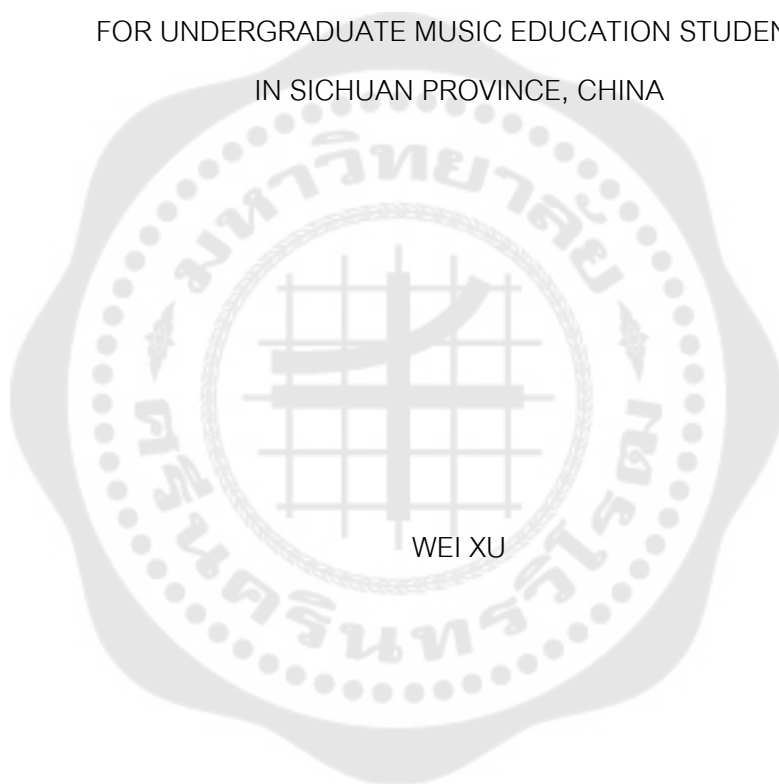




DEVELOPMENT OF A CURRICULUM FOR ELDERLY CARE
FOR UNDERGRADUATE MUSIC EDUCATION STUDENTS
IN SICHUAN PROVINCE, CHINA



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A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of DOCTOR OF EDUCATION
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Faculty of Fine Arts, Srinakharinwirot University

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THE DISSERTATION TITLED
DEVELOPMENT OF A CURRICULUM FOR ELDERLY CARE
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BY
WEI XU

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With the intensification of population aging, the demand for elderly care services is becoming increasingly urgent. This study aims to develop the curriculum "the development of subject curriculum for caring for the elderly among music teachers profession students at the undergraduate level in Sichuan province, China", with the goal of enhancing the professionalism and social responsibility of undergraduate students majoring in music education in Sichuan Province, China, in the field of elderly care services. The study has three primary objectives: 1) To study the planning and needs of geriatric curricula; 2) To design the elderly care curriculum for undergraduate students majoring in music education in Sichuan Province, China; and 3) To investigate the effectiveness of the curriculum in increasing environmental awareness among students at the undergraduate level in music education in Sichuan Province, China. The study adopted a mixed-methods research approach (MMR), divided into three phases: data collection and analysis, the development of the new curriculum, and a focus group review of the draft curriculum. The sample included 16 undergraduate colleges in Sichuan Province offering music education programs, with respondents including undergraduates, elderly groups, elderly school teachers, and relevant course instructors, resulting in the collection of 402 questionnaires. Research tools included surveys, semi-structured interviews, and focus group discussions, with data analyzed using frequency distribution, percentages, means, standard deviations, and the priority needs index. The course design incorporates several key elements, including course principles, objectives, course description, learning outcomes, course content, methods for organizing learning activities, learning materials, assessment and evaluation guidelines, course structure, and learning plans. The results indicate that the elderly care curriculum is significant in enhancing the application of music education to promote the mental health and social integration of the elderly. Future curriculum design should focus on the comprehensiveness and practicality of content to better meet the needs of both students and elderly populations. Furthermore, music education courses focused on elderly care should cultivate students' interdisciplinary knowledge, humanistic care awareness, and professional skills to address the diverse needs of the elderly. The course's suitability received an average score of 4.57-5.00, indicating high appropriateness, and the feasibility score also ranged from 4.57-5.00, suggesting a high likelihood of successful implementation.

Keyword : Music subject curriculum, Undergraduate students, Older adults

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CHAPTER 1

INTRODUCTION

1. Background

Ageing is an extremely important process that has a huge impact in today's society and will increase its influence in the future. Despite the enormous impact of global ageing in society today and in the future, its wide-ranging impact across fields has unfortunately received less attention in academic journals and publications. At the same time, the United Nations and its related organizations, in particular WHO, are very concerned about the global ageing process, which has been actively carried out since the late 70s of the 20th century (WHO, 2017, 2021a, 2021b). At present, in 22 countries and regions, the population aged 65 and over accounts for more than 20% of the total population, mainly in southern and eastern Europe, and Japan tops the list with 28.4% (UN Population Division, 2022a), it can be seen in the demographic composition of some countries that the proportion of people aged 80+ has exceeded 6%, and Japan once again tops the list with 10.2% (UN Population Division, 2022b). At present, more than 20% of the world's population in nearly 24 countries has reached the age of 65. According to the World Health Organization, the number of people aged 60 and over has exceeded the number of children aged 5 and under (WHO, 2021b). Gradually, many of the questions about global ageing are beginning to emerge, and the aspects associated with it are becoming more prominent, and perhaps even more problematic, and these problems are likely to persist and intensify in the coming decades. Based on projections of population ageing, and even predictions of inertial aging, future data on aging are quite impressive. According to the data, the proportion of people over 60 years of age in the global population will increase by 34% between 2020 and 2030 (WHO, 2021b; UN Population Division, 2022a, 2022b). By 2030, the proportion of the population aged 65 years and over will reach 20% or more in 59 countries of the world (UN Population Division, 2022a, 2022b; cp. Shcherbakova, 2019). In the same year, one in six (16.6%) of the world's inhabitants will be aged 60 and over (UN Population Division, 2022a, 2022b; cp. WHO, 2021a). Between 2000 and 2050, the proportion of

the world's population over 60 years of age will more than double, from about 9.9 per cent to 22 per cent. The proportion of the population over 60 years of age will grow several times faster than the global population as a whole in the future (UN Population Division, 2013, 2022a, 2022b). According to the survey, the absolute number of people aged 60 and over is expected to reach 1.1 billion by 2021, 1.4 billion by 2030, 2.1 billion by 2050, and possibly 3.1 billion by 2100. The number of people aged 80 and over is expected to triple to 458 million between the ages of 20 and 21 and 2050 (UN Population Division, 2022a, 2022b; cp. WHO, 2021b). The path of global and national ageing will also change dramatically as early as the 2050s, with the number of people aged 65 and over exceeding The number of adolescents and young adults aged 15 to 24 years, the population of the population aged 90 years and over will increase by a factor of 3.6 (from 22.8 million in 2021 to 82.9 (UN Population Division, 2022a, 2022b; cp. Shcherbakova, 2019). According to the latest UN media projections, by 2100, 2.47 billion people, more than a quarter of the world's population, will exceed 65, and only 2.3 billion will be under the age of 20 (UN Population Division, 2013, 2022a, 2022b). The number of people over 80 years of age will increase sixfold, from about 140 million in 2020 to more than 860 million by the end of the 21st century (Gallagher, 2020); The number of 80-year-olds should increase by nearly two orders of magnitude by 2100 compared to 1950 (UN Population Division database, 2022a). Globally, the proportion of people over 80 years of age per child under 5 years of age is projected to rise from 0.23 in 2021 to 1.73 in 2100. Overall, all population projections unanimously predict a sharp aging of the world's population in the coming decades (Alkema et al., 2011; Kaneda et al., 2016; Lutz et al., 2018; Raftery et al., 2012; UN Population Division, 2019a, 2019b, 2022a, 2022b; Vollset et al., 2020; Wittgenstein Center, 2022), while the year 2100 may seem far away, it must be clearly understood that the growth rate of the geriatric population increases with the median age and that the rate of aging continues to climb (Zimmer, 2016; Shcherbakova, 2019; UN Population Division, 2019a, 2020, 2022a, 2022b; Kumaya & Hertog, 2020; Medici, 2021). If the global trend of ageing and increasing life expectancy continues, it will lead to profound changes in social and

political life. However, modern societies are largely unprepared to respond to and adapt to these changes, so these trends can trigger serious tensions and conflicts. For the education of the elderly, this social development will urgently require significant change and institutionalization. Global ageing has become an extremely important issue and will even become one of the most pressing challenges in the future (Grinin et al., 2023). With the aging of the population, the number of elderly people is growing, and their needs for their own survival are also increasing. Education for the elderly can not only help the elderly maintain their vitality and health, but also contribute to the sustainable development and stability of society. However, investment and policies in the education of the elderly are still insufficient in many countries. Therefore, strengthening investment and attention to education for the elderly, and formulating more comprehensive and inclusive education policies for the elderly, will help to address the challenges brought about by global ageing and provide more learning and development for the elderly will promote the prosperity and progress of society. If there is one issue that countries around the world have faced, are and will continue to pay attention to, it is the aging of populations. As one of the most populous countries in the world, China is no exception. China has one of the fastest aging populations. According to a survey, the proportion of China's population aged 65 and over reached 7% in 2000, and it will only take 26 years to double this proportion to 14% (World Population Ageing, 2013). For comparison, the same growth takes 115 years in France and 85 years in Sweden. Since 2000, when 7% of China's population aged 65 and above entered an aging society, the number and proportion of China's elderly population have continued to grow, and the process of population aging has been advancing rapidly, and the trend of aging has become increasingly apparent. According to the data of the seventh population census in 2020, the size of China's elderly population aged 60 and above reached 264 million, accounting for 18.7% of the total population, of which 191 million were aged 65 and above, accounting for 13.5% of the total population. Compared with the sixth national population census in 2010, the proportion of the population aged 60 and over increased by 5.44 percentage points, and the proportion of the population aged 65 and over

increased by 4.63 percentage points. Compared with 2010, the size of China's elderly population has increased by 86.37 million in the past decade, an increase of 5.44 percentage points. Compared with the period from 2000 to 2010, the size of China's elderly population increased by 47.67 million, an increase of 3.23 percentage points. On the whole, the number of elderly people and the degree of population aging in China have shown an accelerated growth trend in the past decade (Statistics, February 28, 2023). By the end of 2015, China's elderly population (aged 65 and over) reached 143.9 million, accounting for 10.5% of the total population. China's elderly population is larger than that of European countries combined. Over the past few years, research on changes in the Chinese population has been very active (Gietel-Basten, 2023). In 2021, more than 14% of China's elderly population aged 65 and above was in the country, marking a transition from an aging society to an aging society. According to the general expression of the international community, the proportion of the population aged 65 and over in the total population reaches 7% (more than 10% aged 60 and above) is regarded as a sign of entering an aging society, reaching 14% indicates entering the stage of an aging society, and reaching 20% indicates entering a super-aging society. According to the development stage of the aging population of Chinese, China entered an aging society in 2000, an aging society in 2021, and is expected to enter a super-aging society in 2031. The age structure of China's population has changed significantly, with declining fertility rates and aging populations (Peng X., 2011) and has made considerable progress in increasing its life expectancy. However, the continued aging of the population has led to a continued increase in the burden on China (Guo & Zheng, 2018). At present, the study of the current situation of aging and the concern of the elderly group have gradually become an important issue facing China. Ageing is not only a problem for the elderly population, but also a problem for the whole country to think about, and at present, the Chinese government is developing "Healthy China 2030" as a national strategy (who,2018) . The plan is the general guideline for promoting health over the next 15 years. Promoting the health of the population as a whole and throughout the life cycle is the main theme, in which older persons exist as a key target

population. As a manifestation of the progress of human society and civilization, global ageing brings both challenges and opportunities. China is also fully aware of its responsibilities and missions, population health and sustainable human development, and "Healthy China 2030" will be proven. For a long time, Sichuan's population growth has been characterized by "low births, low deaths, and low growth". Sichuan's birth rate and natural growth rate have been about 2 percentage points lower than the national level for a long time, resulting in a relative decrease in the number of births, while the relative increase in the elderly population, and its proportion has gradually increased. Therefore, Sichuan's population aging is higher than the national average, and the aging rate is relatively rapid (Statistics, May 11, 2021). According to the data of the seventh national population census, Sichuan, as a province with a large population, is facing the problem of "one old and one young", which has brought challenges to the long-term balanced development of the province's population, and also means that the traditional quantitative demographic dividend is gradually decreasing. According to the 2020 census data, 16.10% of the permanent residents in Sichuan Province are aged 0-14, 62.19% are aged 15-59, and 21.71% are aged 60 and above, of which 16.93% are aged 65 and above. Compared with the sixth national population census in 2010, the proportion of the population aged 0-14 decreased by 0.87 percentage points, the proportion of the population aged 15-59 decreased by 4.54 percentage points, the proportion of the population aged 60 and over increased by 5.41 percentage points, and the proportion of the population aged 65 and above increased by 5.98 percentage points. From the perspective of the elderly population, Sichuan's elderly population is large, the degree of aging is high, and the aging process is accelerating (Statistics, May 11, 2021). As of 2024, the population aged 60 and above in Sichuan Province will reach 18.164 million, ranking third in the country, accounting for 21.7% of the total population. As a province with a large population, Sichuan's demographic changes have important exemplary significance and influence on the whole country, among which the characteristics of "low birth, low death and low growth" are relatively rare in China and even in the world, and have important reference value for population policy formulation

and social development planning. The problems of "one old and one young", as well as the acceleration of the aging process, show a relatively complex and rich trend of population change, which is worthy of in-depth study and discussion. An in-depth understanding of the population status and trends in Sichuan will help to provide scientific basis and effective countermeasures for population policy formulation and social development in the region.

For a long time, the Chinese government has attached great importance to the development of the cause of the elderly and the pension service system. During the "13th Five-Year Plan" period, with the help of the major planning and policy guidance of the party and the state, China has made a series of new achievements in the development of the cause of the elderly and the construction of the pension service system. First of all, the system of policies and regulations for the elderly has been continuously improved, the laws, regulations and policy measures related to the elderly have been continuously refined, and the standards and regulatory systems for the construction of the pension service system have also been strengthened. Second, diversified social security has been continuously strengthened, the coverage of basic social insurance has been expanded, the level of pensions has been improved, and the pilot work of long-term care insurance has been steadily promoted. Third, the pension service system has been continuously improved, the number of various pension service institutions and facilities has increased significantly, and the home-based community pension service has developed rapidly. Fourth, the health support system has been gradually improved, the health level of the elderly has continued to improve, and the integration of medical and elderly care services has been developed in an orderly manner. Fifth, the development of the cause and industry for the elderly has been accelerated, the number of educational institutions for the elderly has increased, the participation of the elderly in community activities has increased, the construction of a livable environment for the elderly has been actively promoted, and the transformation and upgrading of the manufacturing and service industries of elderly products have been accelerated. During the 14th Five-Year Plan period, China has embarked on a new

journey of building a modern socialist country in an all-round way. In the face of the challenge of population aging, the CPC Central Committee will actively respond to the rise of population aging as a national strategy, and set out the "Outline of the 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Long-Range Objectives Through the Year 2035"(China, October 29, 2020). Although China has the material foundation and human capital to cope with the aging of the population, it is also necessary to recognize the problems existing in the aging cause and the pension service system, such as the low level of rural pension services, the insufficient supply of pension services, and the shortage of nursing personnel. Therefore, it has become an arduous and urgent task to build an aging cause and pension service system that is compatible with the aging process of the population. In order to implement the national strategy of actively responding to the aging of the population, promote the coordinated development of the cause and industry of the elderly, and establish and improve a diversified elderly care service system covering the whole population to meet the growing multi-level and high-quality health care needs of the elderly, in accordance with the Law of the People's Republic of China on the Protection of the Rights and Interests of the Elderly (China, 2019) and the Outline of the 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Long-Range Objectives for 2035 (China, October 29, 2020) and the National Medium- and Long-Term Plan for Actively Responding to Population Aging (China, 2019), and formulated the 14th Five-Year Plan for the Development of National Aging Undertakings and Elderly Care Service System (China, December 30, 2021) Nine tasks are proposed, one is to strengthen health education and improve the active health ability of the elderly; the second is to improve the preventive health care service system that attaches equal importance to physical and mental health; the third is to focus on continuous services to improve the level of medical services for the elderly; and the fourth is to improve the home, community, The fifth is to further promote the development of the integration of medical care and elderly care, the sixth is to develop traditional Chinese medicine health services for the elderly, the

seventh is to strengthen the construction of health service institutions for the elderly, the eighth is to improve the health service capacity of the elderly, and the ninth is to promote the development of science and technology and industry for healthy aging. At the same time, the "Planning" also includes special contents such as the promotion of public pension institutions, the special action to improve the ability of medical and elderly care, the action of wisdom to help the elderly, and the construction of talent team, so as to promote the implementation, implementation and refinement of major strategic deployments.

Sichuan is a most populous province, with a population of 18.01 million people aged 60 and above in 2021, accounting for 21.51% of the permanent population. Among them, the population aged 65 and above is 14.72 million, accounting for 17.58% of the permanent population, and has entered a moderately aging society. Looking back on the development of the elderly in the past ten years, Sichuan has always been guided by the service needs of the elderly, and through policy innovation and a series of measures, it has continuously improved the development level of the rights and interests of the elderly, health services, medical care and elderly care, and friendly society, so as to comprehensively enhance the sense of gain and happiness of the elderly in the province. During the past "13th Five-Year Plan" period, Sichuan Province actively practiced the policy of aging work led by the Party committee, led by the government, participated by the society and acted by the whole people. Under the guidance of major national plans and policies, the province has basically completed the "13th Five-Year Plan" for the development of the cause of the elderly and the planning goals and tasks of the construction of the pension system, and has made great progress. Through the revision of more than 70 important documents such as the Regulations on the Protection of the Rights and Interests of the Elderly in Sichuan Province (Commission, 2018), a sound policy system for the elderly has been initially established. The social security capacity has been steadily enhanced, the basic old-age insurance system has achieved full coverage, and the continuous adjustment of the pension of enterprise retirees has achieved remarkable results. The construction of the elderly care service system has

been accelerated, the home-based community elderly care service has developed rapidly, and various elderly care institutions and facilities have been continuously improved. Health services for the elderly have continued to develop, the construction of geriatric hospitals, rehabilitation hospitals and nursing homes has been accelerated, and the integration of medical care and elderly care has been deepened. The age-friendly social environment has been continuously optimized, the spiritual and cultural life of the elderly has been enriched, and substantial progress has been made in the construction of a livable environment for the elderly. At the same time, Sichuan Province has also continuously strengthened the protection of the legitimate rights and interests of the elderly, carried out a series of actions to improve the quality of services and products for the elderly, severely cracked down on illegal and criminal acts, and strengthened legal services for the elderly. These comprehensive measures have promoted the development of the cause of aging, improved the quality of life of the elderly, and enabled the elderly in the province to enter a well-off society in an all-round way. In order to implement the national strategy of actively responding to the aging of the population and promote the high-quality development of the elderly cause and elderly care services in Sichuan Province, according to the "14th Five-Year Plan for the Development of the National Aging Undertaking and Elderly Care Service System" (China, October 29, 2020) and the "Outline of the 14th Five-Year Plan for National Economic and Social Development of Sichuan Province and the Long-Range Objectives for 2035" ("Sichuan Province's Fourteenth Five-Year Plan for National Economic and Social Development and Outline of Vision Goals for 2035", 2021, (Sichuan Provincial Department of Civil Affairs, 2023)). These policies cover economic security, care services, social assistance, education, culture and sports, legal services, and other aspects, providing comprehensive protection and support for the elderly in Sichuan Province. On the economic front, the basic old-age insurance and the basic old-age insurance for urban and rural residents provide material assistance to the elderly who meet the requirements, while the special family planning allowance and the minimum social security provide additional economic support for special groups. In addition,

policies such as the living allowance for the disabled with difficulties and the nursing allowance for the severely disabled have provided special attention to the elderly with disabilities. In terms of care services, decentralized and centralized support provide care services for the elderly in extreme poverty, while comprehensive assessment of the elderly's ability and home adaptation for the elderly provide more comprehensive support for the elderly. The social assistance policy provides timely assistance to the elderly who have no means of living. In addition, policies such as education for the elderly, cultural and sports activities, and public legal services have also provided a rich and colorful spiritual and cultural life for the elderly. The implementation of these policies will further promote the happiness and sense of gain of the elderly, and help the elderly in the province to jointly move towards the goal of a well-off society in an all-round way. Among these policies, education for the elderly is one of the important aspects of concern, providing education and training services for the elderly over the age of 60. The implementation of the education policy for the elderly means that the elderly have the opportunity to continue learning, enrich their knowledge reserves, expand their horizons in life, and improve their quality of life. By participating in the education of the elderly, the elderly can enrich their spiritual life, cultivate hobbies, enhance social and communication skills, and maintain physical and mental health. At the same time, education for the elderly also helps to inherit and carry forward excellent cultural traditions, and promote intergenerational exchanges and integration. Therefore, the implementation of the education policy for the elderly is not only the care for the individual development of the elderly, but also the respect and support of the society for the elderly, which will help build a more fulfilling and harmonious life for the elderly, and promote the formation of a good atmosphere of respecting and loving the elderly in the whole society.

As the global population ageing trend intensifies, so does the life expectancy of older persons (Christensen et al., 2009; Fernandes et al., 2021; James Lubitz, 2003). Population ageing and its impact have become an important and popular topic (Zhang et al., 2022). The increase in the elderly population has also led to a growing focus on

active ageing (Tomagová et al., 2016). Active ageing means that older people are able to maintain lifelong mental health, participate in society according to their individual needs, desires and abilities, and have an independent, high-quality life. Take China as an example: compared with the sixth national census, China's seventh national census shows an increase in the proportion of people aged 60 and over, and the proportion of people over ≥ 60 years old has increased by 5.44%. In this context, the concept of "successful aging" (Chi et al., 2021; Estebansari et al., 2020) "Healthy Aging" (Cosco et al., 2017; Rudnicka et al., 2020) and "Active Ageing" (Belanger et al., 2017; Paul et al., 2017). Over the past two decades, the concept of active ageing has been applied to various fields such as society, science, psychology and medicine. International political groups and researchers see active ageing as an important part of addressing the challenges of population ageing (Jensen & Skjott-Larsen, 2021). Active ageing underscores the need to address the challenges of population ageing, including focusing on the physical and mental health of older persons, promoting social inclusion, and providing comprehensive care and protection measures to meet the needs of older persons (Tiraphat et al., 2021). In this context, the role of education for the elderly has become increasingly prominent. At present, many studies have been carried out on geriatric education, but there is very limited information on geriatric education for active ageing (Zhang et al., 2022). Education for the elderly is achieved through the establishment of universities for the education of the elderly (Vazquez et al., 2018). Educational schools for the elderly enhance the quality of life of older adults by providing learning opportunities, recreation, and social activities to maintain their physical autonomy and independence (Choi & Cho, 2021). The School for the Elderly, also known as the University for the Third Age (U3A), is an international educational activity for retirees. It originated in France in 1973. Initiated by Professor Pierre Vellas. The 1960s-1970s were a period of sharp increase in the number of people aged 65 and over in France, and the problem of old age gradually developed with age. In 1962, the Laroque Report developed a policy for the elderly, with the aim of taking measures to improve the living and health conditions of the population. R. Lenoir stresses that we are

moving from the idea of caring for people living in total poverty to the issue of their integration into society (Lenoir, 1979). In this context, the category of "third age" was coined. In the 1990s, France expanded the concept to include the concept of "universities of all ages" or "universities of free time". This new designation means that education is no longer limited to a specific age group, but provides learning opportunities for people of all ages, while also emphasizing the freedom and flexibility of learning (Chamahian, 2006). The construction of new concepts has changed the perception of the retired population, and as a result, people see old age as a period of "freedom from negative consumption and social isolation" (Membrado, 2010).

In 1970, "new institutions were created to take care of the so-called "elderly". "The main purpose of these 'clubs', 'residences' and 'universities' is to provide cultural and psychological care for the elderly. "(Kirby, August 1975). During this period, the issue of improving the "fate of the elderly" became an issue for ministries, social workers and organizations. The development of the senior category through the development of policies for the elderly led to the emergence of the first U3A. In 1973, in the research unit of "International Research and Development" of the University of Toulouse, P. Vellas has created an applied research project aimed at improving the lives and health of older people: the "Third Age University" (Chalise et al., 2007).

The U3A project, also known as the "Vellas model", aims to achieve the following four main objectives:

1. Establish university-like institutions that focus on the medical, socio-cultural, and social needs of older adults.
2. As a university institution, it provides education in gerontology, including initial training for students in the humanities and medicine, as well as continuing training for professionals related to the elderly, culminating in the organization of retirement preparation Curriculums.
3. Carry out research projects on ageing and its related issues, as well as on the social conditions of older persons. These studies cover a variety of topics, such

as the medical needs of the elderly, spa therapy, anesthesia and resuscitation for the elderly, and tourism for the elderly.

4. Propose a plan to arouse public attention to focus on the needs and problems of older persons.

The academic nature of this U3A program is evident and all of its teaching aims and objectives are aimed at slowing down aging, whether in the brain, body or mind. P.Vellas emphasized:

"It's not just about learning the language to live to old age, it's about understanding that stimulating the brain helps fight brain aging. "

The objectives of the project include "research, primary training, continuing training, permanent education, and health education for the elderly." I believe that this is where the main task of the Third Age University lies. "(Vellas P., 1977).

