

Sustainable Education for Middle-Aged and Elderly: Learning to Know, Learning to do for Sustainable Living

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ABSTRACT

At present, people's lifestyles have undergone tremendous changes, such as payment methods, travel, etc. Resulting in new and popular symbols. While these are convenient for young people, but many middle-aged and elderly people are forced to be blind because of these new, unfamiliar and fragmented symbols, making it difficult for them to learn to know and learn to do for sustainable living, discussing the changes in P.C.R through 2013-2023." Our vision is to transform lives through education, recognizing the important role of education as a main driver of development" (Mundial, G.B.&UNICEF, 2016). The middle-aged and elderly can join sustainable development by changing their behaviors and coping with life through education, not just formal education in schools, but also 'modern' adult education(that combines individual and collective experiences in a contextual way) for the technological age, and online course that allow the middle-aged and elderly to increase the accessibility and availability of information, as well as to integrate sustainable knowledge in an easily understandable way. This paper expands on the target group for sustainable education and how to make the information more accessible and acceptable to middle-aged and elderly in new, unfamiliar and fragmented symbols and to educate as a top-down sustainability education for next generation.

Keywords: Sustainable education, Modern adult education, Top-down sustainability education, Remote education, Symbol

1. Introduction

With the continuous development of society, the degree of intelligence and modernization of society is getting higher and higher, its intelligence and modernization have reached new heights after the epidemic era, which has brought about significant lifestyle changes, and COVID-19 has spawned a "untact(non-contact) economy('Untact' : South Korea's Plan for a Contact-free Society, 2020)", expansion of the untact economy comes with multiple changes in economic structure and environment as well. Such as to implement contactless services, ticket purchases are basically online ticket purchases or machine ticket purchases, which increases the difficulty of life for middle-aged and elderly who are not good at using all kinds of smart software. At the same time, sustainable development has gained increasing attention. Education for sustainable development (ESD) is a lifelong learning process and an integral part of quality education. It enhances the cognitive, socio-emotional and behavioural dimensions of learning and encompasses learning content and outcomes, pedagogy and the learning environment itself ("What You Need to Know About Education for Sustainable Development," 2023). Among them, lifelong learning is to transform education at one stage of life into lifelong

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education, transform institutionalized education into individualized education, and transform school-based education into socialized education (Ding, 2006, p. 245). At present, in the process of ESD, the public and the national government pay more attention to the school-based and institutionalized education of children and students. In recent years, due to the aging population, they have also begun to pay attention to elderly education. However, middle-aged and elderly groups have always been neglected. The middle-aged and elderly groups are the backbone of society, responsible for providing care for the elderly and teaching children. They have a great impact on children's and adolescents' world views, values, and even children's education. Personalized, Social education is very important. At the same time, in the face of the sudden intellectualization and a series of new, unfamiliar and fragmented symbols produced by modern society, middle-aged and elderly people appear to be confused and out of touch with the unknown, such as how to use social software, the graphic signs of the toilet, and even what is Sustainable development, etc. In this case, they have to become physically and mentally blind, so the development of modern adult education is imminent. This article conducts a longitudinal comparison of China's intellectualization, modernization development and concept changes in the past 2003-2023, and discusses the importance of modern adult education for the development of socialization of middle-aged and elderly people and the importance of learning participation in all forms of daily life. The Global Education Coalition aims to "Help countries in mobilizing resources and implementing innovative and context-appropriate solutions to provide education remotely, leveraging hi-tech, low-tech and no-tech approaches" (Martin, 2022) to establish modern adult education. The content of education should focus on specific methods to solve the "digital divide", making it personalized and practical. This kind of modern adult education will enable middle-aged and elderly people to better integrate into and understand the modern and intelligent society in more ways, and at the same time better understand and integrate into the lives of future generations and increase family stickiness. Moreover, only by changing the old and traditional cognition of the upper class, we can better educate the next generation, drive top-down implementation, and expedite the journey toward sustainable development.

2. Modern Adult Education

The modern adult education talked about in this paper is distinguished from traditional institutionalized, school-based education, such as school-based education for children. It is also different from the "non-academic school education and other forms of education for the elderly (Yang&Wu, 2014, p. 68)" implemented by the currently hotly discussed education for the elderly. Modern adult education is more of an outcome-oriented educational activity with real needs, and it is an individualized and socialized education for the middle-aged and elderly as a group. In the Education 2030 Incheon Declaration, it is stated that "Inclusion and equity in and through education is the cornerstone of a transformative inclusion and equity in and through education is the cornerstone of a transformative education agenda, and we therefore commit to addressing all forms of exclusion and marginalization, disparities and inequalities in access. participation and learning outcomes" (Mundial, G. B., & UNICEF. 2016). This paper

