Way to Bridge It

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Abstract: *With the advent of the digital age, the new media system is increasingly mature and perfect, and is widely used in daily life. The elderly groups are facing many problems and dilemmas in the rapid development of the Internet, and typical phenomena such as "digital differentiation" and "digital barriers" have emerged. It is a crucial issue to integrate the elderly into today's convenient society in the digital age, communicate emotionally with the help of new media, and bridge the "digital divide" through media links. There is a need for a concerted effort by all parties, including government-led, family participation and media guidance, to bridge the deprived media perception of the elderly group.*

Keywords: *Older people; The Digital Age; New Media; The digital dilemma*

1. Introduction

According to the latest census data from 2023: China's population aged 60 and above accounted for 18.7%, an increase of 0.78 percentage points year-on-year, of which the population aged 65 and above accounted for 13.5%. Since 2000, China has entered an aging society. China's aging is a large-scale and rapidly developing process, and the trend of aging is becoming increasingly significant. In the digital age, the continuous development and use of new media has provided much convenience to the life of the elderly, but also triggered the "digital dilemma" of the elderly group. In the context of the dual era of digitization and aging, it is urgent to address the issue of the "digital divide" among the elderly, and it is imperative that all parties in society should pay attention to this issue and work together to help the elderly to cross the digital divide.

2. Digital divide: the phenomenon of the digital divide among aging groups

2.1. Key features of the digital divide

The elderly group is relatively lacking in digital skills of smart media platforms, has a shallow understanding of the Internet, and is not skilled enough to operate smart devices, or even does not understand them at all. This makes digital technology a "gap" in their access to basic public services. For example, in such convenient lifestyle of hospital doctor registration, online ordering food and delivery, online shopping and home delivery, the elderly group has become the most distant group from these convenient lifestyles because they do not know how to use the Internet or are not familiar with the online operating procedures.

The "foundation gap" of digital inclusion is also an important feature of the digital divide in the elderly group. Specifically, the elderly group is relatively lacking in the infrastructure and necessary smart devices to access the network. According to statistics, as of December 2022, China's non-internet users aged 60 and above accounted for 37.4% of the total non-Internet users, 17.6 percentage points higher than the proportion of the national population aged 60 and above.

Due to the lack of digital media technology, some elderly people are unable to access relevant information on Internet platforms, and their understanding of public service content will be misunderstood and biased. Meanwhile, elderly people show altruistic tendencies in information sharing appeals, and are more vulnerable to online rumors and telecommunication fraud than younger groups.

The digital divide among older age groups is mainly manifested by the lack of digital skills and the lack of infrastructure and necessary equipment for digital integration. Influenced by the pervasiveness of the Internet infrastructure, differences in economic and social development, and differences in the

cognition of older groups themselves, some older groups are at a disadvantage in accessing the public services provided by the Internet, with relatively fewer types of access to digitally enabled devices, and not enough opportunities for research, which makes it difficult for older people to enjoy the conveniences brought about by digitization in the digital age, and may even make them feel isolated as a result.

2.2. Perceived deprivation in media practices

The changes of digital technology on modern family relationship and the changes of media information input mechanism will stimulate the left-behind elderly to produce relative deprivation, and the left-behind elderly face the dilemma of meaning construction in the digital system, have a subjective response in the process of digital change, and produce the digital resistance mentality for self-construction.^[1]The phenomenon of "deprivation of perception" occurs in the process of choosing and practicing the media for the elderly, and continues to affect their attitudes and psychological states.

For the elderly group known as "digital immigrants", it is a difficult task and challenge to integrate into today's fast-paced new media era. Some elderly people are reluctant to accept new things out of self-defense psychology and resist integrating into the modern network, so that they are "derailed" with the society of "everything is media". However, those elderly people who are optimistic about life like to find the fun of scientific and technological change in the rapid development of Internet technology innovation, and improve their own happiness in exploring change.

Today, with the continuous development of Internet technology, mobile smart terminals have become a necessity for connecting people with each other emotionally. At the same time, smartphones and social apps have become a necessary channel for communicating family emotions, and older adults are digitally embraced on the premise of perceiving the usefulness of internet platforms and media technologies for reconciling family relationships. In this passive acceptance situation, the elderly groups do not have a strong recognition and desire to explore the new media platforms, and apart from the necessary procedures, some of the elderly groups refuse to contact other relevant knowledge of the media platforms due to reasons such as "not being able to remember", "the procedures are too complicated", "visual fatigue", and so on. This leads to a phenomenon of perceptual deprivation in their media practices, a relative deprivation that fuels the older population's resistance to digital resistance and a greater refusal to go online.