In this regard, his program forms a pattern of diffusion, in which two essential elements are that the choice of name is not accidental and, in fact, integrates it into the university world. In fact, the juxtaposition of the terms "university" and "third age" has changed not only the concept of young people attending college, but also the concept of older people's participation in university learning (passive, dependent, and intellectually disabled. Groombridge B., 1981). Thus, on the one hand, to provide the elderly with the cultural heritage of our society, and at the same time to take advantage of the research potential of traditional universities in various disciplines, especially in the field of medicine. Finally, the inclusion of U3A in the university and the legal status of its university services has the advantage of not turning this structure into a "quarantine" for the "third age". Many countries where English is the main language have adopted this model of education for the elderly, while most countries on the European continent have followed the French model. For historical reasons, in the United States, a lifelong learning institution refers to a term used by organizations similar to U3A groups. A UK U3A website reported on membership in the 'Third Period' as follows: "The 'Third Period' is defined as a period of your life (not necessarily in chronological order of age) in which you have the opportunity to study for the sake of learning itself. There is no minimum age

limit, but the focus is on those who are no longer employed full-time or raising a family. "(www.u3a.org.uk. Retrieved 2022-01-01.) Gradually, this academic model has also been adopted in many other countries, especially on the European continent. It is worth mentioning that U3A does not award degrees, but certificates. This means that students can receive proof of their participation in learning activities upon completion of the program, without having to go through the rigors of a traditional university degree program. In addition, the School for the Elderly offers many opportunities for older students to take elective Curriculums, offering a wide range of options depending on the student's interests and needs, including computer skills, arts and crafts, history, literature, and more. An important platform for learning and social interaction, promoting personal growth and community engagement among older people. China's first education school for the elderly was established in 1983. By the end of 2019, China had more than 62,000 universities for geriatric education, with more than 8 million students. Educational universities in China refer to universities, colleges, schools and institutions that carry out educational activities for the elderly, and are officially organized or supported by the government, enterprises or social organizations. There are more than 250 million people over the age of 60 in China, and only 5% of them participate in the education of the elderly, indicating that there is a large gap between the existing scale of education for the elderly and the education participation rate of the elderly in the context of active aging (Zhang et al., 2022). As China's most populous province, Sichuan Province has built more than 2,600 universities (schools) for the elderly at all levels by the end of 2022, with nearly 700,000 students. 21 cities (prefectures) in the province have built municipal-level universities for the elderly, and 140 counties (cities, districts) have built county-level universities for the elderly, which has basically formed a new pattern of education development for the elderly with clear subjects, complete systems, wide coverage, openness and convenience, multi-party participation, and standardized and orderly. By the end of the 14th Five-Year Plan, Sichuan will strive to achieve the goal of reaching more than 20% of the total elderly population by regularly participating in educational activities in various forms, and doubling the number of

elderly people studying in school. Chengdu, for example, is the provincial capital of Sichuan Province and has a reported total of 110 universities for the elderly. Some of these universities for the elderly are affiliated with a certain university, some are affiliated with a certain unit, and more of them are learning places for the elderly that are spontaneously opened by the community, which are called elderly counseling stations. The development of education in schools for the elderly is in line with national policies and the policy direction of Sichuan Province. At the national level, the government encourages and supports education for the elderly, recognizing the positive impact of education for the elderly on society. This is reflected in the state's support for schools for the elderly and the investment of educational resources, which aim to promote the learning and participation of the elderly in social activities. In Sichuan Province, education for the elderly is listed as an important area for development, and the government is committed to building an education system for the elderly to meet the learning needs of the elderly. Through the establishment of various types of universities for the elderly, including municipal and county-level universities for the elderly, Sichuan Province has built a complete education network for the elderly to provide convenient learning channels for the elderly. At the same time, specific development goals have been set to achieve a certain level of participation in education and the number of students in school among the elderly. Therefore, the development of education in schools for the elderly not only reflects the government's attention to and support for the education of the elderly, but also is an important measure to promote the all-round development of the elderly and long-term social stability.

Music education plays an important role in the education system as a secondary subject Curriculum, music education is an educational activity for all ages and groups, and its goal is to promote the all-round development and artistic accomplishment of individuals through the learning and experience of music. Children, teens, adults, and seniors can all benefit from music education, which may have different content and approaches for different age groups and groups to better meet their specific needs and interests. Therefore, in music education, differentiated

instructional design and implementation are required according to the age, interests, and ability level of the educated. In today's music education environment, piano education is one of the important branches of music education, however, the current piano education is more biased towards children and teenagers, while the elderly group is relatively lacking in piano education. With the intensification of the aging trend of the population, the educational needs of the elderly group are becoming more and more prominent. Their understanding and acceptance of music is different from that of young people, so music education for the elderly should be more tailored to their characteristics and needs. It has become a top priority to improve the musical literacy and quality of life of the elderly through piano education and other means. Participation in music activities has important potential to meet the cognitive, expressive, and social needs of older adults. Actively participating in musical activities not only promotes the aesthetic response of older adults, enhances their understanding of beauty and culture, but also improves their musical skills. However, there are a number of problems with the current music curriculum for the elderly. According to domestic surveys, although older people show a strong interest in music Curriculums, relatively few older people sign up for instrumental music, especially piano education. Piano Curriculums offered in China's schools for the elderly have a smaller number of students than vocal music Curriculums, which is only a quarter of them, reflecting the low popularity of instrumental music Curriculums among the elderly population. In addition, the physiological and psychological characteristics of the elderly are very different from those of young people, and music lessons need to be designed in a targeted manner. However, the current teachers who teach music in schools for the elderly have not been trained in professional music Curriculums for the elderly, which has led to the phenomenon of educational disconnection. Therefore, it is particularly important to scientifically analyze the psychological and physiological conditions of the elderly and develop music Curriculums that meet their needs. As an important direction for the elderly to learn instrumental music, piano education should receive more attention and support. It is of great theoretical and practical significance for the author to study the current situation

and problems of music Curriculums for the elderly. By analyzing the demand and current situation of music Curriculums for the elderly, it can provide a reference for formulating music education policies that are more in line with the needs of the elderly, and optimize and improve the music curriculum to improve the quality of life and happiness of the elderly. Especially for piano education, this research has important social value. The problems include: what kind of music Curriculums can meet the needs of the elderly? What are their expectations and preferences for music Curriculums? How to design a set of music Curriculums suitable for the elderly, and what content and characteristics are included to make the Curriculums more attractive and practical? With the theme of the development of the elderly care Curriculum for undergraduate students majoring in music in Sichuan Province, China, this paper fills the knowledge gap in the field of music education for the elderly and provides a new theoretical and practical basis for the music education of the elderly. With the growing number of elderly people, the provision of targeted music Curriculums, especially piano Curriculums, can meet their spiritual and cultural needs, improve their quality of life and happiness, and is of great significance to social harmony and stability. At the same time, this study involves the intersection of multiple disciplines, promotes academic exchanges and cooperation, and helps to promote the comprehensive development and healthy aging process of the elderly group. Finally, by drawing social attention to the needs and rights of the elderly, this study is expected to promote the government, social organizations and public institutions to increase support and care for the elderly, and make positive contributions to building a more inclusive and harmonious social environment. In conclusion, this study has important theoretical significance and practical value for promoting the cultural life of the elderly, promoting social integration and improving social well-being.

2.Research the question

Planning and demand for geriatric Curriculums:

a. What are the characteristics of the needs of older people for Curriculums in different subjects?

b. What are the expectations and needs of the elderly for the planning of piano lessons?

Curriculum design for undergraduate students majoring in music teachers in Sichuan Province, China:

a. What are the most important contents for the improvement of the elderly care service ability of undergraduate music teachers in Sichuan Province when designing the curriculum of elderly care Curriculums?

b. How to design the content and structure of the piano Curriculum that can fully meet the needs of the undergraduate students majoring in music teachers in Sichuan Province?

An investigation on the effectiveness of the Curriculum of caring for the elderly for students at the undergraduate level of music teachers in Sichuan Province:

a. What is the impact of the Caring for the Elderly on the caring ability and professionalism of undergraduate music teachers in Sichuan Province?

b. What changes have occurred in students' attitudes and perceptions towards older persons after the implementation of the Age-Friendly curriculum?

3.Objectives

1. To study the planning and needs of geriatric Curriculums
2. To design the pension Curriculum for undergraduate students majoring in music teachers in Sichuan Province, China
3. To investigate the effectiveness of the Curriculum of caring for the elderly for students at the undergraduate level of music teachers in Sichuan Province, China.

4.Scope of the study

The purpose of this study is to explore the development of the elderly care Curriculum for undergraduate students majoring in music in Sichuan Province, China, focusing on the evaluation of the effectiveness of the Curriculum content, teaching methods and Curriculum implementation, so as to cultivate the ability of music normal

students to care for the elderly, and provide theoretical and practical guidance for future educational practice.

As a researcher, I will focus on the development of the curriculum for undergraduate students majoring in music in Sichuan Province, China, and will interview the following groups to gain insight into the needs and development of the curriculum:

Crowd range

1. Music Teacher Training Students: I plan to conduct interviews with music teacher training undergraduate students who are already involved in or interested in participating in the senior care discipline Curriculum to understand their expectations and needs for the Curriculum.

2. Education Professionals: I will communicate with professionals and curriculum designers in the field of music education to discuss their views, experiences and suggestions on curriculum development in the field of elderly care.

3. Older learners: I plan to conduct in-depth interviews with older learners who have already participated in the Aged Care Curriculum to understand their evaluation and feedback on the Curriculum, as well as the impact of the Curriculum on their lives.

4. Curriculum Organizers and Managers: I will interview those involved in the organization and management of the Curriculums in the Department of Elderly Care to understand the organization, management and operation of the Curriculums, as well as their views and suggestions on the development of the Curriculums.

Through the exchanges and interviews with the above groups, I hope to have a comprehensive understanding of the current situation and challenges of the senior care Curriculum for undergraduate students majoring in music in Sichuan Province, China, and provide useful suggestions and insights for the further improvement and development of the Curriculum.

Theoretical range

Curriculum Development Theory, OBE Theory, Constructivist Theory, Gerontology Theory, Orff Music Pedagogy, Music Education Theory

Study site : A music teacher training school in Chengdu and surrounding areas in Sichuan Province, China

5. Research implications

This study has far-reaching academic significance for the development of the elderly care curriculum for undergraduate students majoring in music teachers in Sichuan Province, China. With the increasing trend of population aging, the demand for elderly care services is becoming increasingly urgent. Therefore, through the design and implementation of the elderly care science Curriculum, we can provide professional elderly care service training for music normal students, and improve their sense of social responsibility and professional quality among the elderly. This research will also promote innovative development in the field of music education, expand the application of music education, and explore the role of music in the mental health and social integration of the elderly. In addition, by evaluating the implementation effect and social impact of the elderly care Curriculum, it can provide valuable theoretical and practical experience for the future music teacher education and elderly care service field, and promote the development direction of the combination of social service and education.

6. Definition of terms

Music Subject Curriculum

In this study, the term "Music Subject Curriculum" refers to the curriculum framework designed for undergraduate students in the music teacher training programs, specifically focusing on courses that equip students with the knowledge and skills required to provide music-based care for older adults. This curriculum includes traditional music subjects such as music theory, music education, music performance, music history, and audio technology, as well as specialized courses related to the elderly, such as music therapy, the relationship between music and the health of older

adults, and how music can promote both the mental and physical well-being of the elderly. The goal of these courses is to prepare undergraduate students to apply their music knowledge and skills in the context of elderly care, enhancing their ability to provide effective support and services to older adult populations.

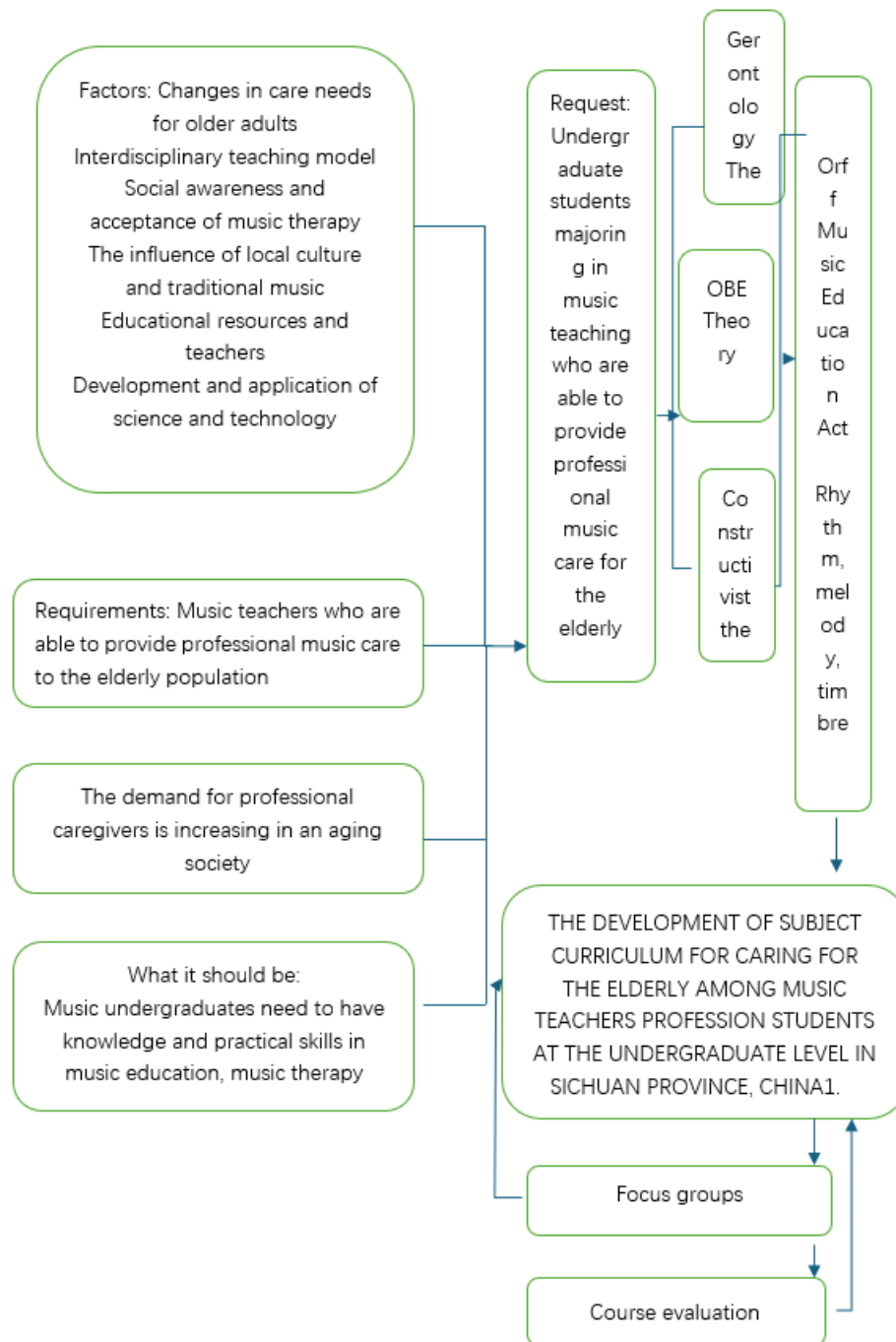
Undergraduate Students

In this study, "Undergraduate Students" refers to full-time students enrolled in four-year undergraduate programs at higher education institutions in Sichuan Province, China. Although the term "undergraduate students" encompasses students from all academic fields, in the context of this study, it specifically refers to students in the music teacher training programs. These students will receive training on how to apply their music knowledge and skills in the care of older adults, with the goal of equipping them to provide music education, therapy, and care to elderly individuals, particularly focusing on addressing the specific educational needs of older adult populations.

Older Adults

In this study, "Older Adults" refers to individuals aged 60 and above. As individuals age, they often experience a range of physical, cognitive, and social changes, such as declining health, memory loss, and increased social isolation. Therefore, improving the quality of life for older adults through effective educational interventions, especially through music activities that promote mental and physical well-being, is a key focus of this research. This study will explore how music education and music therapy can offer professional support to older adults, aiming to enhance their emotional well-being, foster social interaction, and improve physical health.

7. Conceptual framework



CHAPTER 2

RELATED LITERATURE AND RESEARCH

In the study of the development of the curriculum for undergraduate students majoring in music in Sichuan Province, China, the researchers collected relevant information, and the researchers divided it into the following six questions.

1. Curriculum
2. Geriatric school
3. OBE theory
4. Constructivist theory
5. Orff music education act
6. Gerontology theory

1. Curriculum

The word " Curriculum " is originally derived from the Latin word meaning "a race" or "the route of a race" (it comes from the Latin verb currere, which means "to run/continue"). The evolution of the word can be traced back to the classical Latin concept of Curriculum, which means "to run, Curriculum, career", and its roots are in the Latin verb currere, which means "to run" (which in turn derives from the verb currere, which means "to run/continue"). The first known use of the term in the field of education is in the *Professio Regia*, a work published after the death of Petrus Ramus, a professor at the University of Paris in 1576 (Hamilton, David, 2014). The term then appeared in the records of Leiden University in 1582, which seems to be closely related to the desire of Calvinists to bring greater order to education (Hamilton, David, 2014).

In the seventeenth century, the University of Glasgow began to refer to its learning content as a " Curriculum ", and in 1633 the term was first used in English. By the nineteenth century, it was common in European universities to refer to learning content as "Curriculums". Their Curriculums describe the complete program of study (like a surgical degree) as well as the specific curriculum and its content. By 1824, the

term was defined as "a Curriculum, especially a fixed program of study at a college, university, or school".

In the field of education, curriculum is generally defined as the entire educational experience experienced by a student. In the educational process, the term usually refers to a planned sequence of instruction, or an understanding of the student's experience based on the educator's or school's instructional goals (Wiles, Jon, 2008). In the field of education, curriculum usually refers to a planned sequence of instruction, or the organization of a student's learning experience according to the instructional goals of the educator or school. The curriculum covers the interaction of students with instructional content, materials, resources, and assessing the extent to which educational goals are being achieved (Adams, Kathy L.; Adams, Dale E. , 2003). Curricula are divided into several categories: explicit Curriculums, implicit Curriculums (including implicit Curriculums), exclusionary Curriculums, and extracurricular Curriculums (Kelly, A. V., 2009). Curricula may be strictly standardized or may include a high level of teacher or learner autonomy (Adams & Adams, 2003). Many countries have national curricula in primary and secondary education, such as the national curriculum in the United Kingdom. UNESCO's IBE is a priority to explore curriculum research and its implementation on a global scale.

1.1 Definition of the curriculum

There is no general consensus on the definition of curriculum, and the definition of the term is very diverse (Wiles, Jon, 2008).

By collating the relevant theories of Smith, Mark (2000), Dewey, John (1902), and Kelly (A.V. (2009), the author broadly divides the definition of curriculum into four types:

Defined curriculum: the subjects that will be taught, the "mission" determined by the school, and the knowledge and skills that the school expects to succeed students will acquire.

1.2 Implicit curriculum

Curriculum that originates from the school culture and characterizes the behaviors, attitudes, and expectations of that culture, i.e., the unintended curriculum.

Hidden lessons refer to what students learn in the school environment as a result of how school work is planned and organized, but this knowledge itself is not explicitly included in the lesson plan or even explicitly recognized by school staff (Kelly, 2009).

The hidden Curriculum is Philip M. W. Jackson came up with a concept that doesn't always have a negative connotation. If the hidden curriculum is used to its full potential, it can benefit students and learners across all education systems. In addition, the hidden curriculum involves not only the physical environment of the school, but also the formed or unformed relationships between students and other classmates, and even between students and teachers (Jackson, Philip, 1986).

Explicitly exclude topics or ideas from the lesson. Extracurricular activities can also be presented in other forms. This may include school-sponsored programs, academic programs and activities designed to enrich the school experience or be relevant to the community. The school's funded extracurricular programs cover sports, academic clubs, and performing arts. Community-based programs and activities may take place after school but are not directly linked to the school. These projects are usually designed to extend the learning content within the classroom. For example, concepts of environmental protection may be introduced in the classroom, and community-based programs will further develop these concepts. Participants take action based on what they know to implement conservation projects. Community-based extracurricular activities may involve organizations such as "Green Clubs, 4-Hs, Boys/Girls Scouts, and Religious Groups." (Hancock, D., P. H., & Jones, K., 2012).

Cole defines curriculum as all learning activities planned and directed by the school, whether in small groups or individuals, on or outside of school.

Braslavsky noted that the curriculum is a consensus among communities, education professionals, and countries about what learners should learn at a particular stage of life. The Curriculum also defines the purpose, content, time, place, methodology, and questions with whom to learn.

Smith mentions that syllabuses often don't explicitly state the relative importance of topics or the order in which they are studied. Equating a curriculum with a syllabus may limit the consideration of the content or body of knowledge being taught. According to him, the curriculum can be seen as a process that includes needs diagnosis, goal setting, content selection, content organization, learning experience selection, learning experience organization, assessment content determination, and assessment methods and methods.

1.3 Types of curriculum

According to some definitions, the curriculum is normative and based on a more general syllabus that clearly states the topics that must be understood and the requirements to reach a specific grade or standard level.

A curriculum can also refer to a planned and prescribed learning content that students must complete in order to pass a certain level of education. For example, an elementary school might look at how to design its curriculum to improve national test scores or help students learn basic skills. Individual teachers may also talk about their curriculum, referring to all the subjects that will be taught during the academic year. Lessons are arranged sequentially to keep the subject learning more organized. In schooling, the curriculum covers several grade levels.

High schools, on the other hand, may refer to the curriculum as compulsory, which is required in order to earn a diploma. They may also refer to it in exactly the same way as in elementary school, which is used to indicate the individual Curriculums that must be passed and the learning content offered as a whole, which helps prepare students for life after high school.

Curriculum can be viewed from different perspectives (Kelly, A.V., 2009).

Among them, teaching and learning, which are socially recognized as important, form the so-called "anticipatory" curriculum (Kelly, A.V., 2009).

This type of curriculum usually appears in official documents and is therefore also referred to as a "written" or "official" curriculum (Kelly, A.V., 2009). In addition to this, curriculum theory proposes the concept of a "hidden" curriculum, which involves the unconscious development of individual values and beliefs among learners, teachers, and communities, as well as unintended effects of curriculum or unforeseen aspects of the learning process (Kelly, A.V., 2009). Therefore, the person developing the intended curriculum should take into account all these different aspects of the curriculum (Kelly, A.V., 2009). Although the "written" curriculum does not exhaust the meaning of the curriculum, it is essential because it represents the vision of society (Kelly, A.V., 2009). "Written" curriculum are often expressed in the form of comprehensive and user-friendly documents, such as a curriculum framework or subject curriculum/syllabus, as well as relevant and useful learning materials, such as textbooks, teacher guides, and assessment guides (Kelly, A.V., 2009).

In some cases, one may focus too much on the specific subjects covered in the curriculum and what is stated in the textbook, while ignoring the broader objectives of the curriculum, such as competence development and personal development (Dewey, John, 1902). This is why the curriculum framework is so important (Dewey, John, 1902). The curriculum framework places specific topics in a broader context, showing how the learning experience can contribute to the achievement of a broader range of goals (Dewey, John, 1902).

Curriculum is often closely related to schooling, but in some cases can also be applied to informal education or self-directed learning settings (Smith, Mark, 2000). For example, a science museum might develop a "curriculum" that identifies the topics or scope of exhibits it wishes to cover (Smith, Mark, 2000). Many after-school programs in the U.S. also try to adopt this concept, which is often more successful if the curriculum is not strictly defined as a product or transferable body of knowledge. In

informal education and self-directed learning settings, hands-on or experiential curricular models are more appropriate (Smith, Mark, 2000).

1.4 Historical philosophy of the curriculum

Regardless of the origins and intentions of the early curriculum, the function of imparting culture had already emerged in ancient Babylonian times (Crisostomo, Jay, 14 January 2019). The Ancient Roman curriculum began to focus on Greek and Latin skills, especially the study of classical poetry. This model had a profound impact on medieval and Renaissance educational curricula (Atwill, Janet M., 2009).

In the early 20th century, the traditional understanding of curriculum meant "a set of subjects or topics that teachers prepare for students to learn," which meant the same thing as "Curriculum of study" and "syllabus."

John Franklin Bobbitt explored the concept of curriculum in his 1918 book *Curriculum*, which he interpreted as derived from the Latin word *currere*-Curriculum, meaning that curriculum is the process of behavior and action. He believes that children grow into adults through these experiences and succeed in their future lives. In addition, the curriculum covers the entire spectrum of formative behaviors and experiences that occur inside and outside the school, including unplanned and undirected experiences, or experiences that have been consciously and purposefully guided to form the role of a member of society, and not limited to those that occur within the school.

Bobbitt views the curriculum as a field of social engineering, and its curriculum development has two distinctive features:

1. Scientific experts design Curriculums based on their expertise in the qualities required of adult members of society and the experiences that produce them.
2. Curriculum is defined as the behavioral experience that a student should be an adult.

As a result, he sees the curriculum as an ideal, rather than a concrete practice, to shape what people become who they are.

Contemporary conceptions of curriculum no longer identify with Bobbitt's characteristics, but they still retain the core concept of curriculum, which is to

shape the individual through experience. Curriculum design now focuses more on research at the individual and group levels, addressing cultural and social factors such as professional formation and the historical experience of academic disciplines. The formation of a group is closely related to the formation of its individual participants.

Although Bobbitt first formally introduced the concept of curriculum in his definition, it is also widely present in the writings of John Dewey (1859-1952) as an important tool for shaping individual experience. On some key issues, Dewey and Bobbit held different views. Although Bobbitt and Dewey's idealistic understanding of "curriculum" differs from today's limited use of the term, authors and researchers generally agree that it represents a common and substantial understanding of curriculum (Jackson, Philip W., 1992). Development is not simply about removing something from our minds, but about the gradual accumulation and transformation of experience into an experience that we truly desire (Dewey, John, 1902).

University of Chicago President Robert A. Robert M. Hutchins (1899-1977) viewed the curriculum as "lifelong learning," emphasizing the grammar, rhetoric, logic, and mathematical rules of elementary education. He advocated that basic education should emphasize the "three R's", while university education should be based on general education. On the other hand, the essentialist Arthur Bestor (1908-1994) believed that the mission of the school should be to conduct intellectual training. As a result, he advocated that the curriculum should focus on basic knowledge subjects such as grammar, literature, and writing. In addition, the curriculum should also include subjects such as mathematics, science, history, and foreign languages.

Joseph Schwab believed that discipline was the only source of the curriculum. In the education system, the curriculum is divided into basic education areas, such as English, mathematics, science, and social studies. In college, Curriculums may include fields such as humanities, sciences, languages, and more. The curriculum should be made up entirely of knowledge from different disciplines. Dewey proposed that learning should be more attractive and valuable than punishments such as scolding, ridicule, or being asked to stay after school (Dewey, John, 1902).

As a result, a Curriculum can be considered as a discipline. It encompasses its foundations, such as philosophical, historical, psychological, and social foundations, as well as various fields of knowledge and related research theories and principles. As a discipline, Curriculum research should be academic and theoretical, involving a wide range of historical, philosophical, social issues and academic discussions. Mark Smith adopted the initial definition of "curriculum" proposed by John Kerr and adopted by Vic Kelly in his work on curriculum standards: "It covers all learning activities planned and directed by the school, whether in small groups or individually, whether within or outside the school" (Smith, Mark., 2000).

There are four approaches to the study of curriculum theory and practice: curriculum as a body of knowledge to be disseminated, curriculum as a process to help students achieve their goals, curriculum as a process, and curriculum as practice.

In recent years, the fields of education and curriculum have moved beyond the traditional classroom boundaries into other venues, such as museums. In these settings, the curriculum covers a wider range of topics, including a variety of instructional resources, audio guide devices, and even the learners themselves. As with traditional curriculum concepts, Curriculums in a freely chosen learning environment can be divided into explicit and implicit Curriculums, both of which have an impact on the learner's experience and the lessons learned from them (Summer, 2004). These factors are compounded by different contexts, cultural backgrounds, and learner mindsets (Falk, J.H. & Dierking, L.D., 2000). Educators often design programs such as museums, zoos, and aquariums as a complement to the classroom environment to enrich the learning experience for students (Kim, M., & Dopico, E., 2014).

1.5 Curriculum development

Curriculum development is a key job in the field of education and involves a comprehensive process of designing, planning, and implementing instructional content. From needs analysis to the formulation of the syllabus, to the design of teaching content and the selection of teaching methods, curriculum development requires teachers to

have an in-depth understanding of students' learning needs and backgrounds, combined with teaching objectives and resources, to ensure the effectiveness and quality of the curriculum. Continuous assessment and improvement is an important part of curriculum development, and teachers need to adjust the curriculum content and teaching strategies based on student feedback and assessment results, so as to continuously improve the teaching effect and promote students' learning and development.