proposes a focus on modern adult education to improve this current marginalized situation and to bring the middle-aged and elderly closer to the current modern and intelligent society. In China, the pace of intelligent development is very rapid, and this high-speed change affects all aspects of people's lives. around 2003, the penetration rate of cell phones in China was not high, and even just fully entered into the Internet era, and many industries were completely manual services, such as bus conductors, airplane, train ticket purchase points, etc. However, these industries all disappeared one after another within 10 years, when the degree of intelligence was still low and the development was slow. But in 2011-2020, China entered the stage of rapid development of intelligent society, the way of life has undergone a radical change (Zhijiang Laboratory, 2021), travel increased high-speed rail and subway, the traditional cab industry has also suffered the impact of the online car-hailing, buy tickets more advocate online ticket to get electronic tickets, restaurant orders also began to use electronic menus, and even the cinema site to buy tickets are difficult to purchase or to buy with full-price tickets (usually online is a discount ticket), shopping methods also prefer online shopping, and so on. These changes rose to a new stage after the beginning of the 2021 epidemic, with the more rapid development of intelligence, such as the direct elimination of offline ticketing, and even handling business must be done through the official app for a series of operations to make reservations. In addition, with the development of modernization, traditional concepts are constantly being eliminated by society, such as son preference. Traditional thinking stereotypes are also constantly updated, such as the emoji smile, which represents the meaning of a speechless and fake smile in young psychology, while for the middle-aged and elderly it represents a friendly smile. All these changes are happening in 20 years in China, or even in 2011-2023. 13 years is not enough for a generation to be eliminated and renewed, and children born during this period can enjoy the fruits of social development at birth and grow up directly with it, but for middle-aged and old people to change themselves quickly to keep up with social development without external help is obviously impossible. However, it is impossible for middle-aged and elderly people to change themselves quickly to keep up with social development without external help. Even for some middle-aged and elderly people, it is more and more difficult for them to go out of their homes because everything is changing so fast. They are drowned in a sea of new, unfamiliar and fragmented "symbols", and they can only struggle or compromise silently. These problems are not temporary, and they do not only happen to people who were born before the 90s. People's production lifestyle and social structure are undergoing profound changes, and the breakthrough and widespread application of artificial intelligence technology has opened another wave of product revolution (Duan&Zhu,2021). Even if young people now can easily face the current modern and intelligent society, what about in 10 or 20 years, after the decline of understanding and learning ability, can they still easily face the changes of the rapidly developing society? On the other hand, the education of parents for their children or grandparents for their grandchildren has a crucial role in their lives. According to Lacan's (2001b) "the mirror stage" theory, babies mistakenly think they are "others" by looking at themselves in the mirror, and realize that they are themselves in the process of observing the so-called "others". For children, parents are the original mirror, and children also reflect the shadow of their parents. This shows that childhood experiences are important, and because "The enormous asymmetry in power and competence between adults and

children implies that the parent-child relationship must have a unique role in childhood socialization (Maccoby, E. E, 1994)", parents or grandparents will invisibly influence the initial socialization framework of their children or grandchildren. For example, according to recorded history, sons have always been preferred in every aspect of life. The deep-seated desire for sons continues to this day due to a variety of institutional, cultural, and socioeconomic factors (Nguyen, M., & Le, K. 2022). This is also the main reason why the rate of school failure among women is much higher than that of men, as the father's generation believes that "women without talent are virtue (Liu, 1997, p.46-48)". This idea is passed on invisibly through family education, and the gender gap in education still exists. Therefore, the only way to change the way of thinking and living from the inside out and to keep up with the pace of social development is to bring middle-aged and elderly people closer to society, to understand society themselves, to integrate into society, and to educate themselves socially. At the same time, this way they can better integrate into the lives of their children and grandchildren, increase the adhesion between family members, and implicitly educate children or youth from the top-down, promoting the development of sustainable education. Whether for their own needs or the education of the next generation, the establishment of modern adult education is imminent, and even more important than the vigorous development of related education for children or adolescents to promote sustainable education. The foundation determines the superstructure, and in the dimension of family power and status, it is the parents or grandparents who are that foundation, and the development of the superstructure in this way is ultimately slow and difficult.