2.3. Older people in the new media age

In the era of new media, older groups are facing new challenges and difficulties for Internet platforms. Elderly people lack understanding and contact with new media technology and new things, so they are unable to make full use of the convenience and advantages brought by the new media, and even in some cases, because of the continuous improvement of procedures or the popularization of intelligent applications, it brings them a lot of "inconvenience". Elderly people will also encounter some difficulties in operating skills when using new media platforms, such as unfamiliarity with the operating process, inability to use smart devices, complex Internet procedures and lack of media education, etc., all of which will affect the experience and effect of the use of new media by elderly people, thus forming a "digital divide" that is difficult to cross.

At the same time, with the continuous development of China's aging and the improvement of intelligent media information technology, the elderly group also has more learning opportunities and life choices in the new media era. For example, through social applications and Internet platforms, older groups can keep in touch with their families, friends and colleagues and expand their social scope. In addition, new media platforms can provide more learning resources and entertainment projects, such as online courses and e-books, which can enrich the lives of the elderly.

Therefore, the government, society and families should form a joint effort to actively guide older groups to learn and adapt to the new media environment and to improve their skills and knowledge in the use of new media. At the same time, in order to better serve the Internet needs of the elderly population, it is necessary to strengthen education and training in Internet literacy for the elderly, and to improve their ability to use the Internet and their awareness of risks. There is also a need to strengthen the protection of the rights and interests of older persons on the Internet to prevent them from being subjected to Internet fraud and other forms of Internet abuse. In the era of new media, all parties in society should make full use of the convenience and advantages brought about by the Internet platform to help older groups cross the "digital divide" and get out of the digital dilemma, so that older groups can participate in the development and construction of the Internet.

3. Digital barriers: a study of the causes of the digital divide

3.1. Age-influenced cognitive dissonance

Older people show less initiative in accessing the Internet, with some of them expressing a clear reluctance to learn new applications and refusing to access "non-essential" software. The main reason for this is that it is difficult for them to solve the problems they encounter when they surf the Internet, and the behavior of asking for help will also cause them psychological discomfort, self-efficacy and other emotions.

After the emergence of new media technology, the traditional communication context and mode of communication have collapsed. Faced with the "digital divide", the elderly group lacks both the technical feeding of family members and the cognition of multiple channels of the Internet. The "digital barrier" of the elderly group is a huge problem, and it is also the main factor that forms the phenomenon of "digital divide" of the elderly group.

The elderly group is a typical information vulnerable group, with incomplete and incomplete reception of information transmitted by Internet platforms, weak ability to distinguish information, inconsistent cognition of network rumors, and the main victims of overseas telecommunication network fraud cases. Some elderly groups are afraid of the use of digital network technology when using online platforms and new media technologies. It is believed that if you do not contact or use the Internet and new media, you will not be deceived, which leads to the cognitive imbalance of the Internet and new media, resulting in "digital barriers".

In addition, there is age discrimination against the elderly in society, and the media program is not fast and convenient for the elderly, which will further stimulate the elderly to stay away from the Internet. Some scholars believe that whether it is intentional or not, social age discrimination against the elderly will have a negative impact on the self-cognitive ability of the elderly in the era of new media, resulting in cognitive imbalance under the influence of age, further deepening the "digital barrier" of the elderly and increasing the "digital divide".

“Crowd preferences” of Internet platforms

From the perspective of the development of digital technology, the "crowd preference" set by Internet platforms is an important factor in the creation of a "digital divide" among older groups. According to data from Internet platforms, the Internet-using population is mainly concentrated in the adolescent and youth groups, with a smaller proportion in the older age groups. Therefore, the direction of the Internet's technological research and development is oriented to the preferences of the user population, and the design and services are more inclined to the youth population, and the programme is more "youthful".

At the same time, the design and research and development of Internet platforms ignore the needs of the elderly for Internet technology and new media applications, especially the assessment of the basic ability of the elderly to use smart phones. As a result, the operation of media platform applications is too cumbersome for them, and the interface design and application style are not suitable for the aesthetic taste of the elderly.

The operation process of the Internet platform is complicated, and there are huge differences in the operating systems of different programs and different platforms, which increases the difficulty of the operation of the elderly group on the Internet platform. Similarly, in the face of complex public service digitization procedures, the operation difficulties of some elderly groups have become a typical phenomenon of digital difficulties of elderly groups in the process of digitization.

Internet platforms screen target groups through big data, cloud computing and other means, and the hierarchical differentiation of data technology makes Internet platforms choose audiences that ignore the elderly, reflecting "unfriendly" characteristics to the elderly, making their access to the Internet incomplete, and thus gradually appearing as a digital barrier.

3.2. Lack of media education constructs for the elderly

Due to the insufficiency and imbalance of educational resources for the elderly in China, the elderly group belongs to the group of people with scarce educational resources in terms of media education. Digital barriers can only be overcome by getting more older people to actively integrate into the digital society. Therefore, it is particularly important to incorporate the content of media education into the education system for the elderly.

The lack of media education has led to an absence of identity and inter-group understanding among the elderly, making their social and communication channels very narrow and their reception of information lagging behind, resulting in a sense of "group loneliness" among the elderly.