Curriculum development has multiple characteristics. It is a systematic process that includes needs analysis, curriculum design, instructional implementation, evaluation and improvement, which are interrelated to form a complete curriculum development system. Curriculum development is also goal-oriented, with appropriate teaching content and activities designed with students' learning needs and educational goals at the core. At the same time, curriculum development is flexible and can be adapted and improved to different student groups, teaching environments and resources. Through continuous assessment and feedback, curriculum development is a circular process with the goal of continuously improving the quality and effectiveness of teaching. Finally, curriculum development is diverse, involving the selection and application of various teaching methods and resources, and teachers can flexibly apply different teaching methods according to the curriculum objectives and student characteristics.

In the field of education, curriculum development is of great significance. It not only meets the learning needs of students and improves the quality of teaching, but also promotes teaching innovation, adapts to the needs of social development, improves teachers' capabilities, and promotes educational reform. Through curriculum development, teachers can design teaching objectives, content and activities in a targeted manner, and select appropriate teaching methods and resources to achieve the goal of all-round development of education and continuous improvement of teaching effectiveness. Continuing to promote curriculum development not only meets the needs

of education and teaching, but also serves as an important driving force for educational reform and development.

1.6 Curriculum -related research

1.The key to curriculum research is to focus on both teaching methods and teaching content, rather than focusing on one or the other. (Egan, 1978)

The purpose of this paper is to explore the confusion in the curriculum field, especially in the relationship between teaching methods and teaching content, and to make an appeal for the importance of both teaching methods and teaching content. The results show that as a part of the field of education, the curriculum needs to comprehensively consider the teaching methods and teaching content to promote the all-round development of education. Excessive attention to teaching methods and neglect of teaching content can lead to educational imbalances, and neglect of the rationality and importance of teaching content can also affect the quality of education. Therefore, the study highlights the importance of balancing teaching methods and teaching content in the design and implementation of the curriculum to ensure that students receive a well-rounded and effective education.

2. The opinion about the curriculum is not limited to the intention of the developer, but can be seen as a manifestation of potential that can be discovered and revealed during the implementation and evaluation process. (Miriam Ben-Peretz , 1975)

This study aims to explore the nature of the curriculum, especially the relationship between the author's intention and the actual effect in the implementation and evaluation process. The author introduces and explores the concept of "curriculum potential", that is, the independent potential of the curriculum, beyond the author's original intention. The author tries to understand the flexibility and diversity of the curriculum in practical application, as well as the challenges that may exist in the process of curriculum implementation and evaluation. The results of the study show that the curriculum is not just a simple manifestation of the author's intentions, but has independent potential and flexibility. Once the Curriculum materials are out of the

author's hands, they can be interpreted and applied in a variety of ways. The concept of curriculum potential provides a new perspective on educational practice, enabling teachers and evaluators to more fully understand and use the richness of curriculum. The consideration of curriculum potential provides new ideas and methods for curriculum design, implementation and evaluation, which is helpful to promote the development of educational practice and improve the quality of curriculum.

3. Curriculum design plays a key role in medical education, addressing complex issues such as teaching skills, student learning styles, and societal needs. (Grant, J. , 2018)

This study aims to explore curriculum design in medical education, with a particular focus on undergraduate and postgraduate medical training. Our goal is to examine the relationship between teaching skills, student learning styles, and Curriculum content in curriculum design, and to delve into the practical application of curriculum design. The results show that the design of medical curriculum is not only about knowledge transfer, but also about the health needs of society, the philosophy of scientific thinking, and the professional characteristics of physicians. We also found that cognitive development theories provide a valuable reference for curriculum designers, while subject-based curriculum design requires a balance between the integration of subject areas and practical application. In addition, we note that curriculum design is influenced by many factors, including the democratization of social processes, the development of educational theories, political imperatives, and economic considerations, which together shape the shape and practice of medical education curricula.

4.The contrast between the housework curriculum and the school's core curriculum highlights the regular characteristics of the housework curriculum as a natural and informal process for children to learn, master and perform housework. (Lancy, D. F. ,2012)

The aim of this paper is to explore the differences between the housekeeping curriculum and the school's core curriculum, and to analyse children's

roles as domestic workers and the skills and knowledge they learn in the process. The results showed that housework curriculum was an informal learning process that naturally formed with the growth of children and the division of labor within the family, which emphasized the importance of children's learning in practice, and revealed some regularities and characteristics in this process.

5. Curriculum learning is a training strategy that mimics the meaningful learning sequence in human Curriculums by training machine learning models from simple to difficult data, and has demonstrated the power of improving model generalization ability and convergence speed in various scenarios such as computer vision and natural language processing. (Wang, X., Chen, Y., & Zhu, W. , 2021)

The purpose of this paper is to comprehensively review the motivation, definition, theory and application of Curriculum learning, discuss the various works of Curriculum learning under a common framework, and elaborate on how to design manual predefined Curriculums or automatic Curriculums. In addition, the existing Curriculum learning design based on the difficulty measurer++ training scheduler is summarized, and the methodology of automatic Curriculum learning is divided into four categories: self-directed learning, transfer teachers, reinforcement learning teachers and other automatic Curriculum learning. The principles of learning design for different Curriculums are analysed in order to bring benefits to practical applications. Finally, this paper provides insights into the relationship between Curriculum learning and other machine learning concepts such as transfer learning, meta-learning, continuous learning, and active learning, and points out the challenges of Curriculum learning and the direction worthy of further research in the future.

6. Train machine learning models in a meaningful order, from simple to difficult examples, through Curriculum learning, which can improve performance without adding additional computational costs, compared to standard training methods based on random data shuffling. (Soviany, P., Ionescu, R. T., Rota, P., & Sebe, N. ,2022)

This study aims to explore the successful application of Curriculum learning in various fields of machine learning, and shows how to overcome the

constraints of Curriculum learning, such as sample sorting and the choice of rhythm functions that introduce more difficult data. By manually constructing a multi-angle classification system of Curriculum learning methods, the author considers various classification criteria, and uses the condensed clustering algorithm to construct a hierarchical tree of Curriculum learning methods, so as to link the discovered clusters with the classification system. Finally, the author proposes some interesting future research directions.

7. Curriculum DeepSDF, the "Shape Curriculum ", has successfully improved the quality and accuracy of shape reconstruction, bringing significant improvements to the training process of various 3D shape representation learning methods. (Duan, Y., Zhu, H., Wang, H., Yi, L., Nevatia, R., & Guibas, L. J. , 2020)

This study aims to mimic the human learning process and organize the learning task according to two criteria: surface accuracy and sample difficulty, so as to improve the quality of shape reconstruction. Experimental results show that the author's well-designed Curriculum significantly improves the effect of shape reconstruction under the same training data, training period and network architecture. The author believes that the application of shape Curriculums can benefit the training process of various 3D shape representation learning methods.

8. Curricula should reflect the values of the community and the character of the times, be able to accommodate national and regional interests, and achieve this through internalized curricula, extra-curricular activities and potential curriculum development. (Susanto, H., Abbas, E. W., Anis, M. Z. A., & Akmal, H. ,2021)

The study aims to explore how vocational Curriculums implemented in the Tabalong Regency region reflect national and regional interests, particularly in terms of moral values and local merit. The results of the study show that the implementation of vocational Curriculums in the region generally follows the principles of comprehensiveness, relevance, continuity and applicability. Moral development activities are mainly implemented through curriculum activities and extracurricular tutoring, and curriculum internalization, extracurricular activities and potential curriculum

development promote the integration of local characteristics and national curriculum, and provide support for the all-round development of students.

The above literature review highlights the key elements of curriculum design and implementation, emphasizing the balance between teaching methods and content, the exploration of curriculum potential, complex issues in medical education, the informal learning characteristics of housework Curriculums, and the application of curriculum learning in machine learning. These studies provide in-depth theoretical basis and practical guidance for curriculum development, especially on how to reflect community characteristics and values, and cultivate students' all-round development, which is of enlightening significance for the development of undergraduate music Curriculums for the elderly in Chengdu, Sichuan Province, China. In this process, attention should be paid to the comprehensiveness and flexibility of the curriculum content, and the combination of local characteristics and the national curriculum should be used to improve the overall level of education quality and students' learning experience.

2.Geriatric school

As the global population ageing trend intensifies, so does the life expectancy of older persons (Christensen et al., 2009; Fernandes et al., 2021; James Lubitz, 2003). Population ageing and its impact have become an important and popular topic (Zhang et al., 2022).

The increase in the elderly population has also led to a growing focus on active ageing (Tomagová et al., 2016). Active ageing means that older people are able to maintain lifelong mental health, participate in society according to their individual needs, desires and abilities, and have an independent, high-quality life. Take China as an example: compared with the sixth national census, China's seventh national census shows an increase in the proportion of people aged 60 and over, and the proportion of people over ≥ 60 years old has increased by 5.44%. In this context, the concept of "successful aging" (Chi et al., 2021; Estebansari et al., 2020) "Healthy Aging" (Cosco et al.,

2017; Rudnicka et al., 2020) and "Active Ageing" (Belanger et al., 2017; Paul et al., 2017).

Over the past two decades, the concept of active ageing has been applied to various fields such as society, science, psychology and medicine. International political groups and researchers see active ageing as an important part of addressing the challenges of population ageing (Jensen & Skjott-Larsen, 2021). Active ageing underscores the need to address the challenges of population ageing, including focusing on the physical and mental health of older persons, promoting social inclusion, and providing comprehensive care and protection measures to meet the needs of older persons (Tiraphat et al., 2021). In this context, the role of education for the elderly has become increasingly prominent. At present, many studies have been carried out on geriatric education, but there is very limited information on geriatric education for active ageing (Zhang et al., 2022). Education for the elderly is achieved through the establishment of universities for the education of the elderly (Vazquez et al., 2018). Educational schools for the elderly enhance the quality of life of older adults by providing learning opportunities, recreation, and social activities to maintain their physical autonomy and independence (Choi & Cho, 2021).

The School for the Elderly, also known as the University for the Third Age (U3A), is an international educational activity for retirees. It originated in France in 1973. Initiated by Professor Pierre Vellas. The 1960s-1970s were a period of sharp increase in the number of people aged 65 and over in France, and the problem of old age gradually developed with age. In 1962, the Laroque Report developed a policy for the elderly, with the aim of taking measures to improve the living and health conditions of the population. R. Lenoir stresses that we are moving from the idea of caring for people living in total poverty to the issue of their integration into society (Lenoir, 1979). In this context, the category of "third age" was coined. In the 1990s, France expanded the concept to include the concept of "universities of all ages" or "universities of free time". This new designation means that education is no longer limited to a specific age group, but provides learning opportunities for people of all ages, while also emphasizing the

freedom and flexibility of learning (Chamahian, 2006). The construction of new concepts has changed the perception of the retired population, and as a result, people see old age as a period of "freedom from negative consumption and social isolation" (Membrado, 2010).

In 1970, "new institutions were created to take care of the so-called "elderly". "The main purpose of these 'clubs', 'residences' and 'universities' is to provide cultural and psychological care for the elderly. "(Kirby, August 1975).During this period, the issue of improving the "fate of the elderly" became an issue for ministries, social workers and organizations. The development of the senior category through the development of policies for the elderly led to the emergence of the first U3A. In 1973, in the research unit of "International Research and Development" of the University of Toulouse, P. Vellas has created an applied research project aimed at improving the lives and health of older people: the "Third Age University" (Chalise et al., 2007).

The U3A project, also known as the "Vellas model", aims to achieve the following four main objectives:

Establish university-like institutions that focus on the medical, socio-cultural, and social needs of older adults.

As a university institution, it provides education in gerontology, including initial training for students in the humanities and medicine, as well as continuing training for professionals related to the elderly, culminating in the organization of retirement preparation Curriculums.

Carry out research projects on ageing and its related issues, as well as on the social conditions of older persons. These studies cover a variety of topics, such as the medical needs of the elderly, spa therapy, anesthesia and resuscitation for the elderly, and tourism for the elderly.

Propose a plan to arouse public attention to focus on the needs and problems of older persons.

The academic nature of this U3A program is evident and all of its teaching aims and objectives are aimed at slowing down aging, whether in the brain, body or mind. P.Vellas emphasizes:

"It's not just about learning the language to live to old age, it's about understanding that stimulating the brain helps fight brain aging. "

The objectives of the project include "research, primary training, continuing training, permanent education, and health education for the elderly." I believe that this is where the main task of the Third Age University lies. "(Vellas P., 1977)

In this regard, his program forms a pattern of diffusion, in which two essential elements are that the choice of name is not accidental and, in fact, integrates it into the university world. In fact, the juxtaposition of the terms "university" and "third age" has changed not only the concept of young people attending college, but also the concept of older people's participation in university learning (passive, dependent, and intellectual disabilities) (Groombridge B., 1981). Thus, on the one hand, to provide the elderly with the cultural heritage of our society, and at the same time to take advantage of the research potential of traditional universities in various disciplines, especially in the field of medicine. Finally, the inclusion of U3A in the university and the legal status of its university services has the advantage of not turning this structure into a "quarantine" for the "third age". Many countries where English is the main language have adopted this model of education for the elderly, while most countries on the European continent have followed the French model. For historical reasons, in the United States, a lifelong learning institution refers to a term used by organizations similar to U3A groups. A UK U3A website reported on membership in the 'Third Period' as follows: "The 'Third Period' is defined as a period of your life (not necessarily in chronological order of age) in which you have the opportunity to study for the sake of learning itself. There is no minimum age limit, but the focus is on those who are no longer employed full-time or raising a family. "(www.u3a.org.uk. Retrieved 2022-01-01.) Gradually, this academic model has also been adopted in many other countries, especially on the European continent.

It is worth mentioning that U3A does not award degrees, but certificates. This means that students can receive proof of their participation in learning activities upon completion of the program, without having to go through the rigors of a traditional university degree program. In addition, the School for the Elderly offers many opportunities for older students to take elective Curriculums, offering a wide range of options depending on the student's interests and needs, including computer skills, arts and crafts, history, literature, and more. An important platform for learning and social interaction, promoting personal growth and community engagement among older people.

China's first education school for the elderly was established in 1983. By the end of 2019, China had more than 62,000 universities for geriatric education, with more than 8 million students. Educational universities in China refer to universities, colleges, schools and institutions that carry out educational activities for the elderly, and are officially organized or supported by the government, enterprises or social organizations. There are more than 250 million people over the age of 60 in China, and only 5% of them participate in the education of the elderly, indicating that there is a large gap between the existing scale of education for the elderly and the education participation rate of the elderly in the context of active aging (Zhang et al., 2022).

As China's most populous province, Sichuan Province has built more than 2,600 universities (schools) for the elderly at all levels by the end of 2022, with nearly 700,000 students. 21 cities (prefectures) in the province have built municipal-level universities for the elderly, and 140 counties (cities, districts) have built county-level universities for the elderly, which has basically formed a new pattern of education development for the elderly with clear subjects, complete systems, wide coverage, openness and convenience, multi-party participation, and standardized and orderly. By the end of the 14th Five-Year Plan, Sichuan will strive to achieve the goal of reaching more than 20% of the total elderly population by regularly participating in educational activities in various forms, and doubling the number of elderly people studying in school. Chengdu, the provincial capital of Sichuan, is reported to have a total of 110 universities

for the elderly. Some of these universities for the elderly are affiliated with a certain university, some are affiliated with a certain unit, and more of them are learning places for the elderly that are spontaneously opened by the community, which are called elderly counseling stations.

The development of education in schools for the elderly is in line with national policies and the policy direction of Sichuan Province. At the national level, the government encourages and supports education for the elderly, recognizing the positive impact of education for the elderly on society. This is reflected in the state's support for schools for the elderly and the investment of educational resources, which aim to promote the learning and participation of the elderly in social activities. In Sichuan Province, education for the elderly is listed as an important area for development, and the government is committed to building an education system for the elderly to meet the learning needs of the elderly. Through the establishment of various types of universities for the elderly, including municipal and county-level universities for the elderly, Sichuan Province has built a complete education network for the elderly to provide convenient learning channels for the elderly. At the same time, specific development goals have been set to achieve a certain level of participation in education and the number of students in school among the elderly. Therefore, the development of education in schools for the elderly not only reflects the government's attention to and support for the education of the elderly, but also is an important measure to promote the all-round development of the elderly and long-term social stability.

2.1 Research on schools for the elderly

1. The School for the Elderly is an important community education organization that provides a variety of learning and social opportunities for retirees. (Williamson, A. , 1995)

The purpose of this research is to explore the history and characteristics of the U3A movement, and to highlight their organisational structure, curriculum and trends through a survey of 16 U3A in Australia. The results show that the school for the elderly, as a community education model, has gradually gained recognition and

development in Australia, but in order to maintain its development momentum, it is necessary to solve the problems of membership expansion and organization building.

2. The School for the Elderly provides a variety of learning and social opportunities for the elderly, and promotes the development of active ageing.

The purpose of this study was to explore the development of the U3A movement in Poland and to analyze its impact on the quality of life of older adults. The study found that although U3A has a positive impact on the quality of life of the elderly, it is still difficult for the average elderly to participate due to factors such as geographical location, material conditions, and personal preparation. The tradition of older people in Poland in caring for their grandchildren also limits their possibilities to participate in self-development or self-realization projects.

3. Schools for the elderly provide an important platform for older people to continue their learning and socialize, however, there are significant gender differences among their members. (Williamson, A. ,2000)

The study, which aims to explore gender issues in older people's learning, reports findings from an in-depth study of a U3A campus in Sydney's south-west. The study found that there are significant gender differences among U3A members, reflecting a variety of issues such as retirement interests, marital status, membership in social groups, and U3A feminization. The authors call for further research into how men and women spend their retirement, as well as continuing to learn about their place in retirement.

4. Schools for the elderly provide a platform for older persons to support each other and share knowledge, however, differences in socio-economic backgrounds and levels of knowledge can lead to exclusion for some. (Patterson, R., Moffatt, S., Smith, M., Scott, J., Mcloughlin, C., Bell, J., & Bell, N. , 2016)

This study aims to explore the issue of social inclusion in schools for the elderly, with a particular focus on low attendance in social housing and people from non-professional backgrounds. Using a qualitative approach, the study identified a number of barriers to lifelong learning, including health problems, lack of transportation,

and responsibility for care. With regard to school participation of the elderly, the study pointed to exclusionary factors such as lack of knowledge, organization names and locations. It is recognized that a lack of understanding of the purpose and scope of schools for the elderly can lead to exclusion, which limits the participation of lower socio-economic groups. In order to realize the potential of the school for the elderly as a highly inclusive organization, these cognitive barriers must be removed.

5. Schools for the elderly provide a platform for seniors to continue their learning and socialize.

Šlechtová, P. Motivation of U3A Attendants to Study Foreign Languages. Dvacetiletá symbiotická propojenost ekonomického a populačního vývoje..... 3, 91.

The purpose of this study was to explore the motivation of students in the school curriculum for the elderly to learn foreign languages. Through a questionnaire survey among participants of language Curriculums at the Polytechnic School for the Elderly, the study identified the target group of language learners and clarified the reasons for their desire to learn. The results of the survey will help to understand the learning motivation of the participants in the school program for the elderly, and provide a reference for providing better educational services.

6. schools for the elderly provide an important learning and social platform for older people, but there are also some barriers that need to be addressed through ongoing dialogue and reflection. (Hachem, H., & Formosa, M. , 2023)

The aim of this study is to explore the barriers faced by middle-aged and older learners in Lebanese schools for the elderly, and to understand the root causes of these barriers by analysing the (un)intentional consequences of their (interactions). Through a reflective deductive thematic analysis of interview data from older school members, the study found two types of barriers: one caused by the interaction between learners and teachers and administrators, involving curriculum issues, teaching methods, language, etc., and the other by the interaction between learners, involving aspects such as social and social biases. The study notes that the actions of institutional agents in older schools can (re)generate their ways of living and

functioning, and calls for continuous dialogue and reflection to address these barriers in order to improve the age-friendliness of older schools.

The literature review focuses on the development, characteristics, and impact of schools for older adults on the quality of life and social interaction of older adults. These studies point out that schools for the elderly, as an important part of community education, provide a rich variety of learning and social opportunities for older people, and help promote the development of active ageing. However, research has also revealed some problems in schools for older people, such as gender differences, differences in socioeconomic backgrounds and levels of knowledge, and exclusion of learners. The existence of these problems requires the joint efforts of relevant institutions and all sectors of society to continuously improve the inclusiveness and service quality of schools for the elderly by improving the curriculum, lowering the threshold for participation, and strengthening social support. In the development of the elderly care curriculum for undergraduate students majoring in music in Sichuan Province, China, we can draw on these research results to design more inclusive and applicable Curriculums to meet the learning and social needs of the elderly and promote their healthy growth and all-round development.

3.Obe theory

In the context of the increasing attention to the quality of higher education in China, the evaluation mode of higher education is also changing, from the past input determinism to process theory and output theory. Input determinism and process theory focus on resource allocation and teaching process, focusing on school conditions and the role of teachers. The output-based theory, on the other hand, emphasizes the design of the teaching system with student learning outcomes as the core (Capone, R., 2022), which coincides with the concept of Outcome-based Education (OBE) (Kerimbayev, N., Umirzakova, Z., Shadiev, R., & Jotsov, V., 2023).

OBE was first proposed in 1981 (Spady, W. G., 1981), first implemented in elementary and middle schools in the United States, and subsequently widely used in higher engineering and medical education worldwide. In recent years, China's higher

engineering education professional accreditation has joined the Washington Protocol and implemented audit and evaluation, and the concept of OBE has gradually been adopted and practiced in the field of higher education in China.

This concept was born out of the need to meet the challenges of the new industrial revolution and to meet the public's concern about the return on investment and actual output of education. The American Association for Accreditation of Engineering Education has incorporated the concept of OBE into the accreditation standards for engineering education, making it the mainstream concept of education reform in the United States, the United Kingdom, Canada, and other countries (Spady, W. G., 1988).

At the same time, the student-centered teaching philosophy has also become the focus of attention in the field of education. This philosophy emphasizes the cognitive development of individual students, their differences (Salloum, S., Zgheib, G., Ghaffar, M. A., & Nader, M., 2022), and the important impact of learning motivation on teaching. Teachers should not only be the transmitters of knowledge, but also the guides and partners of students' learning process. Instructional design should fully consider students' learning needs, interests and abilities, and build a student-centered learning environment.

In summary, the introduction of the OBE concept and the advocacy of student-centered teaching philosophy mark a shift in the evaluation model and teaching philosophy of higher education in China, with more emphasis on students' learning outcomes and individualized learning process (Shao, J., Zhang, J., Feng, H., Yang, L., Wang, H., & Li, G., 2024). OBE emphasizes that the goal of instructional design and instructional implementation is the learning outcome that students ultimately achieve through the educational process. Specifically, OBE emphasizes addressing the following four issues:

1. What kind of learning outcomes do we want students to achieve?
2. Why do students need to achieve such academic results?
3. How can we effectively help students achieve these learning outcomes?

4. How do I know if a student has achieved these learning outcomes?

The implementation of OBE is of great significance for the reform of the education system and the development of students.

3.1 Obe concept

OBE's philosophy includes Tyler, Bloom, Glaser, and competency-based education. It is a core belief that all students have the potential to succeed, not just those who are fast, smart, or have an edge. Pretty points out that the traditional education system is planned more for student management and administrative convenience, operating on a fixed schedule, for example, when a Curriculum ends because of the end of the semester, rather than whether the student actually mastered the desired skills of the Curriculum. As a result, traditional schools operate more to manage students than to focus on learning outcomes.

The outcome-oriented education paradigm implies that the organization of the education system is outcome-oriented. First of all, it is necessary to identify the final outcomes that students should achieve, which refers to the knowledge, abilities, and values that students have demonstrated when facing real-world challenges after completing school. Then, starting from these end results, the training program and curriculum are carefully designed in reverse. For example, in curriculum design, the composition and content of the curriculum should be defined in terms of desired outcomes. As such, OBE is an approach to designing, developing, imparting, and documenting instruction around desired outcomes, which is significantly different from traditional education.

3.2 Characteristics of the obe educational philosophy

1. The student's outcome is not just a simple accumulation or average of previous academic performance, but the final result achieved after completing all the learning processes.

2. The outcome is not only the student's beliefs, feelings, memories, knowledge and understanding, but also the experience and achievement that the student internalizes into the depths of the soul in the learning process.

3.The scope of the outcome is not only what the student knows and understands, but also the ability to apply it to real-world situations, as well as values or other emotional factors that may be involved.

4.The closer the outcomes are to the students' real-life learning experiences, the more likely they are to be sustained, especially if they are practiced over a long period of time and extensively.

5.The results should cover the important content and skills in life, and focus on practicality, so as not to become forgettable information or one-sided knowledge.

6. "End Result" does not mean ignoring the outcome of the learning process, and schools should design the curriculum according to the principle of reverse design based on the end result achieved, and evaluate the student's outcome at different stages.

3.3 Implementation of the obe concept

(1) Reverse teaching design based on OBE

Reverse design is the opposite of traditional forward design. Positive design is based on the curriculum, establishes a discipline-oriented curriculum system, and emphasizes the systematization and completeness of subject knowledge. However, in the current era of rapid knowledge generation and increased interdisciplinary demand, knowledge completeness has become difficult, while access to knowledge has become more convenient. The reverse design is based on the needs, the training objectives are determined by the needs, and then the graduation requirements are determined by the training objectives, and then the curriculum system and the learning outcomes and teaching content of each Curriculum are determined.

First of all, the school determines the talent training goals according to the social and economic development needs of the country and region and the positioning of the school, and then determines the professional training goals according to the talent training goals of the school and the characteristics of the faculties, and then determines the graduation requirements of the major according to the professional training goals, that is, the learning results of the knowledge, ability and value orientation

that students should achieve when they graduate. Then, construct the curriculum system and determine the degree to which each Curriculum contributes to the graduation requirements. Finally, determine the learning outcomes and teaching content of each Curriculum.

At the curriculum level, the traditional teaching design sets the teaching objectives based on the subject content or textbooks, and the syllabus arranges the teaching time according to the chapter order, but ignores the contribution of each chapter teaching to the graduation requirements. The learning outcomes of outcome-based instructional design are the changes expected of learners, and the syllabus determines the corresponding teaching content and teaching hours.

(2) Key principles for the implementation of OBE

The principles of implementation of the OBE educational philosophy include:

1. Clear focus: Curriculum design and teaching should be closely focused on the final learning outcomes that students can achieve after completing the learning process. Teachers need to clearly inform students about expected learning outcomes and be committed to helping students develop knowledge, competencies and skills, ensuring that the teaching and learning process is closely aligned with learning objectives.

2. Expand opportunities: Curriculum design and teaching should take into account the individual differences of each student to ensure that every student has the opportunity to achieve learning outcomes. Schools and teachers need to be flexible in providing different learning opportunities to suit the individual needs of students and give students the opportunity to showcase their own learning.

3. Raise expectations: Teachers should have high expectations for students' learning performance and set challenging standards for execution to encourage students to learn deeply and successfully. Promote students' motivation and self-improvement by raising expectations, helping them achieve higher levels of learning outcomes.