3. Remote education

Due to the impact of intelligence and modernization, the mode and content of modern education are different from traditional education, especially due to the impact of the epidemic, which has forced a shift from offline to online education, although this is temporary and has given society a lot to think about. The Global Education Coalition actively advocates "Help countries in mobilizing resources and implementing innovative and context-appropriate solutions to provide education remotely, leveraging hi-tech, low-tech and no-tech approaches" (Martin, 2022). The 2020-2022 outbreak is a time frame in which education is more likely to be delivered offline and the online model is not recognized as efficient. During the new Covid-19 epidemic, MOOC and various live-streaming platforms become the main classrooms for students. MOOC and flipped classrooms have brought challenges to traditional teaching methods and models, but also made up for the shortcomings of traditional teaching methods and models (Yang & Jie, 2022). This has largely lowered the threshold of learning and increased the accessibility of learning. The content and form of remote education are constantly being enriched, the epidemic has made more schools join in remote education to make it more professional, but also triggered the thinking of remote education, such as how to realize the effective transmission of knowledge, for which the form of remote education content output began to diversify, combining knowledge with the forms preferred by different age groups in order to meet the target audience of the content acceptance. For example, in the case of history, students are no longer told to remember that the Roman Republic was a kind of

mixed system of government that included the ideas of monarchy, democracy and aristocracy. but rather, Historical stories began to be reproduced on the web in the form of videos and live-action simulations. For the modern adults education of the middle-aged and the elderly, such a form is also effective, through the visual video combined with the current popular forms of content output content, socialization, detailed content in the form of live-action simulation intuitive delivery to the screen in front of the middle-aged and the elderly, which is a simple, convenient and efficient form. In addition, it is more productive to go to social education for middle-aged and elderly people through the Internet, because of the penetration of the Internet, many middle-aged and elderly people are keen on short videos, and even have trust in the knowledge of these short videos. Most of children in China have received links or videos from their parents or grandparents on health science and so on. To a certain extent, this reflects the limited access to their knowledge and the ease with which they can absorb the content of these short, easy-to-understand videos. This can trigger thoughts about the construction of modern adult education. In addition, the contents carried out by short videos or live broadcasts are generally divided into science popularization and sales promotion, among which science popularization is mainly aimed at history, culture, customs, etc. In fact, there is no science popularization education for these new things and symbols around, especially for the middle-aged and elderly groups. In recent years, many countries are vigorously developing elderly education, Aging is known to affect a number of cognitive processes negatively (Salthouse, 1985). Driscoll et al. (2003) described the aging hippocampus and its effects on learning and memory. Therefore, elderly education is generally more inclined to offline classroom education or activities, but middle-aged and elderly people are still in a better stage than the elderly in all aspects of their physical functions, only that they have not yet retired and are shouldering the heavy burden of their families, which is a lack of these advantages. In addition, the purpose of modern adult education for middle-aged and elderly people is mainly to enable them to acquire the ability to adapt to social development and the ability to understand things and environment that are constantly changing. Social cognition is updated. The scope of education for the elderly is broad, not limited to book knowledge, but based on the actual needs of the elderly, for example, the elderly learn interests such as the national standard dance, to achieve continuous socialization of the elderly, "The continuous socialization of the elderly is the final stage of the continued socialization of adults. Its main role is to enable the elderly to adapt to the changing requirements of daily social life, interact normally with other members of the society, arrange their lives according to the new social norms, and meet the life needs of themselves and their families"(Wasay, R., & Farooq, E. A. 2020). When developing modern adult education, it is also necessary to realize the continuous socialization of middle-aged and elderly people based on the actual needs of middle-aged and elderly, such as the constantly updated and changed toilet signs, how to take an airplane, wrong traditional thinking, etc., but the content of the education should be specific and actionable. It is based on the summary of personal and collective experience presented in the technological age. Remote education allows them to work at their own pace and on their own time schedule, which is particularly beneficial for those of them who have work or family responsibilities. The essence of remote education, regardless of the platform or mode used, is to expand the opportunities and accessibility of education for all groups, thereby realizing educational

equity. The remote education model is applied to the construction of modern adult education to solve the problems of difficulty in balancing work and study and freedom of choice of study time. Remote education is divided into live and recorded, for the cognitive degradation of middle-aged and elderly people, and cognitive habits, as well as located in the middle of the children and the elderly social and life pressure, recorded form is more important, recorded so that the learning might be not efficient, and may even be poor quality of learning, but this is conducive to middle-aged and elderly people of this age for fragmented learning. Middle-aged and elderly people usually have fixed jobs and huge family responsibilities (taking care of their parents and children), which makes it difficult for them to have fixed study time, and at the same time, it is difficult for their children to have patience all the time to provide guidance to parents on the operation of various software and other specific operations in other environments, which will stimulate more family conflicts. Furthermore, remote education breaks down geographic barriers so that people from remote or underserved areas can have the same access to education that may not be available to them locally. Everyone have the same access to quality education that may not be available locally. This accessibility promotes inclusivity and provides learning opportunities for diverse individuals. The cost of tuition for online programs is often lower compared to traditional campus-based programs or offline courses, and even many high-quality public interest programs currently exist. And middle-aged and older adults can learn at their own pace and cognitive ability, which reduces the pressure to keep up with a fixed schedule.