Media education focuses mainly on the self-development of the elderly, helping them to actively use new media technology to meet their various needs. It is worth noting that the elderly group is individually heterogeneous, and accurately identifying, exploring and stimulating the personalised needs of the elderly for new media use is the primary goal of media education.^[2]At this stage in our country, there is a lack of universal and age-appropriate media education for the elderly, as well as a lack of fostering awareness of self-development of the elderly in digital platforms. Only by helping the elderly to use new media technology to meet their own needs in life and learning, and by building a complete and comprehensive media education system for the elderly, will we be able to get out of the plight of the "digital divide".

Providing comprehensive and complete media education for the elderly is an important way to promote the elderly to enhance their digital integration and bridge the digital divide. Therefore, in addition to the basic popularization of media skills, media education for the elderly should enhance the way of life and entertainment for the elderly in the digital era, bridge the digital divide between generations, get rid of the label and identity of "digital refugees", and become qualified digital citizens.

4. Digital inclusion: exploring pathways across the digital divide

4.1. Refining the digitization strategy

The improvement of the government-led digital strategy for the elderly is an important issue at present, aiming at improving the elder's skills in using digital technologies and enhancing their sense of digital acquisition.

The government can carry out digital literacy courses and training to help the elderly understand and use digital products and services, and teach the elderly how to use digital devices such as smartphones, computers and the Internet. At the same time, it develops and promotes digital products and services suitable for the elderly to meet the daily life needs and spiritual and cultural needs of the elderly. We will establish and improve a government-led digital service support system to provide consultation and help services for the elderly. For example, a special digital service hotline has been set up to provide online consultation and answer services to help the elderly solve problems encountered in the process of using digital products and services.

At the same time, the relevant government departments need to strengthen the security of digital products to ensure the security and privacy of the elderly when using digital products and services. At the same time, strengthen the supervision of false advertising and bad information to prevent the elderly from being cheated and infringed.

4.2. Social Empowerment and Family Feeding

Intergenerational digital feedback can be divided into micro and macro levels, with the micro level referring to the digital feedback from children and grandchildren to the elderly in the family scenario, and the macro level referring to the digital help from social organizations to the elderly.^[3]To promote social forces to participate in the digital skills training of the elderly, lack of understanding of the Internet and low acceptance of new things are the main factors that keep the elderly away from Internet technology. In the face of the above situation, we should actively mobilize all sectors of society to promote the improvement of the digital knowledge system of the elderly group, promote the construction of the media education system, and accelerate the development of the digital level of the elderly group. In terms of social basic public services, we will improve universities for the elderly, educational institutions and online public service stations targeting the elderly, and promote the construction of network infrastructure.

Relying on the social function of the Internet, the elderly group can realize the "mutual help" of digital technology in social communication. Guide the elderly with flexible and skilled use of digital technology to help the elderly with weak awareness of digital technology, and create an atmosphere of digital technology mutual assistance in social life.

At the same time, we should strengthen the family digital intergenerational feeding. In the digital age, the feeding of digital technology from the younger generation to the elderly in the family is an important

way for the elderly to improve the basic level of digital. At the family level, digital feeding within the family is more acceptable to most older age groups. Due to many factors such as being derailed from the digital society for a long time and being afraid of difficulties, in the face of open courses, there will be "reluctant to go out" and "reluctant to communicate with strangers about new things" and other thoughts and ideas. Family digital intergenerational feeding circumvents these problems, and after learning basic digital media technologies at home, older people are more willing to "go out and see more."

4.3. Platform implementation of the Elderly Care Model

The "friendly" care of the digital platform for the elderly and the optimization of the digital service experience can make the digital service more suitable for the elderly. For example, in the process of software development, we should design a more concise interface, increase font size, optimize voice reading and other functions to improve the ease of use and readability of services.

The new media platform can also develop Internet applications suitable for the use of the elderly group, providing services such as health, health, life assistants and other age-related services. These applications can be combined with the actual needs of the elderly, providing a simple and easy to understand operation interface and practical functions. For example, the registration and login process should be simple and easy to understand, with fewer unnecessary filling and verification steps. Face verification, voice verification and other methods are added to improve the convenience of registration and login, to develop a special care plan for the elderly within the APP, including providing customized services, preferential policies and activities to meet the specific needs of the elderly.

At the same time, the protection of personal information and fund security of the elderly should be strengthened to prevent the occurrence of security incidents such as network fraud and information leakage. Reducing the occurrence of such risks will help older age groups to access the Internet with an open mind.

Under the elderly care model, the Internet platform enables the aging society through digital empowerment, so that new media can truly broaden the channels of learning and entertainment for the elderly and facilitate the life of the elderly.

5. Conclusions

In the new media era, the continuous development of network technology digitally empowers the life of the elderly, and all parties in society should make joint efforts to disseminate the culture and innovation pattern of the times in an accurate and appropriate way, take the initiative to provide the elderly with simple and clear new media platforms, and create an open, tolerant, and appropriate new media ecological environment.

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