4. Reverse design: Curriculum design and teaching activities are carried out in reverse based on the final learning outcome. Teachers need to design and arrange lessons that guide students to achieve their goals, starting from the end learning outcomes that students expect. Reverse design emphasizes the learning needs and goals of students to ensure that the teaching process effectively promotes students to achieve the expected learning outcomes.

These principles guide OBE educational practice, emphasizing student learning outcomes and practical applications, as well as the importance of the teacher's role in motivating, guiding and assessing student learning.

(3) The key points of the implementation of the OBE education concept include:

1. Identify learning outcomes: Identifying learning outcomes is at the heart of OBE education, and these outcomes should be articulated and measured through direct or indirect assessments. Taking into account the expectations of various stakeholders, including governments, schools, employers, students, teachers, and parents, these stakeholders include governments, schools, employers, students, teachers, and parents.

2. Construct the curriculum system: Learning outcomes reflect the competency structure of students, and curriculum teaching is the main way to achieve this ability. Therefore, structuring the curriculum is essential to achieve learning outcomes. There should be a clear mapping between the curriculum and the competency structure, and each Curriculum should contribute to the student's journey towards the expected competency structure.

3. Identify instructional strategies: OBE emphasizes student learning outcomes and focuses on what students learn rather than what teachers teach. The output of the teaching process is more important than the input, advocating research-based teaching and personalized teaching, encouraging teachers to formulate different teaching plans according to the individual differences of students, and providing diversified learning opportunities.

4. Self-referential assessment: OBE's assessment focuses on learning outcomes rather than what is taught, when it is learned, or how it is learned. Adopt diversified and hierarchical evaluation criteria, focusing on individual students' learning progress and achievement results, rather than emphasizing comparisons between students.

5. Climb to the top: Divide the learning process into different stages and determine the learning objectives for each stage, which will be progressively promoted from beginner to advanced level and finally achieve the peak outcome. This means that students with different learning abilities will achieve the same learning goals at different times, in different ways and in different ways.

The advantages and disadvantages of the OBE educational philosophy

Merit

1. Clear purpose: Students and educators have a clear idea of what to expect at the beginning of the training, which helps them clarify their learning direction and goals.

2. Goal-oriented: Pre-set standards and goals can motivate learners and educators and keep them on track.

3. Focus on practicality: OBE focuses on practical operation and practice, less theory and more action, so that learners can demonstrate the skills they have learned at the end of the training.

4. Flexible methods: Educators can flexibly adjust teaching methods and assessment methods according to the needs and characteristics of students, and provide students with diversified learning opportunities.

Shortcoming:

Ignoring nuances: Outcome-based education systems may ignore differences between individual learners and fail to fully measure the diversity and complexity of learning.

Over-assessment: Outcome-based education places too much emphasis on assessment and standardized testing, which can cause undue stress on students and ignore the learning styles and challenges of individual students.

Excessive flexibility: While flexibility is a virtue, it can also lead to uncertainty and confusion in the education system, and the lack of uniform assessment criteria and strategies can lead to inconsistent quality of learning experiences.

Overall, the OBE educational philosophy has advantages in terms of clarity of goals, practicality, and flexibility, but it also faces challenges such as ignoring differences, over-evaluating, and being over-flexible.

3.4 Research on obe theory

1. OBE experiencers pay more attention to mental processes, but their achievement needs and obedience needs are low. (Irwin H. J. , 1981).

The purpose of this paper is to explore the psychological, parapsychological, and neurophysiological characteristics of the OBE (Out-of-Body Experience) phenomenon. By comparing individuals who have experienced OBE with those who have not, we aim to understand the potential impact of OBE on individuals' psychological needs and cognitive function, as well as the possible associated factors. The results of the study showed that individuals who had experienced OBE showed higher levels of attention to mental processes, but lower levels of achievement and compliance needs. In addition, it was found that the frequency and characteristics of OBE experiences may be related to the psychological state and neurophysiological characteristics of the individual. These results provide important clues and research directions for further exploring the OBE phenomenon and its effects.

2. Outcome-Based Education (OBE) bridges the gap between teaching and learning methods by assessing and evaluating student performance.

The purpose of this paper is to explore the principles and evaluation methods for the implementation of Outcome-Based Education (OBE) in the College of Engineering. The findings suggest that OBE can help students better develop their professional skills and improve their performance in the work environment. With the right

assessment techniques and implementation principles, student outcomes can be effectively measured and inspired to bring teaching and learning approaches closer together. The article highlights the four working principles of OBE and explores their importance in practice. In summary, this study aims to guide the effective implementation of OBE in the School of Engineering, and proposes a series of methods to evaluate and evaluate student performance to improve the quality of teaching.

3. Teachers have positive and negative attitudes towards the implementation of OBE in Afghan universities, but they believe that the implementation of OBE helps to design teaching materials and develop learning outcomes, and promotes effective participation in teaching and learning processes. (Katawazai, R. , 2021).

The purpose of this paper is to explore the attitudes of Afghan teachers towards the implementation of OBE in Afghan universities. The results of the study showed that teachers' attitudes towards OBE were both positive and negative, but they believed that the implementation of OBE could help design teaching materials and develop learning outcomes, and promote effective participation in the teaching and learning process.

4. Through the DBL+OBE method, students showed obvious advantages in the improvement of personal ability, which showed that outcome-based education can effectively stimulate students' enthusiasm and autonomy for learning. Zhang, X., Ma, Y., Jiang, Z., Chandrasekaran, S., Wang, Y., & Fonkoua Fofou, R. , 2021).

This study shows that the use of Design Learning (DBL) and Outcome-Based Education (OBE) methods can effectively improve the personal ability and innovative practice ability of industrial engineering students. The experimental results show that the students who adopt the DBL + OBE method perform well in system thinking, independent innovation, etc., which proves that the outcome-based education concept can stimulate students' interest in learning, cultivate teamwork spirit, and improve innovation, practice and problem-solving skills, so as to cultivate the "innovative talents" needed in the new era. Overall, this study finds that an outcome-based

approach to education has a significant positive impact on industrial engineering students, providing strong support for their development of innovation and practical abilities.

5. The new deployment strategy based on motivation theory shows obvious advantages in curriculum outcomes and can provide an effective implementation pathway for outcome-based education (OBE). (Bhat, S., Souza, R. D., Bhat, S., Raju, R., & Kumara, B. P. , 2020).

The purpose of this paper is to discover effective deployment strategies for outcome-based education (OBE) and to implement OBE using the affective domain in Bloom's taxonomy. The research background includes a comparison and summarization of the two parts of the Curriculum to explore the effects of the old and new approaches. Maslow's motivation model and ARCS motivation model complement each other to provide theoretical support for outcome-based education. Overall, the new deployment strategy based on motivation theory shows superiority in curriculum outcomes, provides new development opportunities for engineering education research, and provides valuable knowledge accumulation for scholars, researchers, and policymakers.

6. The concept of OBE has become a paradigm shift in education, with a strong emphasis on student achievement and measurable learning outcomes. (Sunra, L., Aeni, N., & Sally, F. H. S. , 2024).

This study aims to investigate and explore the impact and practice of Outcome-Based Education (OBE) in the field of education, with a focus on its impact on instructional techniques, implementation strategies, and theoretical foundations. The aim of the study includes examining key elements of OBE, such as curriculum design, assessment techniques, and alignment of educational goals with societal needs, and analysing barriers and possible solutions associated with OBE adoption, taking into account a variety of educational settings. By synthesizing the latest literature and case experience, the study delves into the practice and concepts of OBE, providing important insights and guidance for educators, policymakers, and scholars. The findings show

that the concept of outcome-based education (OBE) has become a paradigm shift in the field of education, emphasizing student achievement and measurable learning outcomes. Through an in-depth analysis of OBE, the study reveals that OBE has an important impact on the reshaping of education, which helps educators better understand and apply the concept of OBE. At the same time, the study also puts forward some barriers and solutions for the adoption of OBE, which provides useful reference and guidance for promoting the implementation of OBE in different educational settings.

7. Outcome-Based Education (OBE) theory has tremendous importance in assessing the impact of engineering students' communication skills on employability. (Wu, Y., Xu, L., & Philbin, S. P., 2023).

This study aims to assess the impact of engineering students' communication skills on employability, focusing on verbal and non-verbal communication skills through the four key elements of Outcome-Based Education (OBE) theory. The results show that in the digital age, students' communication skills have a significant impact on the employability of engineering students, and verbal and non-verbal communication skills play an important role in employability. In addition, the study found that employer assessment also plays an important role in the further improvement of students' communication skills, which can help educators better develop students' communication skills, broaden the training methods of engineering students in the digital age, and improve their employability.

8. The implementation of OBE needs to overcome various challenges to ensure the improvement of education quality and the cultivation of students' comprehensive quality. (Kumar, S., Lochab, A., & Mishra, M. K. 2023).

The purpose of this study is to identify the problems faced by affiliates in the implementation of Outcome-Based Education (OBE). In order to identify the challenges before and after the implementation of OBE, relevant literature was collected from empirical and conceptual papers. Significant gaps were identified in the early stages of implementation. Affiliates face a number of challenges in the implementation of

OBE. Lack of resources and inability to embrace change have become major obstacles in the implementation of OBE. This study was conducted for the Affiliated School of Management. The same approach can be applied to other disciplines as well. The structured projects in the study will guide the management to improve its quality level.

In the development of the elderly care curriculum for undergraduate students majoring in music teachers in Sichuan Province, China, it is of great significance to adopt the concept of Outcome-Based Education (OBE). The OBE philosophy is centered on students' learning outcomes, emphasizing that curriculum design and teaching practice should revolve around the final learning outcomes that students can achieve after completing the learning process. This means that the curriculum should clearly identify the skills, knowledge and practical abilities that students should possess in aged care services, and provide a variety of learning opportunities and teaching methods to meet the individual differences and learning needs of students. At the same time, reverse design and self-referential evaluation are an important part of the OBE concept, and in curriculum development and teaching practice, the Curriculum content and teaching activities should be designed and arranged based on the needs and expected outcomes of students, and diversified and hierarchical evaluation methods should be adopted to promote students' self-directed learning and lifelong development. In summary, the OBE concept provides an important guiding principle and methodology for the development of the elderly care Curriculum for undergraduate students majoring in music normal, which is helpful to improve the practicability, applicability and personalization of the Curriculum, and promote the all-round development and personality growth of students in the field of elderly care service.

4. Constructivist theory (Philosophy of education)

Constructivism is an educational theory that argues that learners do not passively accept the knowledge imparted by the teacher, but rather construct new understandings and knowledge systems by actively participating and interacting with the environment, combining new information with existing knowledge. This prior

knowledge includes prior personal experience, both acquired prior to enrollment and through interaction with others and society (Robert Nora and Guroi Ilzik, 2006). Constructivism involves a variety of philosophical positions, especially in the fields of epistemology, ontology, political science, and ethics (Michael Matthews, 1998). The origins of constructivist theory are closely related to the cognitive development theory of Swiss developmental psychologist Jean Piaget. In epistemology, emphasis is placed on the establishment of subjective knowledge and traditional knowledge of individual knowers. Thus, in constructivist education, it is realized that learners possess a priori knowledge and experience, which is often influenced by the social and cultural environment in which they live. As such, learning is achieved by students "constructing" knowledge based on their experiences and circumstances. While the school of behaviorism may be helpful in understanding student behavior, educators also need to understand students' thought processes and how to facilitate the development of students' thinking.

Constructivism in education is derived from epistemology, which is an educational philosophy that focuses on the logical categories of knowledge and theories of knowledge (Steff, Leslie Brown). Jerry Gale 2012). In epistemology, emphasis is placed on the establishment of subjective knowledge and traditional knowledge of individual knowers. Thus, in constructivist education, it is realized that learners possess a priori knowledge and experience, which is often influenced by the social and cultural environment in which they live. As such, learning is achieved by students "constructing" knowledge based on their experiences and circumstances. While the school of behaviorism may be helpful in understanding student behavior, educators also need to understand student thought processes, and how to facilitate the development of student thinking (Seifert, Kelvin & Sutton, Rosemary, 2009). Some scholars have argued that the rise of the constructivist view is a reaction to the traditional "educational delivery model" and the realist philosophy behind it (Robert Nora and Guroi Ilzik, 2006).

The roots of constructivism can be traced back to the educational psychology writings of Jean Piaget (1896-1980), which are in line with his theory of cognitive development. Piaget was concerned with how human beings construct meaning through the interplay of experience and thinking. His view emphasizes the relevance of the individual's development to the individual's experience, rather than the development that is entirely influenced by other people (Piaget, J., 1971). The social constructivist theory of Lev Vygotsky (1896-1934) emphasized the importance of sociocultural learning. He focuses on how learners internalize knowledge through interaction with adults, higher-ability peers, and cognitive tools, which in turn form mental structures. Educational psychologists such as Jerome Bruner were inspired by Vygotsky's theories, who further expanded on Vygotsky's theories to develop the concept of instructional scaffolding. This means that the social or information environment plays a supportive role in the learning process, but these supports are gradually diminished or withdrawn as learners internalize knowledge (Seifert, Kelvin & Sutton, Rosemary, 2009).

The formalization of constructivism from the perspective of the human being is generally attributed to Jean Piaget. He sheds light on the interplay of information from the environment and the individual's mind, leading learners to develop internalized structures. Piaget identified the process of assimilation and adaptation as the key to the individual's construction of new knowledge from experience.

In the process of assimilation, the individual integrates new information into existing cognitive frameworks without changing those frameworks. However, in the process of adaptation, an individual's experience may not be consistent with its internal representation, resulting in the need to adjust the internal representation to the new experience.

Adaptation is understood as the process of reshaping an individual's mental representation of the external world to adapt to new experiences. Failure can be seen as a mechanism of learning: we often experience failure when our expectations do not match actual experience, but by adapting to new experiences and reconstructing our cognitive model of the world, we learn from failure.

Constructivism is not a specific teaching method, but a theory that describes how learning takes place. Whether listening to a lecture or following a model airplane instruction, learners use their own experience to construct knowledge. Nonetheless, constructivism is often associated with pedagogical approaches that promote active learning or learning by doing (Kirschner, Helsinki, Sweller, J., Clark, RE, 2006).

4.1 Constructivist pedagogy

Social constructivism not only recognizes the individual characteristics and complexities of learners, but also actively promotes, utilizes, and rewards learner participation as an important part of the learning process (Wertsch, James V., 1997).

4.2 Constructivism and the learner

Socioconstructivism, or socioculturalism, encourages learners to form their own versions of understanding and knowledge under the influence of their background, culture, or inherent worldview. Learners inherit historical developments and symbolic systems, such as language, logic, and mathematical systems, which are learned as part of a particular culture. This underscores the importance of learners interacting socially with knowledgeable members of society. Without social interaction with other knowledgeable people, it is impossible for learners to acquire the social meaning of important symbolic systems and learn how to use them. Young children develop their thinking skills through interaction with other children, adults, and the physical world. From a socioconstructivist perspective, it is crucial to consider the learner's context and culture throughout the learning process, as this context also helps to shape the knowledge and truths that the learner creates, discovers, and acquires during the learning process (Wertsch, James V., 1997).

In addition, some argue that the responsibility for learning should fall more on the student. As a result, social constructivism emphasizes the importance of students' active participation in the learning process, which is a departure from previous views on education. In the past, the educational perspective was that teachers were responsible for imparting knowledge, and learners played a passive, receptive role. Von Glasersfeld (1989) emphasizes that learners construct their own understanding, rather than simply reflecting what they receive. Even in the absence of complete or

comprehensive information, learners seek meaning and try to discover regularity and order in world events (Von Glasersfeld, 1998).

Another important assumption about the nature of students concerns the level and source of motivation to learn. Von Glasersfeld argues that sustained motivation for learning depends largely on a student's confidence in their ability to learn. He believes that students' belief in the ability and potential to solve new problems comes more from the success they have experienced in solving problems in the past than from external recognition and motivation. This is linked to Vygotsky's "zone of recent development", where the challenges faced by students are very close to but slightly higher than their current level of development. By successfully completing challenging tasks, students gain the confidence and motivation to tackle more complex challenges (Vygotsky, L.S., Michael Cole, 1978).

4.3 Constructivism and mentors

According to the social constructivist approach, the teacher must assume the role of facilitator rather than the traditional teacher role (Bauersfeld, H., 1995). In instructional lectures, teachers usually cover topics and impart knowledge, while tutors help students understand their own understanding of the content. In the former case, the student plays a passive role in the learning process, while in the latter case, the student takes on a more active role. As a result, attention shifted from teachers and content to students (Adam Gamoran; Marret, Coura B., 2000). This dramatic change in role means that counselors need to demonstrate completely different skills than teachers. The teacher narrates while the facilitator asks questions, the teacher stands at the foreground to teach while the facilitator provides support in the background, the teacher provides answers based on a pre-set lesson while the facilitator guides the learner to think for himself and draw conclusions, the teacher mainly monologue while the facilitator engages in a continuous dialogue with the learner (Rhodes, Lynn K., Bellamy, G. Thomas, 1 January 1999). Although students are encouraged to master the process of problems and solutions, not all activities or solutions are fully effective. The key goal is to help students become thinking people.

4.4 Teachers and students in constructivism

Another characteristic of facilitators in the social constructivist view is that teachers and students are involved in the process of learning from each other and are equal to each other (Holt, Dan J. Colleen Willard-Holt, 1 November 2000).

This suggests that the learning experience is both individual subjective and objective, requiring the teacher's culture, values, and background to be an important part of the interaction between the student and the learning task. Students compare their ideas with those of teachers and classmates to gain new, socially tested contextual perspectives. Thus, the task or question becomes the link of communication between the teacher and the student (McMahon, M., December 1997). This means that students and teachers should understand each other's perspectives and then focus on their own beliefs, standards, and values, thus remaining subjective and objective at the same time (Savery, Lawson K., June 1, 1994). Some of the learning methods that can enable this kind of interactive learning include reciprocal teaching, peer collaboration, cognitive apprenticeship, problem-based teaching, network tasks, anchored teaching, and other methods that involve learning with others.

The social constructivist paradigm sees the environment in which learning takes place as central to learning itself (McMahon, M., December 1997). One concept of social constructivism is authentic or contextual learning, in which students engage in activities that are directly related to the application of learning, and that occur in a culture similar to the context in which they are applied (Brown, J. S., Collins, A., and Dugid, P., 1989). Cognitive apprenticeships are considered to be an effective constructivist model of learning that attempts to "engage students in real-world practice through activities and social interactions in a manner similar to the apparent and apparently successful craft apprenticeship" (Ackerman, Phillip L., March 1, 1996)

Holt and Willard-Holt (2000) emphasize the concept of dynamic assessment, which is a significantly different approach to assessing a learner's true potential than traditional tests. Here, the inherently interactive nature of learning extends to the assessment process. Instead of seeing assessment as a process performed by a

single person, such as an instructor, it sees it as a two-way process that involves the interaction between the instructor and the learner. The role of the evaluator becomes to have a dialogue with the assessee to understand their current level of performance on any task and to share with them possible ways to improve performance in later situations. As a result, assessment and learning are seen as inseparable rather than separate processes.

4.5 Constructivist teaching methods

Ask each other questions: Students ask and answer questions together

Puzzle class: Students become "experts" on a part of a group project and teach it to others in the group

Structured Controversy: Students Working Together on a Specific Controversy (Anita Woolfork, 2010)

Currently, constructivist ideas have been used in adult education. Current trends in higher education are driving more "active learning" approaches to teaching, which are often based on a constructivist perspective.

The constructivist-based approach emphasizes the importance of mechanisms such as mutual planning, diagnosing learner needs and interests, cooperative learning atmosphere, sequential activities to achieve goals, and setting learning goals based on diagnostic needs and interests. While adult learning often emphasizes the importance of the personal relevance of content, the learner engagement process, and a deeper understanding of the underlying concepts, all of these principles may benefit learners of all ages, as even children relate their everyday experiences to what they have learned.

4.6 Studies related to constructivism

1. Constructivism emphasizes that learners build meaning by interacting with their environment and constructing knowledge. (Andika, A., Tahrin, T., & Firdaus, M., 2023)

The aim of this study is to determine the best way to develop English grammar teaching materials based on constructivist theory and to evaluate their effectiveness. The results show that the English grammar textbook based on

constructivist theory presents basic and simple content in clear, well-organized and easy-to-understand language, and the structure is user-friendly and engaging, which proves the efficiency and overall quality of the textbook as an English grammar teaching material.

2. Constructivism believes that learning is the process of constructing knowledge and understanding through the interaction of the individual with the environment. (Khushk, A., Dacholfany, M. I., Abdurohim, D., & Aman, N. , 2023)

The study aims to explore theories of social learning in the clinical setting, as well as the role of connectionism, constructivism, and role modeling approaches in this and their consequences. Through qualitative design and inductive methods, the study conducted a comprehensive study and data interpretation of the study through in-depth content analysis methods, which led to conclusions about different empirical implications. The findings suggest that constructivism is a theory that confirms that learning is a learner's process and that role modeling is effective for medical students. This study provides valuable insights into the development of role modeling instructional programs and encourages clinical faculty to continuously strive to improve role modeling and teaching time management and self-control skills to help overcome problems in role modeling learning. The aim of this study is to explore the effects of applying a constructivist framework in early mathematics education, drawing on Jean Piaget's theory of cognitive development. Through meta-analysis and integration of various literature resources, this paper discusses the effectiveness of the constructivist method in early mathematics education, its consistency with Piaget's theory, its pedagogical significance, and the challenges of its implementation. Constructivist theory plays a key role in the study as a theoretical basis to guide early mathematics education, emphasizing the importance of students constructing mathematical concepts through hands-on learning experiences, cooperative activities, and the integration of manipulated objects. Research aims to provide educators and policymakers with guidance on how best to support early mathematics learning to develop students' mathematical understanding and cognitive development.

3. Constructivism believes that learning is the process of constructing knowledge and understanding through the interaction of individuals with their environment. (Ondog, J., & Kilag, O. K. ,2023)

The application of constructivism in early digital education is closely related to Piaget's theory of cognitive development, emphasizing the enhancement of students' understanding of digital concepts through hands-on experience, collaborative activities, and the integration of teaching aids. The aim of the study is to synthesize the literature and explore the effectiveness of the constructivist approach, its consistency with Piaget's theory, its pedagogical implications, and the challenges in its implementation. The findings highlight the ways in which practical experience, collaborative activities, and the integration of teaching aids positively influence students' understanding of digital concepts, and highlight the consistency of the constructivist approach with Piaget's theory of cognitive development, emphasizing the cognitive process by which students actively construct mathematical knowledge. In addition, the study proposes teaching strategies that emphasize the importance of creating interactive learning environments that promote student engagement and critical thinking. Finally, the study identifies the challenges of educators' need for continuous professional development and resource allocation, providing guidance for educators and policymakers to foster learning environments that support students' cognitive development and digital understanding.

4. Constructivism believes that learning is the process of constructing knowledge and understanding through the interaction of the individual with the environment.

The aim of this study is to determine the best way to develop English grammar teaching materials based on constructivist theory and to evaluate their effectiveness. The research and development methodology was adopted, and the DDR model was used. The study found that English grammar textbooks based on constructivist theory present basic and simple content in clear, well-organized, and easy-to-understand language, with a user-friendly and engaging structure. The results of

the validation showed that the developed textbook was very effective in teaching English grammar, confirming its overall quality.

5. Learning is the process by which students interact with their environment, explore, and construct knowledge. (Suhendi, A., Purwarno, P., & Chairani, S. , 2021)

Constructivism is the dominant paradigm in Indonesian education, rooted in Piaget's theory of cognitive development and Vygotsky's sociocultural theory. The study aims to shed light on the role of constructivist teaching in education in Indonesia. The findings show that constructivism-based pedagogical approaches have a positive impact in Indonesian education, enabling students to compete, promote their creative thinking, and design according to students' needs.

6. Constructivism emphasizes that learners construct knowledge and understanding through engaging experiences and social interactions. (Abderrahim, L., & Plana, M. G. C., 2021).

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theory, its pedagogical significance, and the challenges of its implementation. Constructivist theory plays a key role in the study as a theoretical basis to guide early mathematics education, emphasizing the importance of students constructing mathematical concepts through hands-on learning experiences, cooperative activities, and the integration of manipulated objects. Research aims to provide educators and policymakers with guidance on how best to support early mathematics learning to develop students' mathematical understanding and cognitive development.

3. Constructivism believes that learning is the process of constructing knowledge and understanding through the interaction of individuals with their environment. (Ondog, J., & Kilag, O. K. ,2023)

The application of constructivism in early digital education is closely related to Piaget's theory of cognitive development, emphasizing the enhancement of students' understanding of digital concepts through hands-on experience, collaborative activities, and the integration of teaching aids. The aim of the study is to synthesize the literature and explore the effectiveness of the constructivist approach, its consistency with Piaget's theory, its pedagogical implications, and the challenges in its implementation. The findings highlight the ways in which practical experience, collaborative activities, and the integration of teaching aids positively influence students' understanding of digital concepts, and highlight the consistency of the constructivist approach with Piaget's theory of cognitive development, emphasizing the cognitive process by which students actively construct mathematical knowledge. In addition, the study proposes teaching strategies that emphasize the importance of creating interactive learning environments that promote student engagement and critical thinking. Finally, the study identifies the challenges of educators' need for continuous professional development and resource allocation, providing guidance for educators and policymakers to foster learning environments that support students' cognitive development and digital understanding.

4. Constructivism believes that learning is the process of constructing knowledge and understanding through the interaction of the individual with the environment.

The aim of this study is to determine the best way to develop English grammar teaching materials based on constructivist theory and to evaluate their effectiveness. The research and development methodology was adopted, and the DDR model was used. The study found that English grammar textbooks based on constructivist theory present basic and simple content in clear, well-organized, and easy-to-understand language, with a user-friendly and engaging structure. The results of the validation showed that the developed textbook was very effective in teaching English grammar, confirming its overall quality.

5. Learning is the process by which students interact with their environment, explore, and construct knowledge. (Suhendi, A., Purwarno, P., & Chairani, S. , 2021)

Constructivism is the dominant paradigm in Indonesian education, rooted in Piaget's theory of cognitive development and Vygotsky's sociocultural theory. The study aims to shed light on the role of constructivist teaching in education in Indonesia. The findings show that constructivism-based pedagogical approaches have a positive impact in Indonesian education, enabling students to compete, promote their creative thinking, and design according to students' needs.

6. Constructivism emphasizes that learners construct knowledge and understanding through engaging experiences and social interactions. (Abderrahim, L., & Plana, M. G. C., 2021).

This article explores the theoretical basis of digital storytelling as a tool for language classroom teaching through the concept of time travel. The article describes the arguments put forward by Dewey, Piaget, and Vygotsky, which form the basis of the theory of social constructivism, as well as the empiricist theory of learning proposed by Kolb. The article further describes how these theories are embodied in the pedagogical approaches to language learning, from Asher's whole-body response

method, to Brian Ray's TPR narrative, and finally to the digital narrative developed by Lambert and Atchille. On this journey, the reader can pause to think about progressive theories of education and consider cognitive development and sociocultural theories. The importance of experience and the value of physical responses in the learning process become apparent, and the benefits of storytelling, whether told in traditional ways or through digital technology, are obvious.