Remote education has many advantages in establishing modern adult education for the middle-aged and the elderly, but at the same time, its disadvantages must also be our concern. Remote education will inevitably lack face-to-face interaction, even with the assistance of online live broadcasting, due to the way of thinking of the middle-aged and elderly is difficult to match the modern intelligent society, so in practice, due to the lack of practical experience and contrary to their long-established cognitive habits, especially in the implementation of the process is cumbersome and full of details, for example, countries have their own specific machines or software for purchasing subway tickets, and the operation process is completely different, and even the operation process of the same software may not be exactly the same for each person, which will lead to low learning efficiency. Secondly, it is difficult for middle-aged and old people to maintain the motivation of learning or feel disconnected from the learning process due to a long period of time away from the state of learning, and they get overwhelmed easily in the face of a brand new learning environment and content. Moreover, it is difficult to maintain the motivation of continuous learning under the dual effects of work and family pressure. Finally, in modern society, the network information is overdeveloped, and the ensuing problem is that it is difficult to distinguish between the real and the fake, there are illegible counterfeit versions of goods, and the same is true of information, there are too many answers to the same thing in the network world, but very often this is a '1+1' math problem, However, we need to spend a lot of energy to recognize the correct information of '2' from a lot of information, which is absurd and true. So, it is important to create a systematic, professional, socialized and personalized distance education, and to establish a branded modern adult education for middle-aged and elderly people, for example, knowledge from school is more reassuring, especially in the network society, which is full

of all kinds of online fraud and information deception. In short, remote education offers many advantages in terms of flexibility, accessibility and cost-effectiveness. However, it also poses many challenges that we must be concerned about. With the continuous development of technology and online learning platforms, the increasing awareness and recognition of online remote education, as well as the gradual introduction of measures to regulate the dissemination of information, it may become more feasible to address some of these shortcomings, making remote education more attractive and conducive to the construction of modern adult education for middle-aged and elderly people.

4. Conclusion

If we want to develop comprehensive sustainable education, we must not neglect the middle-aged and the elderly, who are an important group of people who carry on the work of education, and we should pay more attention to modern adult education for the middle-aged and the elderly, drawing on the experience of developing elderly education, and building a modern adult education that transcends textbook knowledge and conforms to the modernization of society and the development of intelligence in order to satisfy the practical needs of the middle-aged and the elderly in their daily lives. This way would prevent the middle-aged and the elderly do not feel lost in the unknown and socially disconnected, providing personalized education tailored to their specific needs. In the field of education, numerous institutions and schools teach us how to acquire textbook knowledge or skills. However, there is a lack of education that adapt to social development, particularly for the middle-aged and elderly who are the backbone of society. It is undeniable that have responsibilities in caring for their parents and educating their children, yet they are unable to adapt to social development, update their thinking and understanding of sustainable education, how to practice sustainable education, and even how to influence the next generation to practice sustainable education. By observing China's development over the past 20 years, it is evident that the development of an intelligent society is gaining momentum, the COVID-19 epidemic has forced the accelerated landing of the new technology of 'Untact', which greatly contributed to the development of global intelligence, modernization, even some countries and people who are reluctant or resistant to intelligence and modernization have to join it. Society is constantly evolving, which further emphasizes the urgency of developing modern adult education for the middle-aged and elderly. It serves as an important means to promote sustainable educational development. During the epidemic, more and more universities joined the remote education platform, making it increasingly specialized and systematic, and its contents and forms are constantly developing and enriching. Remote education is used in the construction of modern adult education for middle-aged and elderly people, and the combination of live and recorded forms improves the interactive experience while mobilizing the enthusiasm of the learners, so that middle-aged and elderly people can carry out fragmented learning according to their own time schedule, and the form of live-action short video makes it easier for them to understand. Only by making the middle-aged and the elderly closer to the society, understanding the society itself, integrating into the society, and carrying out social education can they play a better role in guiding their children and parents in the path of sustainable education development. "Transforming lives through

education, recognizing the important role of education as a main driver of development" (Mundial, G.B. & UNICEF, 2016). Modern adult education uses remote education to accelerate the familiarity of middle-aged and older adults with modern society while impacting the lives of three generations. Sustainable Development Goal 4 (United Nations, 2022) proposes "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". Among them, the specific goal 4.7 proposes "By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development." Modern adult education is designed to give middle-aged and elderly people equal and fair access to educational opportunities and the fruits of social development, to change the marginalized role of education, to enhance the possibilities of lifelong learning for all, and to promote sustainable development.

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