In the development of the curriculum of the elderly care discipline for undergraduate students majoring in music in Sichuan Province, China, the constructivist pedagogical theory provides important guiding principles and methods. Constructivist pedagogy emphasizes that learners construct understanding through the process of interacting, engaging, and constructing knowledge with their environment. In music curriculum development, the social constructivist view holds that the individual characteristics and cultural background of the learner are essential for the formation of knowledge and understanding. Teachers play the role of facilitators under the framework of constructivism, engaging with students in the learning process, creating interactive learning environments, and setting learning goals based on students' needs and interests. Constructivist teaching methods such as mutual questioning, puzzle lessons, and structured arguments help to stimulate students' interest and active participation in learning. Through the theory and practice of constructivist pedagogy, the senior care Curriculum for undergraduate students majoring in music teacher training can better meet the learning needs of students and promote their musical understanding and personal development.

5.Orff music education act

The Orff Schulwerk Method, or simply the Orff Schulwerk Method, is a developmental approach used in music education. It combines music, movement, drama, and speech into a curriculum that resembles a child's play world. It was developed in the 20s by the German composer Carl Orff (1895-1982) and his colleague Gunild Keetman. Karl Orff devoted himself to the development and dissemination of his teaching methods until the last moment of his life. The Orff Method is now used around

the world, allowing students to teach in a natural and comfortable environment. The word "Schulwerk" means "schoolwork" or "schooling" in German, as far as the field of music is concerned.

The Orff method of music education uses very basic forms of daily activities to achieve the musical purpose of music students. The Orff Method is a "child-centered style of learning" music education that treats music as a basic system like language and believes that just as every child can learn a language without formal instruction, every child can learn music in a gentle and friendly way. (Campbell, Patricia Sherman.,2008)

It is often referred to as "elemental music production" because the materials needed to teach students are "basic, natural, close to the child's mind and fantasy world". (Shamrock, Mary .,May 1997)

In order for the Orff Method to work effectively, teachers must create an atmosphere similar to that of a children's play world. This allows participating children to easily learn new and often abstract musical skills, better explore instrumental or musical skills, and allow students to feel judged or judged by their peers and teachers. Children who attend Orff's classroom don't feel pressured to perform with the music because every student in Orff's classroom is treated equally, even when playing solo.

Teachers use the Orff Method to encourage students to enjoy making music individually and in groups. Children experience the joy of teamwork and cohesion. It also involves other adults and parents involved in music production. Thus, it puts the role of parents in the education of children at the center. From a teacher's point of view, Orff the Musical is also a process of breaking down each activity into its simplest form, and then presenting the steps one at a time, culminating in a complete performance.

In the Orff method, "all concepts are learned by 'doing'". Students of the Orff Method learn music by experiencing and participating in different music lessons and activities. These lessons inspire not only the paraxial concepts of music such as rhythm and rhythm, but also the aesthetic qualities of music. "The Orff activity awakens the child's overall awareness" and "increases the child's sensitivity to space, time, form, line, color, design and emotional aesthetic data, which musicians are acutely aware of, but

difficult to explain to novice musicians".(Banks, Susan .,March 1982).Unlike the Simple Music or Suzuki Method, the Orff Music Method is not a method. There is no systematic step-by-step procedure to follow. All teachers with intuition and creativity guide them in organizing their musical ideas with basic principles, clear models, and basic processes.The music produced in the Orff Method is largely improvised and uses a primitive tonal structure to build confidence and interest in the process of creative thinking. Students of the Orff Method can sing, play instruments, and dance individually or in groups. Songs are usually short, contain fixed tones, and within the singing range, can be manipulated to be played in loops or ABA forms. "The music chosen has a strong nationalist overtone, linked to folk songs and the traditional music of the children themselves". Music can also be anything from nursery rhymes to songs invented by children themselves. Orff music is largely based on simple but powerful rhythmic pattern variations. This makes the musical form very simple and beautiful, easy for young children to learn, and useful for adults, so it has a universal appeal.

5.1 Orff's instruments and tools

Orff believed that percussive rhythm was a natural and fundamental form of human expression. Carl Orff and his colleague Gunnard Kitman co-wrote most of the music in the five-volume series *Music for Children*. The volumes were first published in 1950 and are still available and used today. Music played with Orff instruments is usually very simple and easy to play even for those who are new to musicians.

Some of the instruments in this method include miniature xylophones, marimba, glockenspiel and metallic, all of which have detachable rods and resonance columns for projecting sound, and are easy to transport and store. Mr. Orff also used different sizes of drums, recorders, and silent percussion instruments "to perfect the songs sung and played" (Campbell, Patricia Sherman., 2008).

The Orff method also requires children to sing, chant, clap, dance, clap, and snap their fingers to melody and rhythm (Campbell, Patricia Sherman. ,2008).

5.2 Orff's music app

The Orff method was originally intended to teach music to children, but because it has different benefits in terms of coordination, flexibility, and concentration, the technique is often used to teach individuals with special needs. The simplicity of the technology allows students with all ranges of disabilities to participate in the learning process. Mentally handicapped students can easily complete tasks without worrying about being ridiculed or falling behind. Visually impaired/blind people who are prone to "hesitation, jerkiness, and over-control" movements due to "often very shallow breathing" can use different breathing and movement exercises to relax their body and breathe (Bitcon, Carol Hampton., 1976). Students with hearing impairments can use the Orff Method by feeling the vibrations produced by different musical instruments. Since music is mostly restorative, students who have suffered mental damage can use the method as a form of therapy. Even older adults who have become frail with age can use the Orff Method to help improve memory, flexibility, and agility (Bitcon, Carol Hampton., 1976).

5.3 Orff music pedagogy and older student populations

The Orff Music Pedagogy is combined with piano education for the elderly to create a dynamic and creative music learning environment for older students. In such an environment, older students can not only learn piano skills, but also develop musical perception and creative expression through the activities of the Orff Music Pedagogy. Through rhythm games, physical rhythm exercises, and group cooperation, elderly students can feel the charm of music, enhance their ability to appreciate music, and cultivate team spirit in collective cooperation. At the same time, this combination also promotes the physical coordination and flexibility of the older students, who show more confidence and virtuosity in their piano performance. The most important thing is that through the learning and expression of music, elderly students can enrich their spiritual world, enjoy the happiness and satisfaction brought by music, and make their lives more fulfilling and meaningful.

5.4 Research on orff's music pedagogy

1. As a foreign music teaching method, the Orff music teaching method integrates Chinese and Western cultures, and injects new vitality and impetus into the development of music education in China.

Through the review of the development process of music education in China, it is found that after the reform and opening up, the introduction of Orff's music pedagogy has brought new impetus and enlightenment to music education in China. However, with the fusion of the two different cultures, there are also positive and negative influences. In order to better develop music education in China, it is necessary to create music teaching methods that are suitable for our own national conditions and have local characteristics, and relying only on the introduction of foreign methods is not the fundamental solution.

2. In the process of promotion and development, it is very important to integrate the Orff music pedagogy with the national conditions, history and culture, and not abandon the traditional concepts and music education concepts inherent in the country. (Guo, W. .,2018, June).

This paper analyzes the theoretical localization and application localization of Orff's music pedagogy in Chinese music education, as well as the problems and countermeasures existing in the current music classroom, and discusses the ways and cases of combining Orff's music pedagogy with Chinese music education theory. The purpose of this study is to provide theoretical support and practical guidance for the development of music education in China through an in-depth analysis of the combination of Orff's music pedagogy and Chinese music education, so as to realize the localization and improvement of music education.

3. The Orff Music Pedagogy helps to develop students' musical creativity and independence and promotes their development in musical performance. (Long, A. ,2012)

This study aims to explore the application of Orff's music pedagogy in developing musical independence, improvisation, and composition skills in primary music curriculum. Through literature review, curriculum design, action research, and the presentation of conclusions, the research created three different grade level lesson plans for students in grades 2-4, 4-6, and 5-8. Teaching experiments were conducted with students in two primary grades in local public schools, and lesson videos were recorded for later reflection and analysis. The study found that students and teachers responded positively to the curriculum activities designed by the Orff Music Pedagogy, and that each student successfully participated in musical opportunities for rhythm and melody, learning and demonstrating musical independence. Early participation in the music creation process can help develop students' musical learning ability, improve creativity and musical independence, and play a positive role in subsequent music training. The Orff Music Pedagogy naturally fosters the development of musical creativity and independence, highlighting the success of individual students. This approach facilitates the successful implementation of improvisation and better teaching composition, facilitating the application of these skills by students in their subsequent musical experiences.

4. The Orff Music Pedagogy has a positive impact on students' social-emotional competence. (Zhang, F., & Talib, M. B. A. ,2023)

Through a comprehensive analysis of 50 literatures, this study explored the impact of Orff's music pedagogy on the social-emotional competence of elementary school students. The study found that the Orff music pedagogy had a positive impact on the social-emotional competence of primary school students, including emotional regulation, empathy enhancement, social skills development, self-esteem improvement, and self-expression skills. These results underscore the importance of the Orff music pedagogy in the education system and call for further more rigorous research to verify its effectiveness and promote its application in educational practice.

5. Research has shown that the Orff Music Pedagogy has a positive impact on the performance of basic musical skills in teacher trainers.

The purpose of this study was to explore the impact of Orff's music pedagogy on the performance of basic musical skills of teacher trainers. A mixed-method quasi-experimental study design was adopted, with the experimental group receiving music-based teaching methods while the control group continued to use traditional teaching methods. The findings suggest that effective teaching becomes very difficult in the absence of adequate and functional music teaching resources, especially when using the Orff music pedagogy. The study recommends expanding opportunities for continuing professional development (CPD) through in-service Curriculums and seminars, among others, to provide music teachers with the stimulation and motivation to explore lifelong career paths.

The development of the curriculum for undergraduate students majoring in music in Sichuan Province, China can draw on the principles and methods of Orff's music pedagogy. The curriculum should be student-centred, with a focus on creativity and flexibility, while emphasizing social interaction, emotional experience, and wellbeing. Combined with regional cultural characteristics, local traditional music and dance elements are integrated into the Curriculum to make it more attractive and regional. Through continuous evaluation and feedback, we will continuously improve the curriculum and enhance the teaching effect, so as to provide better music learning experience and services for undergraduate students majoring in music normal.

6. Gerontology theory

Gerontology is the study of the social, cultural, psychological, cognitive, and biological aspects of aging. The term was coined by Ilya Ilyich Mechnikov in 1903 and is derived from the Greek **γέρων** (gérōn), which means "old man", and **-λογία** (-logía), which means "research" (Harris, D.K., 1988). This field is different from geriatrics, which is the branch of medicine that specializes in treating existing conditions in older adults. Gerontologists include biology, nursing, medicine, criminology, dentistry, social work, physical and occupational therapy, psychology, psychiatry, sociology, economics,

political science, architecture, geography, pharmacy, public health, housing, and anthropology (Hooyman, N.R.; Kiyak, H.A. ,2011).The interdisciplinary nature of gerontology encompasses many sub-fields related to aging. These include policy issues such as government planning and nursing home operations, studying the impact of ageing on society, and designing living spaces for older people that promote a sense of place or family. Dr. Lawton, a behavioral psychologist at the Philadelphia Center for the Elderly, was one of the first to recognize the need to design living spaces for older adults, especially those with Alzheimer's disease. Gerontology as a discipline is relatively new. The USC Leonard Davis College of Gerontology created the first doctoral, master's, and bachelor's degree programs in gerontology in 1975.

Over the past few decades, the study of ageing has developed rapidly, making the theory of ageing even more important. Ageing theory is essential for us to continue to find more answers, as studying aging can help address complex questions that affect an individual's identity and growth process (Powell, 2009). Aging has attracted much attention as an important entry point for research, and in the study of aging, the study of aging theory can help to recognize and understand the factors that lead to age-related changes. The interaction of environmental and genetic factors, and identifying and responding to these factors can help to develop a deeper understanding (Comfort, 1979). In research theories, a unified theory that encompasses the entire phenomenon associated with aging is unrealistic. The study found that age-related changes did not occur evenly among individuals, but that psychological and sociocultural factors controlled by genes increased the difficulty of finding universal theories. Geriatricians from different schools of thought have come up with theories about aging (Merker, 2001). Over the years, this theoretical understanding has developed through analysis and criticism from a particular perspective. Biologists, sociologists, psychologists, feminists, etc., have analyzed theories related to aging from different perspectives. In general, the development of aging research and the discussion of aging theory provide an important theoretical basis for us to better understand and cope with the aging process of human beings.

Theoretical research in sociogerontology is currently relatively scarce, however, an integrated bio-psycho-social approach, visualized aging health (Ryff and Singer, 2009), is being promoted. This comprehensive analysis is expected to provide solutions to many complex problems and further improve the future productivity and healthy lifestyles of older people. This theory helps to better resist the aging process in life, improve longevity and quality of life. Social gerontology is dedicated to the study of the subtle effects of demographic change on society. This area is influenced by national interventions, health and social policies, and the perception that population ageing poses challenges to society. Phenomenology provides a theoretical basis for sociogerontology, emphasizing how individuals understand the meaning of social life and exploring the characteristics of how individuals experience the social world. The integrated theory of sociogerontology blends macro and micro perspectives to examine the impact of social, economic, environmental, cultural, and political aspects on human behavior and health. These theories aim to help people better understand the needs, challenges, and development opportunities of older persons, and to promote health, well-being, and social participation of older persons (Bengtson et al., 2009). With the intensification of the aging trend of the population, the research and application of gerontology theory has become more and more important to provide guidance for improving the living conditions and social environment of the elderly.

Gain an in-depth understanding of the needs and challenges of older persons to support their health, well-being and social engagement. By studying gerontology theory, we can pay more attention to the quality of life and social integration of the elderly, and promote the care and support of the society for the elderly. Especially in the context of exploring the development of the geriatric music curriculum for undergraduates in Chengdu, Sichuan Province, China, the understanding of gerontology theory will provide guidance for the design of the Curriculum content and form, so as to make the music curriculum more relevant to the needs and interests of older students, so as to improve their quality of life and well-being.

6.1 Research on gerontological theories

1. Gerontology theory explores the life experience, social participation and health status of the elderly, and provides an important theoretical basis for building an age-friendly society. (Howe, C. Z., 1987)

The purpose of gerontology theory research is to explore the leisure participation of the elderly and extract meaningful enlightenment for readers concerned about aging and leisure. To set the tone of the research, the theory discusses activity and detachment theory and places it within the overall conceptual framework of role theory. The results show that the recent leisure literature has contributed a wide variety of research on the relationship between older adults and activity participation, ranging from personal testimonies to non-theoretical works to empirical research. However, there are some shortcomings in the existing research, so the continuity theory is considered as a useful way to study leisure under the framework of role theory. Finally, some implications for further research and professional practice are highlighted.

2. Gerontology theory is committed to exploring the diversity, meaning transformation and reconstruction of social roles in the lives of older people in order to promote the well-being and social integration of older people. (Westerhof, G. J., Dittmann-Kohli, F., & Bode, C., 2020).

Gerontology theory aims to study the process of change and adaptation of the meaning of the individual, which implies the reorganization of the interpretation and purpose of self and life. The aim of his research is to explore the dynamic and temporal nature of personal meaning, with a particular focus on the process by which individuals reflect on and give meaning to their past, present, and future. Sociological theories often describe age-related transitions, such as retirement or empty nesting, as role losses, but society fails to compensate for these losses by providing other meaningful opportunities for older adults. An important criterion for self-evaluation of older adults is considered to be self-esteem. Research in different disciplines of psychology reveals different perspectives on the social aspects of the self. Overall, gerontological theoretical research emphasizes the importance of personal meaning

change and adaptation processes, as well as the influence of society on psychological functioning and well-being in older adults.

3. Gerontology theory explores the life, social roles and the impact of social change on older people, and provides an important theoretical basis for understanding and supporting the needs of older people. (Rubinstein, R. L., & de Medeiros, K. , 2015)

The article critiques the Successful Ageing (SA) paradigm, noting that it is described in Rowe and Kahn's book, *Successful Aging*. The article argues that two key points in the book may be consistent with neoliberal ideals, namely the emphasis on the importance of individual social action in the experience of ageing, and the failure to provide a detailed policy agenda to drive social and cultural change, especially for older people who may be discarded by the transformative approaches suggested in the book. The article does not provide direct evidence of a direct link between SA and neoliberalism, but rather points to their methodological similarities in social change. In conclusion, the article highlights the social theories implicit in the book, similar to neoliberalism, which sees the individual as the main driver of paradigm change in SA, and SA as the possibility that individual actions will not meet the needs of all older people. As a result, the article argues, this could lead to a two-tier system for older people, rather than the best way to address the needs of all older people. The article also reviews some of the studies on SA and shows that they may also highlight its similarities with neoliberalism, as well as other issues that the SA paradigm has failed to adequately address.

4. Gerontology theory explores the multi-dimensional and changing social roles of the elderly, and provides an important theoretical basis for understanding and supporting the needs of the elderly. (Rosenberg, E. ,2022)

This dissertation summarizes social theories of gerontology, including earlier theories based on roles, detachment, activity, and continuity, as well as more recent theories based on modernization, feminism, geriatric transcendence, and interactionism. The dissertation discusses the elements, assumptions, and possible

biases of each of the major theories, as well as their strengths and weaknesses. Since gerontology is interdisciplinary, a diversity of theoretical perspectives can be seen as an advantage in the field. Likewise, these theories have a focus on representing micro and macro approaches, functional and conflict approaches, social structure and psychosocial approaches, as well as historical and economic approaches. The theory may have Eurocentric and androcentric biases, which cannot be ignored. Cross-cultural research can further contribute to the refinement and strengthening of the gerontology knowledge base, as well as its value in broader areas such as public health and medicine.

5. Gerontology theory is committed to exploring the diversity of the lives of the elderly, the changes in social roles and the understanding of the needs of the elderly, which provides an important ideological foundation for building a more inclusive and supportive social environment for the elderly. (Berridge, C. ,2012)

The article points out that in the United States, care for the elderly is not a civil right, and unmet needs remain a hidden struggle. There are shortcomings when comparing long-term care (LTC) with the ethics of care. A key step toward a more just long-term care system is to integrate feminist theories of care with gerontology and disability thinking. This will involve reframing the relationship between caring ethics and justice to ensure that all participants in the care relationship are taken care of. The essay draws on feminist philosopher Martha Nussbaum's theory of competent-justice, which is centered on caring, dependence, and dignity.

Synthesizing the research results of gerontology theory, we find that gerontology, as an interdisciplinary field, is committed to deeply exploring the diversity of the lives of the elderly, the changing social roles, and the understanding of the needs of the elderly. From earlier theories of role, detachment, activity, and continuity, to more recent theories such as modernization, feminism, gerontology, and interactionism, the development of gerontology presents a pluralism and richness. These theories provide an important theoretical basis for us to understand and respond to the various challenges in the lives of older people. By studying gerontology theory, we can pay

more attention to the quality of life and social integration of the elderly, and promote the care and support of the society for the elderly. In particular, in the context of exploring the development of the curriculum of the elderly care discipline for undergraduate students majoring in music in Sichuan Province, China, the research results of gerontology theory will provide guidance for the content and form design of the Curriculum, so as to better meet the needs and interests of elderly students, and improve their quality of life and happiness. It also reflects the importance of combining theoretical knowledge with practice to provide more targeted and effective supports and services for the health, well-being and social participation of older adults.



CHAPTER 3

RESEARCH TECHNIQUE

This study focuses on the research and development of music courses for the elderly, aiming to explore and develop music courses for the elderly suitable for undergraduate students in Sichuan Province to meet their learning and social needs. In order to fully achieve the research objectives, the investigators have divided the research process into three steps, which are as follows:

1. Step 1 Research: R1 Basic Information research collect

basic information about the needs and opinions of the elderly's music curriculum, and understand the concepts, theories, and development status of the elderly's music curriculum through literature research and related research. Interviews were conducted with people involved in curriculum development, including education administrators, teachers, and older people. The information obtained through literature research and group discussions provides a theoretical basis for the development of senior music courses suitable for undergraduate students in Sichuan Province, and ensures that the curriculum development meets the needs of the target group.

2. Step 2 Development: D1 Determine the principles and objectives of the curriculum, select the content and learning experience, and develop and check the quality of the curriculum

Determine the principles and objectives of the curriculum, select the learning content and learning experience suitable for the elderly, and then develop the music curriculum for the elderly, and evaluate the quality of the curriculum. Develop music programs for seniors to meet their learning and social engagement needs. This step also includes designing a course assessment tool and inviting experts to conduct a quality check on the course to ensure that the course is developed in accordance with the course principles, objectives, content and learning experience.

3. Step 3 Development: D2 Evaluate and improve

the developed music curriculum for the elderly, so as to improve the effectiveness and adaptability of the curriculum and ensure that the curriculum can.

1. Step 1 Research: R1 Basic Information research collect

This step is consistent with the first phase of curriculum development, where basic information is collected through questionnaires and semi-structured interviews. This stage aims to analyze and research the theories, concepts and practical experiences of the music curriculum for the elderly through descriptive research and content analysis. Researchers will explore the concepts and theories related to curriculum development through literature research and related research, and collect information on the needs of the target group (undergraduates majoring in music teachers, elderly groups, elderly school teachers and teachers related to elderly care courses) for curriculum content and design through questionnaires and expert interviews, and construct a theoretical framework for curriculum development.

Research Objectives:

1. Analyze and study basic information

1.1 To study the concepts, theories and research related to the music curriculum for the elderly, and explore how the curriculum can promote the improvement of music appreciation, physical and mental health, social interaction and quality of life of the elderly.

1.2 To study the needs and opinions of undergraduates, elderly groups, teachers of schools for the elderly, and teachers related to the elderly course on music courses for the elderly, especially their expectations in terms of course content, teaching methods, and course objectives.

1.3 Through expert interviews, study the current situation and development trend of music curriculum development for the elderly, and understand the suggestions and guidance of experts on curriculum design.

Sources of information:

Documentation

1. National and local education planning documents, such as the National Education Plan (2017-2030), local education policies of Sichuan Province, etc.

2. Literature on music education for the elderly at home and abroad, especially the research results on the psychological, social, and cultural aspects of the elderly.

3. Relevant music education concepts and methods, especially practical experience related to elderly education.

personal data

1. Undergraduate students majoring in music education: The focus is on undergraduate students majoring in music education from major universities in Sichuan Province, in order to understand their understanding, interests, and needs for elderly music courses.

2. Elderly population: including elderly people who are currently participating or interested in participating in senior music courses, mainly focusing on their needs, interests, and challenges in music learning.

3. Senior school teachers: Senior school teachers play a key role in implementing the curriculum, providing important feedback and suggestions on course content, teaching methods, and other aspects.

4. Elderly care course related teachers: These teachers have rich practical experience in the field of elderly education and have certain professional suggestions for course development.

5. Expert interviewees: Four experienced experts from the fields of music education and elderly curriculum development will provide theoretical support and practical guidance for curriculum development.

Operation steps

1. Research and analyze the theories and concepts related to the development of music courses for the elderly

Through literature research, we will delve into the theories and concepts related to music courses for the elderly, with a particular focus on how music education can promote the physical and mental health, social skills, and quality of life of the elderly population. Literature analysis will also combine the current needs of the elderly

population in the field of music education to propose a theoretical framework for curriculum development.

The research content includes

The theoretical basis of music education for the elderly: exploring the convergence between the learning characteristics of the elderly population and music education, and studying how music education promotes the development of social skills, mental health, and innovation abilities of the elderly.

The design philosophy of music courses: Analyze the existing music course design models, especially how to adapt to the needs of the elderly population, help them improve their quality of life, inherit culture, and stimulate social participation.

The cultivation of innovation ability and teamwork: Research on how to combine the cultivation of teamwork and innovation ability in the curriculum to improve the learning enthusiasm and social adaptation ability of elderly students.

2. Study the needs and feedback of the elderly population towards music courses

Through questionnaire surveys and semi-structured interviews, gain a deeper understanding of the needs of different target groups for elderly music courses. The survey targets undergraduate students majoring in music education, the elderly population, senior school teachers, and teachers related to elderly care courses, mainly focusing on their expectations and suggestions for the content, teaching methods, and course objectives of elderly music courses. The semi-structured interview will focus on interviewing four experts with rich experience in music education and senior curriculum development, collecting their professional opinions and guidance.

The target audience includes:

1. Undergraduate students majoring in music education: Investigate their interest, cognition, and expectations for elderly music courses, especially their practical experience and teaching methods in the field of elderly education.

2. Elderly population: Understand their interests, needs, and expectations for music learning, especially their preferences for course format and content, as well as the difficulties and challenges they face in actual learning.

3. Elderly school teachers and elderly care course teachers: Collect the difficulties they encounter in actual teaching, evaluate the effectiveness of existing curriculum models, and explore their suggestions and expectations for new curriculum design.

Design of data collection tools

To ensure the accuracy and effectiveness of data collection, this study will design the following tools: 1. Questionnaire survey

Design a questionnaire survey covering the basic information, music course needs, learning expectations, and other aspects of undergraduate students majoring in music education, the elderly population, teachers in senior schools, and teachers related to elderly care courses. The questionnaire questions will include course content (such as music style, learning format, course difficulty, etc.), teaching methods (such as online, offline, group teaching, etc.), and course objectives (such as enhancing social skills, improving quality of life, promoting cultural heritage, etc.).

2. Semi structured interview outline

Design a semi-structured interview outline for four experts with rich experience in music education and senior curriculum development. The interview will cover experts' suggestions on the design of music courses for the elderly, their practical experience, their views on course objectives and methods, as well as their understanding of the needs of the elderly population.

Data collection and analysis

Collect data through questionnaire surveys and interviews, and conduct quantitative and qualitative analysis. Quantitative analysis mainly involves statistical analysis and comparison of data in questionnaires, while qualitative analysis involves coding and thematic analysis of interview content to gain a deeper understanding of the needs and feedback of different groups.

Development and Quality Assurance of Tools

Quality assurance measures:

1. Expert review and feedback

All designed questionnaires and interview outlines will be submitted to experts in the relevant field for review before official release. Experts will review the relevance, effectiveness, and scientificity of the tools based on the needs of course development, to ensure that the tools can accurately collect the needs of the target audience and further enhance their scientificity and practicality.

2. Consistency check

To ensure the effectiveness and consistency of the tool, the Index of Objective Consensus (IOC) will be used for testing. Experts evaluate each question in the questionnaire and provide feedback, scoring them based on their consistency with the research objectives. If the IOC value of the tool is greater than or equal to 0.50, it indicates that the tool meets the requirements and the formal data collection and analysis process can begin.

IOC expert composition: In order to ensure the professionalism and accuracy of the tool, this study selected experts in the following fields:

Gerontology expert: with research or practical experience related to gerontology, able to evaluate the effectiveness and scientificity of content in the field.

Education expert: Possess academic background and practical experience related to education, responsible for evaluating the adaptability and practicality of questionnaires and interview outlines in the field of education.

Music educator: an expert specializing in the field of music education, capable of evaluating content related to music teaching, ensuring its professionalism and applicability.

IOC calculation formula:

The Content Consistency Index (IOC) is used to evaluate the consistency of each project with research objectives and assign a score to each question. The scoring criteria are as follows:

+1: Experts believe that the issue is completely consistent with the research objectives.

0: Indicates that experts believe the issue is not completely consistent with the research objectives, or are unsure of its consistency.

-1: Experts believe that this issue is completely inconsistent with the research objectives.

The calculation formula is:

$$IOC = \frac{\sum R}{N}$$

Among them:

$\sum R$ is the sum of expert ratings for each question (the sum of each expert's ratings).

N is the number of experts involved in the evaluation.

If the calculated IOC value is greater than or equal to 0.50, it indicates that the tool has good effectiveness and further data collection work can be carried out; On the contrary, it is necessary to modify and optimize the tool.

Tool correction and improvement

Make necessary modifications and improvements to the tool based on expert feedback to ensure that it can comprehensively and accurately reflect the needs and expectations of the target audience.

Result analysis and modification

Data analysis

After collecting the data, conduct detailed quantitative and qualitative analysis, calculate the distribution of answers for each question in the questionnaire, and conduct thematic analysis on the interview data to extract the main needs and expectations of the elderly population for music courses.

Modification and improvement

Based on the data analysis results, further modify the research tools, curriculum design framework, and teaching content to ensure the adaptability, effectiveness, and operability of the course.

epilogue

The first stage of this study will provide solid theoretical support and practical basis for the design of elderly music courses through questionnaire surveys and expert interviews. By extensively collecting and analyzing the needs of various parties, ensure that the final designed curriculum can meet the needs of the elderly population in music education, promote their physical and mental health, social interaction, and cultural heritage.

2. Step 2 Development: D1 Determine the principles and objectives of the curriculum, select the content and learning experience, and develop and check the quality of the curriculum

At this stage of curriculum development, we will determine the principles and objectives of music courses for the elderly through a series of specific measures, and select course content and learning experiences that are suitable for elderly learners. At the same time, we also need to design effective course evaluation tools to ensure the quality of course content, and invite experts to conduct quality checks on the courses to ensure that the course design meets educational goals and the needs of the elderly population.

1. Determine course principles

The principle of curriculum is the foundation of curriculum development, which determines the overall framework and direction of the curriculum. To ensure the effectiveness of music courses for the elderly, the following core principles need to be followed:

Learner centered: Course content and teaching methods should fully consider the characteristics of elderly learners, including their special cognitive, physical, psychological, and other needs. The curriculum should focus on the learning pace, interests, and social participation needs of the elderly, providing personalized learning experiences.

Interdisciplinary integration: The diversity of the elderly population requires courses that combine knowledge from fields such as music education, psychology, and

gerontology to ensure that the curriculum not only provides learning of music skills, but also focuses on the psychological health, emotional needs, and social interaction abilities of the elderly.

Practice oriented: Curriculum design should focus on practical aspects, emphasizing the promotion of participation and achievement among the elderly through music activities. Encourage elderly learners to actively participate and experience the joy of music through interactive learning, performance, and creative activities.

Combining Situation and Experience: The course content should be closely integrated with the actual living situations of the elderly, using situational learning methods to simulate music scenes in daily life to help the elderly understand and apply the knowledge they have learned.

2. Determine course objectives

Clear course objectives are the key to course development. According to the characteristics of the elderly population, the goals of music courses should focus on physical and mental health, social participation, and artistic enjoyment. Specific goals include:

Physical and mental health goals: Through music activities, improve the mental health of the elderly, alleviate feelings of loneliness, anxiety, and depression, enhance self-expression ability, and improve mentality.

Social participation goal: Through collective music activities such as choir, music and dance, promote interaction and connection between the elderly and others, enhance their sense of social belonging and community participation.

Skill development goal: To help elderly people learn and master simple music skills (such as instrument playing, vocal training, etc.), enrich their spiritual and cultural life, and stimulate their interests and hobbies.

Artistic enjoyment goal: Through music learning and participation, enable the elderly to enjoy the beauty of art, enhance their appreciation and creativity of music, and improve their quality of life.

3. Choose suitable course content and learning experience

When selecting course content, full consideration should be given to the physiological, psychological, and social characteristics of the elderly, ensuring that the content is both easy to understand and operate, and can bring physical and mental benefits. The specific content should have the following characteristics:

Simplicity: The course content should be concise and easy to understand, in line with the cognitive characteristics of the elderly, and avoid overly complex concepts or difficult skills. By selecting simple and easy to operate learning activities, it helps elderly people easily understand and master.

Physical and mental benefits: The course content should focus on promoting the physical and mental health of the elderly. For example, activities such as music and dance can not only enhance the cognitive ability and coordination of the elderly, but also relieve stress, improve emotions, and achieve dual physical and mental benefits.

Interest orientation: The curriculum should be designed based on the interests, cultural background, and life experience of the elderly. By selecting topics that they are familiar with and enjoy, stimulating their interest in learning, enhancing their motivation to learn, and enabling elderly people to participate in activities in a pleasant atmosphere, they can gain a sense of achievement.

Social interaction: The curriculum should be designed to promote social interaction and emotional communication, enhance interaction and cooperation among students. Collective activities, group discussions, and other forms not only help improve social skills, but also enhance emotional connections, strengthen the sense of belonging and social support of the elderly.

Through the selection of these contents, the course will better meet the learning needs of the elderly, promote physical and mental health, emotional expression, and social interaction, and improve their overall quality of life.

4. Develop course structure and learning activities

The structural design of the course should be based on the needs and learning characteristics of the elderly, ensuring that each link is reasonable and easy to operate. A reasonable course structure includes the following main components:

Course Introduction and Goal Setting: Clarify the course objectives and learning goals, allowing students to understand the significance and expected benefits of participating in the course.

Theoretical explanation and discussion: Through brief explanations and interactive discussions, help students understand the relationship between music and emotional expression, and introduce how to improve physical and mental health through music.

Practical activities: Through collective performances, singing exercises, dance exercises, etc., help students transform theoretical knowledge into practical operational skills.

Feedback and Reflection: Regularly provide learning feedback to help students summarize experiences, identify problems, and adjust learning strategies in a timely manner.

Evaluation and Adjustment: Conduct regular evaluations at various stages of the course, collect student feedback, assess the effectiveness of the course, and make adjustments based on feedback.

5. Design course evaluation tools

To ensure the quality and effectiveness of the course, it is essential to design scientific course evaluation tools. These tools will help monitor the implementation of courses and make timely adjustments to course content and teaching methods. The evaluation tools include:

Learning effectiveness evaluation: Evaluate students' learning outcomes and skill mastery in the course through their classroom performance, assignments, skill tests, etc.

Teaching method evaluation: Collect feedback from students on course teaching methods, learning experiences, and teaching resources through questionnaire surveys or interviews, and evaluate the suitability and effectiveness of the course.

Course satisfaction assessment: Conduct regular satisfaction surveys on students to understand their opinions and suggestions on course content, teaching progress, learning environment, and other aspects.

Social Participation Assessment: Evaluate students' social activities outside of the classroom, such as participating in music activities, interacting with others, etc., to understand the promoting effect of the course on social participation among the elderly.

6. Invite experts to conduct quality inspections

Course development not only relies on feedback from students, but also requires inviting experts for quality checks. Expert review can ensure the academic and practical nature of course content and provide constructive feedback. The main contents of expert review include:

Expert review team: Invite music education experts, elderly care experts, curriculum development experts, etc. to form a review team to comprehensively review curriculum design, teaching methods, evaluation tools, and other content.

Expert feedback: Through expert review, confirm whether the course conforms to the principles and objectives of the course, meets the learning needs of the elderly, and has sufficient teaching effectiveness and practical significance.

7. Final evaluation and course improvement

Based on the evaluation results and expert feedback during the course implementation process, carry out the final course optimization. Improvement measures may include:

Content adjustment: Add, remove or modify content that is not suitable for the elderly.

Optimization of teaching methods: Adopt interactive and situational teaching methods that are more in line with the characteristics of elderly learning.

Learning resource support: Provide more diverse learning materials and coaching resources.

By implementing the detailed steps above, we ensure that the developed music curriculum for the elderly not only meets academic requirements, but also effectively promotes the physical and mental health and social integration of the elderly population.

3. Step 3 Development: D2 Evaluate and improve

In this study, due to the inability to conduct classroom observation and practical teaching, the evaluation and improvement of the curriculum mainly rely on expert review. Through expert feedback and evaluation, combined with a five level rating scale, a comprehensive assessment of the curriculum is conducted, and improvement suggestions are proposed based on this to ensure that the curriculum content, teaching methods, and activities can better meet the needs of the elderly population and music teacher education students.

1. Evaluation objectives

The evaluation objective of this stage is to assess the designed music curriculum for the elderly through professional evaluation by experts and provide suggestions for curriculum improvement. Specific goals include:

Verify the clarity and feasibility of course objectives, ensuring that they meet teaching needs and are actionable.

Evaluate the scientificity and adaptability of the course content, ensuring that it meets the needs of the elderly population and meets the learning requirements of music teacher education students.

Evaluate the effectiveness of teaching methods and activities to ensure that the selected teaching methods can help students understand and master the course content.

Collect expert opinions and optimize the course, adjust the course design based on expert feedback, and ensure the efficiency and adaptability of the course.

2. Composition of expert review team

To ensure the scientific and comprehensive nature of the evaluation results, the research team invited six experts from different fields to conduct course reviews. These experts include:

Two music education experts: provide professional opinions on curriculum content and teaching methods to ensure that curriculum design meets the basic requirements of music education.

1 geriatrics expert: Help evaluate whether the curriculum fully considers the special needs of the elderly population, especially in terms of physiological, psychological, and educational needs.

1 music teacher trainee: As a potential beneficiary of the course, provide practical feedback on the course content, teaching methods, and their applicability.

One course development expert: provides professional advice from the perspective of course design, ensuring a reasonable course structure and appropriate teaching methods.

One senior school student: Provide valuable feedback on the needs of the elderly population, ensuring the attractiveness and adaptability of course content to elderly learners.

3. Evaluation tools

The main evaluation tool for this study is a five level rating scale, which will be used by experts to evaluate various aspects of the course. Each item on the rating scale is scored using five levels to more accurately reflect the strengths and weaknesses of the course design. The rating levels are as follows:

1 point: Very dissatisfied, indicating that the course has serious problems in this area and cannot achieve the expected goals.

2 points: Dissatisfied, indicating that there are obvious problems with the course in this area and significant improvement is needed.

3 points: average, indicating that the course meets the basic requirements in this area, but there is still room for improvement.

4 points: Satisfied, indicating that the course has performed well in this area and can meet the expected requirements.

5 points: Very satisfied, indicating excellent performance in this area of the course, fully meeting the expected goals.

The specific items evaluated include:

Clarity and feasibility of course objectives: Experts evaluate whether the course objectives are clear and can be effectively achieved through course content and teaching methods.

The scientificity and adaptability of course content: Experts evaluate whether the course content fully considers the needs of the elderly population and whether it is in line with the learning goals of music teacher education students.

Innovation and effectiveness of teaching methods: Experts evaluate whether teaching methods are innovative and can effectively help students master relevant knowledge and skills.

The rationality and practicality of course activity design: Experts evaluate whether the arrangement of course activities is scientific and reasonable, whether it can stimulate students' interest, and promote learning effectiveness.

The adequacy and diversity of learning resources: Experts evaluate whether the learning resources provided by the course are sufficient, including textbooks, auxiliary learning materials, etc., and whether they can support the learning needs of students.

4. Evaluation process

The evaluation process is divided into the following steps:

1. Distribute a five level rating scale: After the research team designs a positive rating scale, experts will evaluate the course based on their professional field and provide ratings.

2. Expert feedback collection: The research team will collect expert feedback after the review and organize and analyze the expert ratings.

3. Rating analysis: The expert's rating results are statistically analyzed, mainly using descriptive statistical methods to calculate the average and standard deviation of each rating, and the rating results are classified and analyzed to identify the strengths and weaknesses of the course.

4. Develop improvement measures: Based on the evaluation results and feedback from experts, the research team will analyze the course, identify problems in the course design, and propose improvement measures. For example, for low scoring projects, it may be necessary to redesign course content or adjust teaching methods; For high scoring projects, their advantages can be further strengthened and maintained.

5. Modification and optimization: Based on the evaluation results, optimize the course design to ensure that it can better meet the needs of students and teachers, and improve teaching effectiveness.

5. Data analysis methods

As this study mainly relies on expert rating scales, data analysis will focus on quantitative analysis. The specific analysis methods include:

Descriptive statistical analysis: Calculate statistical indicators such as the average score and standard deviation of each evaluation item to understand the overall evaluation situation of each item.

Project analysis: Based on feedback from expert ratings, conduct a detailed analysis of each course module or teaching method, identify areas with lower ratings, and further make targeted improvements.

Summary of expert opinions: Organize and categorize the open-ended opinions provided by experts, and extract specific suggestions for course improvement from them.

6. Expert feedback and course improvement

After the evaluation is completed, the research team will optimize the course based on expert ratings and feedback. Improvement directions may include:

Clarify course objectives: Adjust or clarify course objectives to ensure their operability and effective guidance for students' learning.

Optimize course content: Based on expert feedback, adjust the structure and depth of course content to better meet the needs of students and fully consider the special needs of the elderly population.

Improving teaching methods: If experts provide feedback on deficiencies in teaching methods, the research team will consider introducing more innovative and diverse teaching methods to increase student engagement and learning interest.

Increase learning resources: Based on evaluation feedback, the research team will enhance the learning resources in the course to ensure they can support the learning needs of different types of learners.

7. Summary and Prospect

Through the analysis of expert review results, the research team is able to effectively identify deficiencies in course design and make targeted optimization and improvement based on the evaluation results. Ultimately, through this evaluation, this study will design a more scientific and practical music course for undergraduate students majoring in music education in Sichuan Province, ensuring that the course not only meets educational goals but also meets the needs of students and the elderly population, improving their quality of life and music education level.

CHAPTER 4

DATA ANALYSIS RESULTS

The purpose of this study is to develop a nursing curriculum suitable for undergraduate students majoring in music in Sichuan Province, China, so as to improve students' ability to care for the elderly. The objectives of the study include: 1) to study the planning and needs of the curriculum for the elderly, 2) to design the corresponding music curriculum for the elderly, and 3) to evaluate the effectiveness of the curriculum. This study is in the form of research and development (R&D) and is divided into three steps: the first part is basic data collection to develop a suitable music curriculum for the elderly; The second part is to develop the curriculum according to learning needs and socio-cultural factors; The third part conducts an expert assessment to ensure the quality and applicability of the Curriculum. The results of the data analysis are divided into three parts, as follows:

Part 1 (R1): On the development of the elderly care curriculum, which aims to support the development of the elderly care curriculum for undergraduate students majoring in music in Sichuan Province. In order to promote the care and support of undergraduate students majoring in music in Sichuan Province, China, for the elderly. This is in line with the first phase of curriculum development, which is to analyze and research the underlying data. The results of this phase of the study are divided into two parts: 1). to study the importance of music Curriculums for the elderly, theories and the results of related research; 2) Through the results of the questionnaire survey on the needs and opinions of the elderly music Curriculum and semi-structured interviews, the concepts and concepts related to the music Curriculum for the elderly were discussed.

Part 2 (D1): Develops the undergraduate pension Curriculums for the elderly .According to the learning needs and social and cultural factors, formulates the music Curriculums for the elderly, and develops the pension Curriculums for the aged, so as to promote the care and understanding of the elderly. This is consistent with the second stage of Curriculum development, which determines the Curriculum principles and objectives and selects the Curriculum content.

Part 3 (D2) :Effectiveness Evaluation Results of the pension subject Curriculum .According to the needs of the Curriculum development, this stage aims to conduct an expert evaluation of the music Curriculum for the elderly to ensure the quality and applicability of the Curriculum. Experts evaluate the effectiveness of the developed curriculum to promote the care of the elderly of undergraduate students in Sichuan Province, China. This is consistent with the third stage of the curriculum development, namely, the assessment and improvement of the curriculum.

1. Part I (Research: R1)

This part aims to explore the importance of elderly music Curriculums and their current status to meet the growing needs of the elderly population for music education. Through literature analysis, questionnaires and semi-structured interviews, the results show that teachers and parents generally recognize the importance of music Curriculums for the elderly, especially in improving the physical and mental health and social skills of the elderly. However, the survey also revealed that the existing curriculum pays insufficient attention to the elderly group, and teachers have relatively poor professional knowledge and skills training in music education for the elderly. In addition, the awareness of social support for the elderly's participation in music activities still needs to be enhanced. These results provide an important basis for the design and development of music Curriculums for the elderly, emphasizing the need to meet the needs of the elderly and improve their quality of life.

The results of the basic information needs of the geriatric music curriculum developed to promote physical and mental health and social skills are divided into two parts:

On the importance, theory and related research results of the elderly music Curriculums: The core concepts and their role in improving the quality of life of the elderly were studied through literature analysis and questionnaire survey, emphasizing the importance of music in promoting physical and mental health and social interaction.

Questionnaire results and semi-structured interviews on music curriculum needs and opinions for the elderly: Through semi-structured interviews, we collected

feedback from teachers, parents and the society on the music Curriculums for the elderly, pointed out that the existing curriculum paid insufficient attention to the elderly group, and made suggestions for improvement to meet the actual needs of the elderly. The data results for each section are analyzed in detail next.

1.1 On the importance, theory, and related research results of music curriculums for the elderly

1.1.1 Explore the importance of music curriculums for the elderly

Music education plays an important role in the education system, especially in addressing the challenges posed by the global aging population, and the educational needs for the elderly are becoming increasingly significant. Studies have shown that older people show a strong interest in music activities, and that participation in music significantly improves their physical and mental health and quality of life. However, the participation of older people in instrumental music Curriculums, especially in piano education, is still too small, reflecting insufficient attention to this field. Many teachers who teach music for older people lack professional training, leading to poor education outcomes. In addition, the social cognition of the music needs of the elderly still needs to be strengthened, and many people fail to fully understand the positive effects of their participation in music activities. Although the importance of music Curriculums for the elderly has been widely recognized, there are still problems such as emphasis on the young group, lack of systematic curriculum design and insufficient professional knowledge training in Sichuan Province. Therefore, in-depth research on the importance and current status of the music Curriculums for the elderly is crucial for the design and development of the follow-up Curriculums to ensure that these Curriculums can effectively meet the cultural needs of the elderly and improve their quality of life. On the whole, music Curriculums for the elderly can not only improve the quality of life of the elderly, but also have significant social value and practical significance. With the deepening of attention to the elderly group, music education will play a more important role in this process.

1.1.2 Related research results of the geriatric music curriculum

In the process of studying the development of pension Curriculums for undergraduate students in Sichuan Province, China, researchers have systematically sorted out many relevant theories and research results to support the design and implementation of music Curriculums for the elderly. First, curriculum development must focus on the needs of older learners, emphasizing the practicality and pertinence of the content to accommodate their psychological and physiological characteristics. Schools for the elderly provide a lifelong learning platform for the elderly, while music Curriculums for the elderly can enrich their daily life and stimulate their creativity and self-confidence. At the same time, OBE theory emphasizes learners and focuses on the achievement of learning results to ensure that curriculum design can effectively promote skills improvement; constructivism theory encourages elderly learners to actively construct music understanding through experience and exploration to improve their independent learning ability. Music education is regarded as an important means to promote the physical and mental health of the elderly, which can enhance social skills and improve mental health. The Orff music teaching method stimulates learners' interest through games and activities. It is especially suitable for the elderly, and can promote physical and mental coordination and social interaction. Furthermore, gerontology theory provides the basis for understanding the unique needs of older people, helping to design Curriculums for them that meet their practical needs. By integrating these theories, it can provide solid theoretical support for curriculum development, ensuring that the cultural needs of older people are met and their physical and mental health and social integration are promoted.

1.2 Requirements and opinions on senior music curriculums

Develop the pension Curriculums for music normal undergraduates in Sichuan Province: Develop the music Curriculums for the elderly according to the learning needs and social and cultural factors, and develop the Curriculums for the elderly to promote the care and understanding of music normal undergraduates for the elderly (development: D1). Include the following contents: 1). Develop the framework of the elderly music curriculum, and determine the core content and components of the

curriculum.2). Develop the specific content and teaching plan of the music Curriculum for the elderly, including the Curriculum objectives, teaching process and evaluation method. Developing the framework and specific content of the elderly music Curriculum is an important step to improve the quality of the undergraduate nursing care Curriculum in Sichuan Province. In the curriculum framework, the core content and components of the curriculum should first be determined to ensure that it is closely integrated with the social needs. The development of the curriculum for the elderly is not only the adjustment and improvement of the existing education system, but also a new curriculum designed to adapt to the challenges of the new era. Clear curriculum objectives are key in the development process, and existing Curriculums must be systematically improved so that student behaviour can change in a predetermined direction. Furthermore, rational and appropriate ways to assess and measure also need to be planned to ensure the effectiveness and sustainability of Curriculum effects. Through this series of work, it aims to improve students' comprehensive ability in the field of elderly care, and to provide better quality talent support for the future elderly care service. During the investigation, the following seven steps can be followed.:1). Demand survey and background research: Conduct a survey and background research to understand the needs of elderly people for music Curriculums and socio-cultural factors on the impact.2). Literature review: To conduct a literature review in the field of music education for the elderly, collect relevant research results and practical experience, and provide theoretical basis for curriculum design.3). Design research tools: Design research tools such as questionnaires, interview guides and observation tables to collect elderly needs and feedback on music Curriculums.4). Data collection: collect the music learning needs and feedback of the elderly, and obtain more intuitive data by observing the participation in music activities.5). Data analysis: organize and analyze the collected data to deeply understand the elderly's needs of music learning and the impact of social and cultural factors.6). Curriculum design: Based on the survey and analysis results, design the framework, content and teaching methods of the music Curriculum for the elderly to ensure the characteristics and needs of the elderly

learners.7). Curriculum evaluation: To evaluate the elderly music Curriculum, collect relevant data to evaluate the effectiveness and applicability of the Curriculum, and provide a basis for the subsequent Curriculum improvement. Through the above research steps, it will be able to fully understand the music learning needs of the elderly and the influence of socio-cultural factors, and provide scientific support for the design of the elderly music Curriculums close to the reality. At the same time, the investigators also clearly pointed out that the components of the Curriculum should include 10 aspects: 1) principles; 2) objectives; 3) learning results; 4) curriculum structure; 5) Curriculum description; 6) content; 7) the organization of learning activities; 8) learning resources; 9) measurement and evaluation; 10) learning management plan.

1.2.1 Development and analysis results of music normal major undergraduate nursing curriculum in sichuan province, china

In the development of pension Curriculums for music normal major undergraduates in Sichuan Province, China, the curriculum design emphasizes the integration of various learning activities to form the characteristics of mutual promotion. The Curriculum aims to cultivate students' comprehensive ability and innovative consciousness in the field of elderly care, covering many fields of music education, mental health, social services and cultural inheritance. The curriculum development follows six stages: firstly, through the analysis of the characteristics of the pension industry, identify students' needs and define the Curriculum objectives; secondly, discuss the Curriculum objectives and content framework with relevant experts to ensure the integration with the career development of students; next, design diversified teaching strategies to promote students' active participation and deep learning; then, integrate different learning activities to enhance students' actual understanding ability; then, establish a scientific evaluation mechanism to comprehensively evaluate the learning process; finally, continuously optimize the Curriculum content based on the evaluation results and market feedback. Through this systematic development process, the Curriculum aims to cultivate interdisciplinary talents with professional knowledge and practical ability, and to make contributions to the future development of elderly care services.

1.2.2 Results of the curriculum analysis of music teachers in sichuan province

In the nursing subject Curriculum of music normal major undergraduates in Sichuan Province, it is very important to cultivate students' innovative ability effectively. This process needs to comprehensively consider students' creativity, knowledge level, personality characteristics, internal motivation and surrounding environment and other influencing factors. Innovation ability is essentially a complex thinking process, involving problem solving, theoretical understanding and practical application. Therefore, approaches to developing this ability should include creative thinking, creative work with others, and putting innovations into practice. Specifically, students need to identify novel ideas in the pension subject, use a variety of information sources to integrate their thinking, and stimulate the innovation potential in teamwork. The core tasks of the curriculum also include developing high-quality Curriculums for the elderly to adapt to social changes, cultivating communication skills with an international perspective, shaping moral and ethical concepts in line with Chinese culture, improving teachers' professional ability to meet professional standards, and improving Curriculum management through a quality management system. The goal of the Curriculum is to ensure that the quality of students' education complies with international standards, enabling them to effectively use communication skills in the field of elderly care services, and have the necessary moral character and expertise. In addition, the curriculum strategy emphasizes the principle of fairness to increase the accessibility of old-age education and encourage relevant organizations to participate in the management of old-age education. Through systematic teaching strategies and rich practical activities, this Curriculum aims to cultivate compound talents with comprehensive quality, meet the growing social demand for elderly care services, and improve students' comprehensive ability in the field of elderly care.

1.3 Questionnaire survey and semi-structured interview for undergraduates of music teachers in sichuan province, china

In order to have a deeper understanding of students' needs and opinions on the pension subject Curriculum, I designed a targeted questionnaire covering the Curriculum content, teaching methods, evaluation methods and other aspects. A total of 402 questionnaires were distributed in this study, mainly collecting students' basic information and specific feedback on the Curriculum. The questionnaire was collected through the questionnaire star platform, and the analysis was divided into three parts: first, the basic information and general information of the respondents; second, the demand for the Curriculum form, learning activities and evaluation methods; and finally, other suggestions and opinions. Through the systematic analysis of these questionnaire data, it is expected to provide an effective reference basis for the design and implementation of pension subject Curriculums.

In addition, semi-structured interviews with four experts with rich experience in the field of music education. First of all, Professor Du Xiaoli is from the School of Music Education of Sichuan Conservatory of Music. She has been engaged in piano education and teaching research for a long time, and has made remarkable achievements in academic research, textbook compilation, student guidance and academic exchange. Secondly, Liang Zhi is a senior piano teacher who graduated from Sichuan Conservatory of Music. As a member of Chinese Musicians Association, he has accumulated many years of experience in piano teaching and social teaching, and cultivated many outstanding students who have entered the world famous music university. Zhou Qianqian graduated from Southwest University of Science and Technology, majoring in music performance. She worked in TheONE intelligent piano headquarters in Sichuan, then returned to her hometown to establish a piano training school, and served as an electric piano teacher in the University for the elderly. She has performed excellent performance in teaching and won many honors. Finally, Zhang Weiwei graduated from the School of Music of Sichuan Normal University with a master's degree, and his research direction is piano playing and teaching. Currently, he works in Sichuan Vocational and Technical College and Suining University for the Elderly, serving

as an art director and piano teacher, and leads students to win awards in many competitions. The interviews with these experts aimed to gain more insights to help optimize the design and implementation of the pension subject curriculum to better meet the needs of students and society.

1.3.1 Survey questionnaire

Table 1 Basic information of the respondent

Gender of the respondents	quantity	percentage
man	191	47.51%
woman	211	52.49%
total	402	100%

As can be seen from the table, the number of males who answered the questionnaire was 191, accounting for 47.51%; The number of females was 211, accounting for 52.49%.

Table 2 The type of respondent

Type of respondent	quantity	percentage
Undergraduate student majoring in music	190	47.26%
teacher		
Older age groups	103	25.62%
Teacher of the school for the elderly	62	15.42%
Teachers related to the elderly care	47	11.69%
Curriculum		
total	402	100%

As can be seen from the table, a total of 402 respondents answered the questionnaire, and 190 undergraduates majored in music normal, accounting for

47.26%. This was followed by 103 teachers (25.62%) in the elderly group, 62 teachers in schools for the elderly, accounting for 15.42%, and 47 teachers (11.69%) related to the elderly care Curriculum.

Table 3 Respondent age information

Age of the respondents	quantity	proportion
18-29 years old	161	40.05%
30-39 years old	118	29.35%
40-59 years old	77	19.15%
Over 60 years old	46	11.44%
total	402	100%

As can be seen from the table, a total of 402 respondents responded to the questionnaire. The number of people aged 18-29 was 116, accounting for 40.05%. The number of people aged 30-39 was 118, accounting for 29.35%, the number of people aged 40-59 was 77, accounting for 19.15%, and the number of people over 60 years old was 46, accounting for 11.44%.

Table 4 Respondents' work/study information

Respondents' work/study background	quantity	proportion
Undergraduate college for music teacher training	199	49.5%
School for the Elderly	116	28.86%
Pension-related institutions	69	17.16%

Table 4 (Continued)

other	18	4.86%
total	402	100%

As can be seen from the chart, among the 402 respondents, 199 (49.5%) are from undergraduate colleges specializing in music teaching, 116 (28.86%) are from schools for the elderly, 69 (17.16%) are from pension-related institutions, and the remaining 18 (4.86%) are from other backgrounds.

Table 5 Questionnaire information

Percentage data on Curriculum format, activity organization, assessment and evaluation needs	Quantity (percentage)	Average score
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Table 5 (Continued)

<p>I believe that if undergraduate students majoring in music can participate in the planning of elderly care Curriculums, their ability to serve the elderly will be enhanced.</p> <p>Strongly disagree</p> <p>disagree</p> <p>Up in the air</p> <p>agree</p> <p>Strongly agree</p>	<p>22 (5.47%)</p> <p>26(6.47%)</p> <p>78(19.4%)</p> <p>164(40.8%)</p> <p>112(27.86%)</p>	<p>3.79</p>
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Table 5 (Continued)

I believe that for undergraduate students majoring in music teaching, systematic retirement curriculum planning can significantly improve their professional skills.		3.67
Strongly disagree		
disagree		
Up in the air		
Agree	20(4.98%)	
	42(10.45%)	
Strongly agree	104(25.87%)	
	122(30.35%)	
	114(28.36%)	

Table 5 (Continued)

I believe that the more comprehensive the content of the Curriculum planning, the more helpful it will be for the undergraduate students majoring in music to improve their practical ability to serve the elderly.		3.82
Strongly disagree		
disagree		
Up in the air		
agree	18(4.48%)	
Strongly agree	33(8.21%)	
	81(20.15%)	
	142(35.32%)	
	128(31.84%)	

Table 5 (Continued)

I believe that the elderly care Curriculums that undergraduates majoring in music can better meet the needs of the elderly group.		
Strongly disagree		
disagree		
Up in the air		
agree	67(16.67%)	
Strongly agree	50(12.44%)	
	83(20.65%)	
	94(23.38%)	
	108(26.87%)	3.31

Table 5 (Continued)

I believe that systematic curriculum planning can effectively improve the practical service ability of undergraduate students majoring in music teaching.		
Strongly disagree		
disagree		
Up in the air		
agree		
Strongly agree	38(9.45%)	
	81(20.15%)	
	84(20.9%)	
	114(28.36%)	
	85(21.14%)	3.32

Table 5 (Continued)

I believe that the systematic curriculum design of the elderly care discipline can help the undergraduate students of music teacher training to better understand the psychological needs of the elderly.		
Strongly disagree		
disagree		
Up in the air		
agree		
Strongly agree	26(6.47%)	
	24(5.97%)	
	67(16.67%)	
	123(30.6%)	3.92
	162(40.3%)	

Table 5 (Continued)

I believe that it is helpful to think that the systematic education of undergraduate students majoring in music teacher training will help them better cope with the psychological needs of the elderly group.		
Strongly disagree	17(4.23%)	
disagree	47(11.69%)	
Up in the air	67(16.67%)	
agree	142(35.32%)	
Strongly agree	129(32.09%)	3.79

Table 5 (Continued)

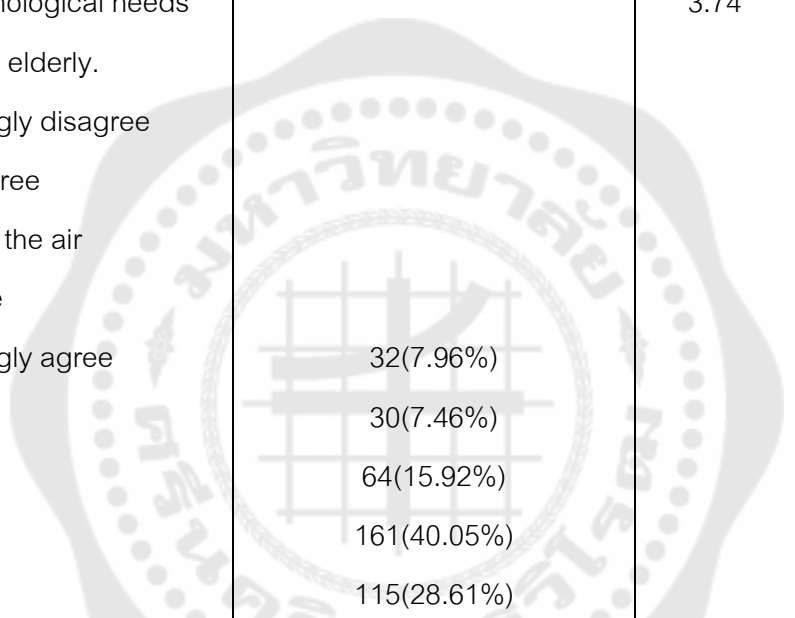
<p>I believe that systematic curriculum design can improve students' ability to cope with the psychological needs of the elderly.</p> <p>Strongly disagree</p> <p>disagree</p> <p>Up in the air</p> <p>agree</p> <p>Strongly agree</p>	 <p>32(7.96%)</p> <p>30(7.46%)</p> <p>64(15.92%)</p> <p>161(40.05%)</p> <p>115(28.61%)</p>	3.74
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Table 5 (Continued)

<p>I believe that the curriculum design can effectively meet the understanding of the psychological needs of the elderly undergraduates majoring in music.</p> <p>Strongly disagree</p> <p>disagree</p> <p>Up in the air</p> <p>agree</p> <p>Strongly agree</p>	<p>63(15.67%)</p> <p>60(14.93%)</p> <p>79(19.65%)</p> <p>88(21.89%)</p> <p>112(27.86%)</p>	<p>3.31</p>
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Table 5 (Continued)

I think that the systematic curriculum design of the elderly care discipline is helpful to improve the sensitivity of undergraduate students majoring in music to the psychological needs of the elderly.	60(14.93%) 71(17.66%) 79(19.65%) 110(27.36%) 82(20.4%)	3.21
Strongly disagree		
disagree		
Up in the air		
agree		
Strongly agree		

Table 5 (Continued)

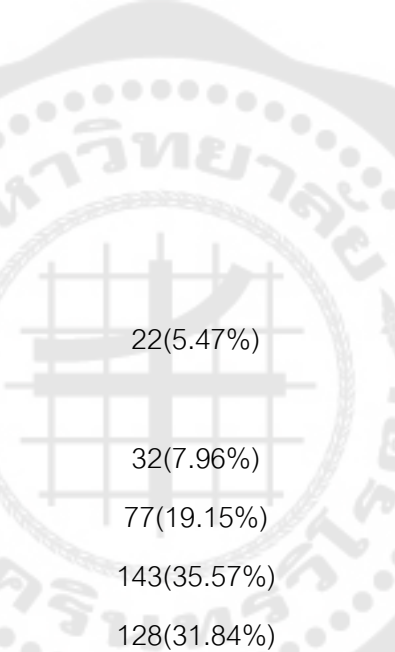
<p>I think that the elderly in Sichuan Province of China have a high demand perception for the elderly care Curriculum for undergraduates majoring in music.</p> <p>Strongly disagree disagree Up in the air agree Strongly agree</p>	 <p>22(5.47%) 32(7.96%) 77(19.15%) 143(35.57%) 128(31.84%)</p>	<p>3. 8</p>
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Table 5 (Continued)

I believe that the Elderly Care Curriculum for undergraduate students majoring in music teaching can effectively meet their needs.		
Strongly disagree		
disagree		
Up in the air	22(5.47%)	
agree		
Strongly agree	46(11.44%)	
	93(23.13%)	
	145(36.07%)	
	96(23.88%)	3.61

Table 5 (Continued)

<p>I feel that the elderly group has a clear demand for senior care Curriculums for undergraduates majoring in music teacher training, and I look forward to the implementation of these Curriculums.</p> <p>Strongly disagree</p> <p>disagree</p> <p>Up in the air</p> <p>agree</p> <p>Strongly agree</p>	<p>16(3.98%)</p> <p>42(10.45%)</p> <p>69(17.16%)</p> <p>143(35.57%)</p> <p>132(32.84%)</p>	<p>3.83</p>
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Table 5 (Continued)

<p>I think there is a high demand for elderly care Curriculums among the elderly, and I look forward to the participation of undergraduate students majoring in music teaching.</p> <p>Strongly disagree</p> <p>disagree</p> <p>Up in the air</p> <p>agree</p> <p>Strongly agree</p>	<p>27(6.72%)</p> <p>26(6.47%)</p> <p>68(16.92%)</p> <p>125(31.09%)</p> <p>156(38.81%)</p>	<p>3.89</p>
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Table 5 (Continued)

I believe that the Curriculums in which undergraduates participate in music teacher training are of great significance to meet the needs of the elderly population.		
Strongly disagree		
disagree		
Up in the air		
agree		
Strongly agree	26(6.47%)	
	46(11.44%)	
	66(16.42%)	
	142(35.32%)	
	122(30.35%)	
		3.72

Table 5 (Continued)

I believe that increasing the content of Curriculums related to elderly care services has a positive effect on improving the sense of social responsibility of undergraduates majoring in music normal.		3.82
Strongly disagree		
disagree		
Up in the air		
agree	35(8.71%)	
Strongly agree	23(5.72%)	
	74(18.41%)	
	118(29.35%)	
	152(37.81%)	

Table 5 (Continued)

I think that after taking the Curriculum on elderly care services, the sense of social responsibility of the elderly group will be significantly enhanced.		
Strongly disagree		
disagree		
Up in the air		
agree	65(16.17%)	
Strongly agree	50(12.44%)	
	75(18.66%)	
	115(28.61%)	
	97(24.13%)	

3.32

Table 5 (Continued)

I think that the sense of social responsibility of undergraduate students majoring in music teaching will improve after the completion of the Curriculum.		
Strongly disagree		
disagree		
Up in the air		
agree	24(5.97%)	
Strongly agree	41(10.2%)	
	61(15.17%)	
	136(33.83%)	
	140(34.83%)	3.81

Table 5 (Continued)

I think the increase in senior care Curriculums helps students pay more attention to the elderly population in their careers.		
Strongly disagree		
disagree		
Up in the air		
agree	66(16.42%)	
Strongly agree	58(14.43%)	
	68(16.92%)	
	104(25.87%)	
	106(26.37%)	3.31

Table 5 (Continued)

I believe that the introduction of the elderly care Curriculum will help to improve the awareness of social responsibility among undergraduates majoring in music teaching.		3.26
Strongly disagree		
Up in the air	51(12.69%)	
agree		
Strongly agree	80(19.9%)	
	73(18.16%)	
	108(26.87%)	
	90(22.39%)	

Table 5 (Continued)

I believe that the development of the curriculum of elderly care can promote the innovative development of music education in the field of mental health of the elderly.		
Strongly disagree		
disagree		
Up in the air		
agree		
Strongly agree		
	24(5.97%)	
	25(6.22%)	
	68(16.92%)	3.91
	133(33.08%)	
	152(37.81%)	

Table 5 (Continued)

<p>I believe that the implementation of the elderly care curriculum can expand the application of music education in promoting the social integration of the elderly.</p> <p>Strongly disagree</p> <p>disagree</p> <p>Up in the air</p> <p>agree</p> <p>Strongly agree</p>	<p>27(6.72%)</p> <p>44(10.95%)</p> <p>66(16.42%)</p> <p>143(35.57%)</p> <p>122(30.35%)</p>	<p>3.72</p>
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Table 5 (Continued)

I believe that music education, in the context of the Aged Care curriculum, can be more effective in promoting their mental health and social inclusion.		
Strongly disagree		
disagree		
Up in the air		
agree		
Strongly agree	16(3.98%)	
	32(7.96%)	
	61(15.17%)	
	147(36.57%)	3.93
	146(36.32%)	

Table 5 (Continued)

I believe that the introduction of the elderly care curriculum has a positive effect on the innovation and development of the field of music education.		
Strongly disagree		
disagree		
Up in the air		
agree		
Strongly agree		
	62(15.42%)	
	63(15.67%)	
	69(17.16%)	
	104(25.87%)	
	104(25.87%)	3.31

Table 5 (Continued)

In my opinion, the implementation of the elderly care curriculum has effectively expanded the scope of application of music education in the social integration and mental health of the elderly.		
Strongly disagree		
disagree		
Up in the air		
agree		
Strongly agree		
	51(12.69%)	
	64(15.92%)	
	79(19.65%)	3.3
	129(32.09%)	
	79(19.65%)	

2) The survey results show that there is a significant demand for elderly care Curriculums among undergraduates majoring in music, and the participants generally recognize the importance of systematic elderly care Curriculum planning, believing that it can improve their professional ability and sense of social responsibility

in elderly services. Specifically, 40.8% of the participants agreed that Curriculum planning will significantly improve service capacity, with an average score of 3.79, which further validates the necessity of Curriculum planning. In addition, 35.32% of the participants believed that the comprehensiveness of the Curriculum content was crucial to service ability, with an average score of 3.82. However, opinions on whether the curriculum can better meet the needs of the elderly are divided, with an overall average score of 3.31, indicating that further adjustment of curriculum design is needed. Regarding the impact of the Curriculum on improving students' sense of social responsibility, 37.81% of the participants believed that the relevant Curriculum content could have a positive effect on the improvement of their sense of responsibility, with an average score of 3.82, reflecting the importance of the elderly care Curriculum in shaping students' values. For the focus on understanding the psychological needs of the elderly, 40.3% of the participants agreed, with an average score of 3.92, showing a trend towards the importance of psychological needs. On the whole, the survey shows that the application potential of the elderly care curriculum in improving the mental health and social integration of the elderly, and the future curriculum design should focus on the comprehensiveness and practicality of the content, so as to better meet the actual needs of students and the elderly, and promote the innovative development of music education.

1.3.2 Semi-structured interviews

1. Background and Purpose of the Interview: The United Nations Environment Programme (UNEP) pointed out that at present, the situation of population aging is becoming increasingly severe, and the demand for elderly care services is growing. In this context, the music education major has shown great potential and plays an important role in meeting the educational needs of the elderly population in Sichuan Province. Music education not only provides recreational activities for the elderly, but also promotes their mental health and social interaction, which in turn improves their quality of life and well-being.

2. The purpose of the interview: First, to deeply explore the specific role of music education in responding to the educational needs of the elderly population in Sichuan Province, and the key educational objectives that should be established in the music education curriculum with geriatric care as the core. The second is to study how to structure the curriculum content to achieve the organic integration of music education and geriatric nursing principles, and at the same time explore teaching methods that can effectively attract undergraduates to participate in the practical experience of elderly care. The third is to consider how to adjust the music education curriculum to better meet the diverse needs of the elderly population based on the cultural diversity and regional characteristics of Sichuan Province, and analyze the challenges that may be faced in the implementation of such Curriculums and the corresponding solutions. The fourth is to identify the specific skills and competencies that music education students need to develop in order to excel in teaching aged care Curriculums. In addition, it provides future research directions and development suggestions for the integration of music education and elderly education Curriculums in Sichuan Province, so as to promote the further development of this field, enhance the professional level and social influence, so that the elderly can enjoy higher-quality elderly care services, and realize that the elderly can learn and have fun.

Table 6 Interviewees and basic information

Interviewees	Workplace	Relevant experience or achievements

Table 6 (Continued)

Du Xiaoli	School of Music Education, Sichuan Conservatory of Music	Deputy Director of Piano Teaching and Research Department, Professor, Master Tutor, Executive Director of Sichuan Piano Society, Director of Piano Art Direction Society of Sichuan Music Association. He has been engaged in piano education and teaching research in higher music education for a long time. He has twice won the "Outstanding Education and Scientific Research Achievement Award" from the Sichuan Provincial Department of Education. He visited the Asian Exchange Center of the University of Colorado in United States. He has presided over and participated in 5 scientific research projects, and published many academic papers related to his major in core journals.
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Table 6 (Continued)

Liang Zhi	Association of Musicians	<p>Graduated from Sichuan Conservatory of Music, a member of the Chinese Musicians Association, he is currently a piano examiner of the social art examination of the China Music Association, a member of the jury of the Chengdu Youth Art Competition, the president of the Suining Piano Society of Sichuan Province, the vice chairman of the Suining Musicians Association of Sichuan Province, and the vice chairman of the Music Committee of the Suining Education Society of Sichuan Province.</p>
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Table 6 (Continued)

Zhou Qianqian	Sichuan The ONE Smart Piano Headquarters, Chengwu County The ONE Smart Piano Training School, Pearl River Piano Art Classroom	In June 2017, he graduated from Southwest University of Science and Technology with a major in music performance, and won the Inspirational Scholarship and the Gold Award in the Singing Competition. After graduation, he worked in the Sichuan TheONE smart piano headquarters, returned to his hometown in November of the same year to start a business, founded the first TheONE smart piano training school in Chengwu, and later joined the Pearl River Piano Art Classroom, as an electric piano teacher of the University for the Elderly.
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Table 6 (Continued)

Zhang Weiwei	Sichuan Vocational and Technical College, Suining University for the Elderly	<p>Graduated from the School of Music of Sichuan Normal University (full-time master's degree in music and dance, research direction: piano performance and teaching). In 2007, he started working at Sichuan Vocational and Technical College and Suining University for the Elderly. He has long served as the artistic director of the choir of Suining University for the Aged and the piano teacher of the teaching class. He has participated in provincial and municipal choral competitions on behalf of Suining University for the Aged for many times, won the "First Prize" many times.</p>
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Overall, the experiences and perspectives of these interviewees are of great reference value for the study of the development of music education for the elderly in Sichuan Province, China.

3.Coding analysis framework for semi-structured interviews

Table 7 Coding analysis framework

Serial number	topic	Subtopics
1	The relationship between music education and the educational needs of the elderly population	The role of music education in addressing the educational needs of older populations
		Potential for a professional curriculum in music education with aged care at its core
2	Educational objectives for the development of a professional curriculum in music education with a focus on aged care	Key Educational Objectives
3	Construction of Curriculum content	Integrating music education and aged care principles
4	Teaching methods that engage undergraduates in the practice of aged care	Effective Teaching Methods

Table 7 (Continued)

5	Curriculum adjustment taking into account the cultural diversity and regional characteristics of Sichuan Province	Curriculum adjustments to meet the needs of the older population
6	Challenges in implementing such Curriculums and mitigations	The Challenge
		Measures to mitigate challenges
7	Skills and abilities that music education students should possess	Required skills and competencies
8	Suggestions on the integration of music education and pension education Curriculums in Sichuan Province	Future research or development initiatives

The coding analysis framework mainly focuses on the relationship between music education and the educational needs of the elderly population, the educational objectives of curriculum development, curriculum content design, teaching methods and practical experience, the challenges and responses of curriculum implementation, the cultivation of students' abilities, and future research and development initiatives.

Through the in-depth analysis of these topics, we can fully understand the role and potential of music education in meeting the educational needs of the elderly population and improving the level of elderly care, clarify the direction and focus of

curriculum development, explore effective teaching methods and practice models, cope with the challenges that may be encountered in the implementation of the curriculum, and cultivate students' corresponding abilities and qualities. At the same time, it provides guidance and suggestions for future research and development, promotes the integration of music education and elderly care education, and improves the quality of life and happiness of the elderly. Overall, this coding analysis framework provides a systematic and comprehensive framework for the study and discussion of the development of music education for the elderly in Sichuan Province, China.

4. Statistical analysis of high-frequency words and times

From these high-frequency words, it can be seen that this paper mainly focuses on music education, the elderly, curriculum, nursing, teaching, students, etc., reflecting that in the discussion on the development of music education Curriculums for the elderly in Sichuan Province, the focus of attention includes the role of music education in meeting the educational needs of the elderly population and elderly care, the design, content and implementation of the curriculum, as well as the participation and ability training of students in it. At the same time, it also involves the regional characteristics of Sichuan, as well as the challenges and development opportunities it faces. Together, these high-frequency words constitute the main focus and direction of discussion in this field.

Table 8 Statistical analysis of high-frequency words and their frequency

High-frequency words	frequency	analyse
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Table 8 (Continued)

Music education	15	This topic was frequently mentioned in the interviews, indicating that music education plays an important role in the educational needs of the elderly population and the development of elderly care Curriculums.
Old age	14	It is closely related to the research theme, including the educational needs of the elderly population, nursing care, and the targeted design of music Curriculums.
Curriculum	13	It is one of the core contents of the discussion, including curriculum design, content construction, teaching methods, and student training.

Table 8 (Continued)

Senior citizen	10	Directly to the research object, it focuses on the needs and characteristics of older people, and how to provide them with appropriate music education programs.
Teaching	9	It involves teaching methods, teaching practices and the cultivation of students' teaching ability, which is an important means to achieve the objectives of the curriculum.
Nursing	8	Related to aged care, the role of music education in aged care is emphasised and the nursing principles that should be considered in curriculum design.

Table 8 (Continued)

Student	7	Focus on the participation and competence development of music education students in aged care Curriculums, as well as their role in teaching practice.
Demand	6	Explore the educational needs of older adults and how curriculum design should meet these needs to improve the quality of life of older adults.
Specialized	6	It involves the development of the music education profession itself and its application in the elderly care curriculum, emphasizing the importance of professional knowledge and skills.

Table 8 (Continued)

Sichuan	6	The geographical scope of the study was clarified, taking into account the influence of cultural diversity and regional characteristics on the professional curriculum of music education in Sichuan Province.
Develop	5	It covers the development direction of music education Curriculums in the field of elderly care, future research initiatives and the promotion of the quality of life of the elderly.
Music	5	As a core element throughout the study, it includes the design of music lessons, the organization of music activities, and the impact of music on the physical and mental health of older adults.

Table 8 (Continued)

Profession in Education	4	4 The importance and professionalism of music education in the development of elderly care Curriculums are further emphasized.
Aged care	4	The focus of the research is highlighted, that is, how to combine music education with elderly care to provide more comprehensive elderly care services.
Curriculum content	3	Specifically, it involves the construction of curriculum content, the integration of music education and aged care principles, and how to adapt it to the needs of older people.

Table 8 (Continued)

Practice	3	It includes teaching practice, field practice, etc., emphasizing the improvement of students' ability and the effectiveness of the curriculum through practical experience.
Challenge	3	This paper points out the problems that may be faced in the process of implementing the professional curriculum of music education for the elderly, such as resource allocation and interdisciplinary cooperation.

Table 8 (Continued)

Target	3	Clarify the educational objectives of curriculum development, such as cultivating students' interdisciplinary competence and humanistic care.
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Table 9 Coding analysis results of semi-structured interviews

Topic	Subtopics	Analysis of the main content
The relationship between music education and the educational needs of the elderly population	The role of music education in addressing the educational needs of older populations.	The music education major can improve the quality of life of the elderly by promoting their mental health and social interaction, and respond to the educational needs brought about by the rapid growth of the elderly population.

Table 9 (Continued)

	Potential for a professional curriculum in music education with aged care at its core.	The music education program has the potential to address the educational needs of the older population by providing customized music activities and learning experiences through innovative curriculum design and community partnership models.
Educational objectives for the development of a professional curriculum in music education with a focus on aged care.	Key Educational Objectives	The music education curriculum focusing on geriatric nursing should focus on cultivating students' interdisciplinary ability and humanistic care awareness, including improving the knowledge of geriatric psychology, cultivating professional skills in music nursing, and designing and implementing music activities and nursing plans that meet the special needs of the elderly.

Table 9 (Continued)

Construction of Curriculum content	Integrating music education and aged care principles.	The curriculum content should fully integrate the principles of music education and geriatric care, and be constructed through the combination of theory and practice, the use of music for emotional expression and social interaction training, and the adaptation and response to the individual differences and cultural characteristics of the elderly.
Teaching methods that engage undergraduates in the practice of aged care.	Effective Teaching Methods.	Teaching methods such as field practice, application of music therapy techniques, and co-creation of musical works with the elderly can effectively attract undergraduate students to participate in elderly care practice, increase practical experience, and promote emotional resonance and effective communication.

Table 9 (Continued)

Curriculum adjustment taking into account the cultural diversity and regional characteristics of Sichuan Province.	Curriculum adjustments to meet the needs of the older population.	Taking into account the cultural diversity and regional characteristics of Sichuan Province, the curriculum adjustment should be personalized according to the actual needs of the local elderly population, integrating dialects, traditional music culture, and considering regional differences in health and lifestyle.
Challenges in implementing such Curriculums and mitigations.	The Challenge	The implementation of professional music education Curriculums focusing on geriatric care may face challenges such as insufficient resource allocation, difficulty in interdisciplinary collaboration, and low participation of older people.
	Measures to mitigate challenges	

Table 9 (Continued)

<p>Skills and abilities that music education students should possess</p>	<p>Required skills and competencies</p>	<p>Ways to alleviate these challenges include increasing policy support and investment, establishing interdisciplinary collaboration mechanisms, and advocating for the benefits of music education in aged care.</p> <p>Music education students should have the skills and abilities to effectively teach music lessons to seniors, such as musical expression, psychoanalysis and communication skills for the elderly, teamwork, and leadership skills.</p>
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Table 9 (Continued)

Suggestions on the integration of music education and pension education Curriculums in Sichuan Province	Future research or development initiatives	It is suggested that the professional curriculum of music education in Sichuan Province should carry out in-depth research and development in the integration of music education and elderly education Curriculums, such as setting up music therapy Curriculums, promoting interdisciplinary collaborative research projects, and cooperating with the community to establish long-term music activities for the elderly.
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6.Main findings and analysis

1) The importance of music education to the elderly population in Sichuan Province

Music education plays an important role in addressing the educational needs of the elderly population in Sichuan Province, improving the quality of life of the elderly, promoting physical and mental health, and promoting social integration. With the increase of the elderly population, their demand for spiritual and cultural life is also growing. Music education can provide a rewarding form of

entertainment for the elderly, while also helping to improve their psychological state and enhance social interaction, thereby improving the quality of life.

2) Key points of curriculum design for music education in geriatric care

The professional curriculum of music education focusing on geriatric nursing should give priority to the needs and characteristics of the elderly, such as interest, practicability, learning level, physical and mental development, era, hierarchy, social experience and learning ability. The needs and characteristics of older people are different, so the curriculum should be tailored to meet their individual needs. Taking these factors into account can make the Curriculum more in line with the actual situation of the elderly, and improve their learning enthusiasm and effectiveness.

3) The challenges and opportunities of integrating music with aged care and social work

There are challenges in integrating music with elderly care and social work, such as some older people are not interested in music, professional nursing staff and teaching teachers have professional requirements, and music graduates are willing to work, but it also brings opportunities, such as improving the quality of life of the elderly and attracting the participation of music-loving older people. The integration of music with elderly care and social work needs to overcome some practical difficulties, but at the same time, it also provides more care and support for the elderly, which helps to improve their quality of life. By solving the challenges, the role of music in aged care can be better utilized.

4) Teaching Methods and Strategies for Older Music Curriculums

When teaching music Curriculums to the elderly, effective teaching methods and strategies include organizing the effectiveness of teaching, controlling class size, organizing singing practice activities, adjusting teaching content according to feedback, breathing training, warm-up exercises before singing and vocalization, etc., at the same time, focusing on interest, increasing practicality, and carrying out more performance activities. These teaching methods and strategies can improve the learning interest and participation of older adults according to their characteristics and

needs, make music teaching more lively and interesting, and also help to improve their musical skills and performance.

5) Skills and knowledge that music education students should possess

Students majoring in music education should have solid music professionalism, basic skills in playing and singing, standardized demonstration and performance ability, comprehensive comprehensive literacy, ability to communicate reasonably with the elderly, ability to understand the psychological condition of the elderly and good affinity and other skills and knowledge, in order to effectively teach music Curriculum to the elderly. Equipping students with these skills and knowledge can better understand the needs of older adults and build relationships with them, which can lead to improved teaching and learning. At the same time, it also helps to cultivate students' sense of social responsibility and caring spirit.

6) Methods for assessing the learning outcomes of older learners

When evaluating the learning outcomes of senior students in music classes, they can combine formative and summative evaluation, qualitative and quantitative evaluation, self-evaluation, mutual evaluation and other evaluation, etc., with performance as the main focus (each semester to show the learning outcomes of the teaching class or the whole school), and to test the teaching results (the basic theoretical knowledge and performance skills of the semester). Diversified assessment methods can evaluate the learning outcomes of the elderly more comprehensively and objectively, and also help to stimulate their motivation and enthusiasm for learning. The combination of performance and in-class testing can comprehensively examine their actual performance and knowledge mastery.

7) The key and ways of integrating undergraduates and older learners

The actual integration of undergraduates and elderly learners in teaching practice requires professional teachers to have excellent professional teaching ability, the difference is that undergraduates pay more attention to professionalism, the elderly are more entertaining than professional, and teachers should be patient in teaching. Through cooperation with elderly care institutions and communities,

Curriculums and lectures can be held to promote the integration of care and education, and enrich the spiritual and cultural life of the elderly. The competence of professional teachers is essential to facilitate the integration of undergraduate students and older learners. By partnering with senior care institutions and communities, more learning opportunities and resources can be provided for seniors, while also helping to improve the practical ability and social responsibility of undergraduates.

8) Promote the necessity of developing professional Curriculums in music education for the elderly

With the acceleration of the aging process of the population and people's pursuit of quality pension life, music Curriculums can bring the feeling of "beauty" to the elderly, and are selected by some of the elderly, and their inclusion in the teaching system has a good role in promoting commercial value and improving the employment rate.

The promotion and development of such Curriculums is in line with the needs of social development, which can not only meet the spiritual and cultural needs of the elderly, but also provide more employment opportunities for music education students and promote the development of related industries.

In summary, music education plays an important role in the education of the elderly population, and it is necessary to design and teach the curriculum according to the needs and characteristics of the elderly, and strengthen the cooperation of all parties to promote the integrated development of music education and elderly care.

1.3.2.7 Conclusions and recommendations

Through an in-depth analysis of the four interviews, it is found that the music education major has important potential to meet the educational needs of the elderly population in Sichuan Province, which can provide rich spiritual life and social opportunities for the elderly, and have a positive impact on their physical and mental health and quality of life. The music education curriculum focusing on geriatric care should focus on cultivating students' comprehensive abilities, including interdisciplinary

knowledge, humanistic care awareness and professional skills, to meet the diverse needs of the elderly. Integrating music with elder care and social work is feasible, but some challenges need to be addressed, such as differences in older people's interests, professional requirements, and willingness to work. Effective teaching methods and strategies are essential to improve the effectiveness of music learning among older adults, including individualized instruction, hands-on activities, and diverse assessment methods. Music education students need to have well-rounded abilities and qualities to better serve the elderly population. The promotion and development of music education Curriculums focusing on elderly care is of great significance to improve the quality of life of the elderly, promote social harmony and promote the development of related industries.

Suggestions: First, the government and relevant departments should increase the support for the music education professional pension Curriculum, including policy support, capital investment and resource allocation, so as to promote the development and implementation of the curriculum. Second, schools and educational institutions should strengthen interdisciplinary cooperation between music education, geriatric nursing, social work and other fields, and jointly cultivate professionals with comprehensive abilities. Third, teachers should continuously improve their teaching level and professional quality, pay attention to the needs and characteristics of the elderly, adopt diversified teaching methods and strategies, and improve the quality of teaching. Fourth, the society should strengthen the publicity and promotion of the role of music education in elderly care, and improve the public's awareness and attention to music education for the elderly. Fifth, further research and exploration of models and methods of combining music with elderly care and social work to better meet the needs of the elderly. Sixth, music graduates are encouraged to actively devote themselves to the field of music education and nursing for the elderly, so as to provide high-quality services for the elderly. Seventh, strengthen cooperation with elderly care institutions and communities, carry out more colorful music activities for the elderly, and provide more learning and communication opportunities for the elderly. Eighth, we should

continue to pay attention to and study the changes in the needs of the elderly, and adjust and optimize the content and form of music education professional pension Curriculums in a timely manner.

The development prospects of music education in the field of elderly care are indeed broad and promising. With the increasing attention to the quality of life of the elderly, music education, as a non-drug treatment method, is gradually becoming an important means to improve the quality of life of the elderly. First of all, music education can enrich the spiritual life of the elderly. By organizing various musical activities, such as choirs, instrumental performances, music appreciation, etc., not only can the elderly relive the good times of their youth, but also help them build new social circles and reduce loneliness and depression. These activities can stimulate the enthusiasm of the elderly and make their later life more colorful. Secondly, music education has a positive impact on the physical and mental health of the elderly. Music can relieve stress, relax the mind, and help improve sleep quality and emotional state in the elderly. At the same time, learning music can also exercise the memory and thinking ability of the elderly, delay brain aging, and improve their cognitive function. In addition, the development of music education in the field of elderly care is inseparable from the joint efforts of all parties. The government can increase investment in music education for the elderly, formulate relevant policies, and encourage and support music education institutions to enter the pension market. Music education institutions can develop music Curriculums and activities suitable for the elderly according to their characteristics and needs, and provide professional music education services. At the same time, the community and families can also actively participate in providing more music learning opportunities and platforms for the elderly. Finally, music education also plays an important role in promoting the harmonious development of society. Through music education, communication and interaction between the elderly and young can be enhanced, and understanding and respect between people of different ages can be promoted. This kind of intergenerational communication helps to build a harmonious society, so that the elderly can receive more attention and care in society.

To sum up, the music education major has broad prospects for development in the field of elderly care. Through the joint efforts of all parties, we can provide better music education services for the elderly, improve their quality of life, and promote the harmonious development of society.

2. Part II (Development: D1)

The key to curriculum research is to focus on both teaching methods and teaching content, rather than focusing on one or the other. (Egan, 1978). The purpose of this study was to develop a course on geriatric nursing for undergraduate music teachers in Sichuan Province, aiming to improve students' theoretical knowledge and practical ability in the field of geriatric education. In the process of curriculum design, this study draws on a number of theoretical frameworks to ensure the scientific and practical nature of the curriculum. First of all, the curriculum design is based on curriculum theory, emphasizing the organic unity between curriculum objectives, content, teaching strategies and assessment methods to ensure the effectiveness of teaching activities. Secondly, the research incorporates the theory of geriatric education to ensure that the curriculum content can fully meet the learning needs of the elderly group, and help students fully understand the physiological and psychological characteristics of the elderly. The Outcome-Based Education (OBE) theory provides a theoretical basis for the setting of curriculum objectives and the assessment of students' abilities, and ensures the close integration of curriculum content and learning outcomes. At the same time, the constructivist learning theory emphasizes students' active participation and knowledge self-construction in the learning process, and promotes students to understand and master geriatric nursing skills through practice. In addition, the Orff Music Education Act promotes the professional skills of students by integrating music education with elderly care, while also helping the elderly to promote physical and mental health through music; Gerontology theory provides academic support for the depth and breadth of the course content, ensuring that the course is fully scientific and humanistic in theory and practice. In terms of data collection, this study systematically collected students' basic information and their feedback on course content, teaching

methods and assessment methods through the distribution of 402 questionnaires, and the questionnaire survey data provided an empirical basis for curriculum design. At the same time, the study also interviewed four experts with extensive experience in the field of music education through semi-structured interviews, including Professor Du Xiaoli from Sichuan Conservatory of Music, Liang Zhi, senior piano teacher, Zhou Qianqian from Southwest University of Science and Technology, and Zhang Weiwei from Sichuan Vocational and Technical College, to gain more in-depth professional insights. The analysis results of these data provide valuable guidance for the design and implementation of the curriculum in this study, aiming to provide students with a comprehensive and practical geriatric nursing course, and improve their comprehensive quality and sense of social responsibility in the field of geriatric education in the future.

2.1 Determine the development of subject curriculum for caring for the elderly among music teachers profession students at the undergraduate level in sichuan province, china

Based on the comprehensive analysis of relevant research literature, existing Curriculums and expert recommendations, the following curriculum plans for elderly care are formulated, including:

1. Principles of the Elderly Care Curriculum
2. Objectives of the Elderly Care Curriculum
3. Structure of the Elderly Care Curriculum
4. Description of the Elderly Care Curriculum
5. Curriculum content
6. Organization and guidance of Curriculum learning activities
7. The learning medium of the elderly care Curriculum
8. Guidelines for Measurement and Evaluation
9. Study Plan

2.1.1 Principles of the elderly care curriculum

In order to make the education management of the Sichuan Provincial Music Teacher Training Professional comply with the requirements of the Education Law of the People's Republic of China, respond to the educational objectives of the Basic

Education Committee, cultivate students' professional ability, innovative thinking and practical skills in the field of elderly education, and the ability to cope with the needs and social challenges of the elderly, the following curriculum principles are formulated:

1) Guided by the needs of the elderly: The curriculum design closely focuses on the learning and living needs of the elderly, emphasizing personalized and humanized teaching methods to improve the quality of life and happiness of the elderly.

2) Interdisciplinary integration: Organically combine music education with the knowledge of elderly care to cultivate students' comprehensive literacy, improve their ability in practical application, and enable them to flexibly apply the knowledge they have learned.

3) Practice-oriented: Through community service, field teaching and case analysis, students can exercise and improve their ability to solve practical problems in a real environment.

4) Focus on teamwork: Encourage students to work as a team in the learning process, enhance their collaboration ability and collective awareness, promote mutual learning and support, and cultivate a sense of social responsibility.

5) Self-directed learning and reflection: Cultivate students' self-directed learning ability, encourage them to reflect on the learning process, and improve their self-driven learning attitude and lifelong learning ability.

Through the implementation of the above principles, it aims to promote the improvement of the educational fairness and quality of the music teacher profession in Sichuan Province, and cultivate high-quality talents to meet the needs of social development.

2.1.2 Objectives of the elderly care curriculum

This Curriculum aims to develop students' creative ability and teamwork skills with the following specific objectives:

1. To study the planning and needs of geriatric Curriculums
2. To design the pension Curriculum for undergraduate students majoring in music teachers in Sichuan Province, China

3. To investigate the effectiveness of the Curriculum of caring for the elderly for students at the undergraduate level of music teachers in Sichuan Province, China.

There are a total of 7 learning outcomes in the Curriculum of elderly care, which are as follows:

- 1) Explain the basic knowledge of pension education and music education and their interrelationship.
- 2) Identify the challenges and problems faced in senior education.
- 3) the design of innovative teaching programs by integrating knowledge of music, psychology and sociology.
- 4) Demonstrate and exchange the learning results of elderly education through music activities and practical cases.
- 5) Have the ability to carry out innovative activities in the field of elderly education.
- 6) Ability to work in a team and work with others to plan and implement projects.
- 7) Recognize the value of the team's work and be proud of their contributions.

2.1.3 Structure of the elderly care curriculum

The Curriculum consists of two learning units: Learning Unit 1: Learning Needs of Older Adults and Music Applications, with a total of 5 learning plans totaling 20 hours; Learning Unit 2: Music Therapy and Social Interaction, 5 learning programs totaling 20 hours.

2.1.4 Description of the elderly care curriculum

This Curriculum aims to explore the knowledge and skills related to the education of the elderly, in particular how to promote the physical and mental health of the elderly through music and the arts. Students will learn to analyze the learning needs and motivations of older adults, design music activities that are appropriate for them, study the basic concepts and practices of music therapy, and master effective teaching strategies. Topics include understanding the learning challenges of older adults,

choosing the right type of music, applying music therapy to promote mental health, and developing teaching skills for older learners. By integrating the above, students will be able to creatively apply what they have learned, ask questions, design research proposals, and collect and analyse data to improve the quality of life for older adults, while developing teamwork and innovation to address real-life challenges.

2.1.5 Curriculum content

In the characteristics analysis, needs identification, teaching strategies, and implementation methods, the content of the integration of relevant learning activities includes:

1) Understanding the Elderly: Understanding the learning needs and motivations of the elderly, and exploring the various needs and motivations faced by the elderly in the learning process, will help them design more effective teaching strategies to meet the expectations and interests of older learners.

Table 10 Learn about older people

topic	detail
Feature analysis	Analyze the physical and psychological characteristics of older adults, such as memory, learning styles, and mood changes.
Requirements identification	To explore the learning needs and motivations of older adults, including their interest in learning new skills and their desire to participate in social activities.
T e a c h i n g Strategies	Design the content and approach of the curriculum for older learners to enhance learning outcomes.
How to do it	Interactive and hands-on teaching methods are used to encourage the active participation of older adults.

2) Choose music that is suitable for the elderly: Choosing music that is suitable for the elderly is an important part of promoting their physical and mental health and social interaction. This Curriculum will explore how to meet the emotional

needs and cognitive development of older adults by analyzing their musical preferences and cultural backgrounds. First, students will examine the effects of different music genres on the emotional and psychological states of older adults, including emotional responses such as relaxation, recollection, and happiness. Secondly, the Curriculum will emphasize the importance of individualized music choices, encouraging students to tailor music playlists to enhance their sense of engagement and well-being based on the life experiences and personal preferences of older adults. In addition, students will learn to design age-appropriate music activities, such as choirs, instrumental performances, and music appreciations, to promote social interaction and emotional expression among older adults. By integrating relevant music education theory and practice, students will learn how to use music to improve the quality of life of older adults and help them feel more happy and fulfilled in their daily lives.

Table 11 Choose music that is suitable for seniors

topic	detail
Feature analysis	Learn about the musical styles, melodies and rhythmic characteristics that are appropriate for older adults, taking into account their personal experiences and cultural backgrounds.
Requirements identification	To study the reception and preference of older adults for different music genres and to identify their emotional resonance.
Teaching Strategies	Develop a music selection guide to ensure that the music you choose will spark interest and engagement among older adults.
How to do it	Choose and adjust music with auditions and feedback to ensure the needs of seniors are met.

3) Music therapy: The application of music therapy in the education of the elderly is an important means to promote the physical and mental health of the elderly. This Curriculum will provide an in-depth exploration of the basic concepts, principles and methods of music therapy through a combination of theory and practice.

First, students will learn how music therapy can improve the mental health of older adults by stimulating emotional responses and memories through specific musical forms and activities. The Curriculum will introduce a variety of music therapy techniques, including the role of melody, rhythm, harmony and other elements in emotional regulation.

Second, students will analyze different case studies to understand the practical effects of music therapy in coping with common problems in older adults, such as loneliness, anxiety, and cognitive impairment. Through role-playing and simulation therapy, students will practice how to design a personalized music therapy program for older adults that effectively meets their specific needs.

In addition, students will be encouraged to reflect on the design and implementation of musical activities, and explore how group music activities can enhance the social skills and participation of older adults. Eventually, students will be equipped with the skills to use music therapy to improve the quality of life of older adults, and build a strong foundation for future careers in aged education and nursing.

Table 12 Musicotherapy

topic	detail
Feature analysis	To analyze the rationale of music therapy and its impact on older adults, including the emotional, cognitive, and social benefits.
Requirements identification	Identify the emotional and psychological needs of older adults and identify specific goals for music therapy.
Teaching Strategies	Music therapy programs are designed to improve the mental health and quality of life of older adults.
How to do it	Use specific music therapy activities and techniques, such as group chorus or instrumental playing.

4) Find teaching techniques that are suitable for the elderly

In the education of the elderly, it is crucial to choose teaching techniques that are suitable for the elderly to ensure that they are able to have a positive experience and sense of accomplishment in their music learning. This Curriculum will focus on a variety of teaching techniques for older adults to help students master how to effectively impart music.

First, the Curriculum will introduce teaching methods suitable for older learners, such as step-by-step teaching and simplifying the Curriculum content so that they can understand and master the basic knowledge in a shorter period of time. In addition, the use of visual and auditory aids, such as illustrations and audio materials, can enhance learning and make it easier for older adults to understand the basic concepts of music.

Second, encouraging students to use interactive and participatory teaching methods, such as group activities and discussions, can promote participation and social interaction among older adults. This approach not only stimulates their interest in learning, but also helps them share their experiences in a relaxed atmosphere.

Finally, the curriculum will also emphasize the importance of individualized instruction, encouraging students to design a learning plan tailored to each older learner's interests and abilities. This flexible teaching strategy ensures that every older person can find joy in learning music, achieve personal goals and boost self-confidence. Through these senior-friendly tips, students will be better served by the older population in their future educational practice.

Table 13 Look for teaching techniques that are suitable for older adults

topic	detail
Feature analysis	Explore teaching techniques and methods suitable for older adults, such as using easy-to-understand language and steps.
Requirements identification	Identify the challenges and needs that older adults may face when learning music, such as hand dexterity and concentration.
Teaching Strategies	Develop a phased teaching plan to ensure that older adults can gradually acquire new skills.
How to do it	Through personalized teaching programs, the pace and content can be flexibly adjusted to meet the needs of different older learners.

2.1.6 Organization and guidance of curriculum learning activities

This Curriculum is designed for senior education and is designed to help students meet the needs of older adults through an integrated teaching approach that uses an inquiry-based learning process. Students will investigate, analyze, identify problems, retrieve information, and find answers to questions about the learning and life of older adults. Students can conduct research based on individual or group interests and creatively develop educational programs suitable for the elderly. The organization of Curriculum activities is divided into six steps, which are as follows:

Step 1: Stimulate thinking and clarify needs. Through questioning, students are guided into activities that connect with relevant things in their daily lives, such as the physical and psychological characteristics of the elderly, their learning needs and motivations. Have students share their experiences and brainstorm questions that meet the needs of older learners.

Table 14 The first step of the course learning activities is to stimulate thinking

Teacher roles	student
Through questions, students are guided to think about the needs of the elderly and the relevance of music, and stimulate students' interest. Use examples from everyday life, such as older adults' preferences for music, to guide the discussion.	Share your own experiences and observations, brainstorm ideas, and ask questions about the learning needs and music choices of older adults.

Step 2: Gather knowledge and set goals. Co-set learning goals and scope with students, involve students in the development of goals, select topics of interest to them, such as music education and music therapy for seniors, and sequencing. Study learning management skills related to the education of the elderly, analyze the problem, identify the selected problem, and summarize the feasible solutions.

Table 15 The second step of the course learning activities is to guidance on the organization

Teacher roles	student
Co-set learning goals with students, ensure that the content is relevant to geriatric education and music therapy, and help students choose topics of interest.	Participate in setting learning goals, selecting musical topics that are relevant to older adults, and analyzing and identifying specific problems they want to address.

Step 3: Plan to solve the problem and design. Through teamwork and integration, students connect what they have learned and creatively design music teaching programs and activities that are appropriate for older adults.

Table 16 The third step of the course learning activities is to planning and problem solving.

Teacher roles	student
Guide students to design music teaching programs suitable for older adults, and provide necessary knowledge and skills to support and promote teamwork.	Work collaboratively in small groups to connect what you've learned to design a music lesson or activity that fits the needs of older adults.

Step 4: Create a work through integration. According to the design results, students select music materials and methods suitable for the elderly, and use various music resources to create and implement teaching activities.

Table 17 The fourth step of the course learning activities is to create a work through integration.

Teacher roles	student
Instruct students in selecting appropriate materials and methods to create musical activities or lesson plans in a way that is applied in a practical way.	Based on teacher guidance, create music teaching activities or music therapy programs that are suitable for older adults using a variety of resources and materials.

Step 5: Pass the actual evaluation of the work. To test the effectiveness of teaching programmes and musical activities to ensure they meet the needs of older learners and reflect the integrated application of what has been learned.

Based on the results of the assessment, the teaching plan and activities are adjusted, the students check whether their work has achieved the expected goals, and the teacher and students participate in the assessment.

Table 18 The fifth step of the course learning activities is to pass the actual evaluation of the work.

Teacher roles	student
Assessment criteria are provided to help students test and evaluate whether their musical activity or Curriculum is in line with the goals set.	Examine and reflect on your own work, evaluate its effectiveness with the teacher, and make suggestions for improvement.

Step 6: Demonstrate and reflect on the continuity. Evaluate the value of the success of the teaching activity and discuss the effectiveness of the problem-solving process. Demonstrate the lesson plans and musical activities you have created, and express your views on the benefits of the content you have created. Reflect on the knowledge, skills and methods acquired and how this knowledge can be applied in future teaching practice, and explore directions for further development and improvement.

Table 19 The sixth step of the course learning activities is to demonstrate and reflect on the continuity.

Teacher roles	student
Organize students to present their results, instruct them on how to engage in effective reflection and discussion, and emphasize the value of the work and its future application.	Showcase their musical activity or lesson design, share experiences and feelings from the implementation process, and discuss how to further develop their work.

2.1.7 The learning medium of the elderly care curriculum

When organizing learning activities related to senior education, the learning mediums involved are as follows:

1) Curriculum Manual: provides the basic knowledge and theoretical framework of geriatric education.

2) Practical Worksheets: Designed to record and assess the learning progress and needs of older adults.

3) Teaching materials and equipment: including music equipment, teaching props and other practical tools to support the learning of music and skills by the elderly.

4) Multimedia & Electronic Resources: Enrich the learning experience with video, audio, and online Curriculums.

5) Internet: As an important tool for accessing the latest research, information, and resources to help students understand hot topics related to older adults.

6) Community Learning Resources: Cooperate with elderly care institutions, universities for the elderly, and related organizations to provide practical learning and communication platforms.

2.1.8 Guidelines for measurement and evaluation

Measurement and assessment emphasize fact-based assessment, with a focus on student and teacher involvement. The specific measurement and evaluation methods are as follows:

1) The method of collecting the assessment data is divided into three parts, and the total score of each part is 100 points.

1.1) Pre-learning assessment, using questionnaires or test questions to help understand students' basic knowledge and learning needs.

1.2) The assessment in progress of learning activities is based on the student's performance in music composition or performance, with a total score of 80 points, and the assessment method is as follows:

1.2.1) 10 points on the evaluation form for creative works

1.2.2) 40 points on the assessment form for the demonstration of skills

1.2.3) 20 points on the evaluation form for teamwork ability

1.2.4) 10 points for the Behavior Observation Record Form

1.3) Post-learning assessments, conducted through tests or feedback forms, to assess students' learning effectiveness and mastery of musical knowledge 20 points.

2) Score Grading Criteria

Table 20 Measurement and evaluation of music education programs for the elderly.

80-100	on a scale of 4	excellent grades
75-79	on a scale of 3.5	very good grades
70-74	score scale 3	good grades
65-69	on a scale of 2.5	quite high grades
60-64	score scale 2	good grades
55-59	on a scale of 1.5	very good
50-54	on a scale of 1	pass
Minimum requirements		
Below 49	Score Grade 0	grade Low
Minimum threshold		

2.1.9 Study plan

The curriculum for the education of the elderly contains the following elements:

Learning outcomes. 2) Important content. 3) Learning content. 4) Learning objectives. 5) Key Capabilities. 6) Expectation traits. 7) Projects/Tasks. 8) Measurement and evaluation. 9) Learning activities. 10) Media/Learning Resources.

A total of 10 plans are as follows:

Plan 1: Understanding older people and stimulating learning needs

Plan 2: Choose music that is suitable for seniors to enhance the learning experience

Plan 3: Implement music therapy to promote physical and mental health

Plan 4: Master age-appropriate skills to enhance quality of life

Plan 5: Stimulate thinking and explore the characteristics of older learners

Plan 6: Gather knowledge and choose music that is suitable for the elderly

Plan 7: Create music therapy activities to increase participation

Plan 8: Evaluate the effects of music therapy, reflecting on practical experience

Plan 9: Demonstrate tips for older adults and share success stories

Plan 10: Lessons learned and future learning activities planned

Preliminary results of the development of a senior care Curriculum for undergraduate students majoring in music teacher training in Sichuan Province, China

The researchers collected basic information from Step 1, including analyzing the core curriculum content and objectives to be studied by undergraduate students majoring in music education, and exploring how to integrate the elements of the elderly care discipline into the music education curriculum to meet the needs and responsibilities of future teachers in the field of elderly care education. In addition, the theoretical basis and educational policy background of music education and elderly care were considered, and the design concept and implementation effect of the existing Curriculums related to elderly care in China were analyzed, so as to explore how to effectively integrate the content of elderly care in music education and improve students' cognition and care ability for the elderly. The research results and expert

opinions further reveal the current situation and development trend of the curriculum development of the discipline of elderly care, and discuss the theoretical framework and related concepts of the curriculum development of the discipline of elderly care for undergraduate students majoring in music.

2.1.10 Preliminary curriculum development results

The preliminary curriculum development results were derived from a comprehensive analysis of the basic education literature and relevant research data, as well as suggestions from the dissertation advisor and curriculum development experts who supervised me. The content includes the core concepts and objectives of the Curriculum, the characteristics and learning outcomes of the students, the detailed description of the Curriculum, the Curriculum structure, teaching activities, teaching media and learning resources, and the specific details of the assessment and feedback mechanism.

Curriculum Philosophy

The teaching concept of the syllabus of the Elderly Care Curriculum for Undergraduate Students of Sichuan Province is to improve the comprehensive quality of students through multidisciplinary integration, so that they can master the skills of music teaching and have the ability of elderly care and psychological counseling. The curriculum emphasizes both theory and practice, combined with field practice and social practice, to cultivate students' practical skills and humanistic caring spirit. In addition, it advocates lifelong learning and career development, cultivates students' sense of social responsibility and professional ethics, aims to shape interdisciplinary talents with professional quality and comprehensive ability, and provides high-quality elderly care services for the society. The teaching philosophy of this Curriculum is determined by the nature of the Curriculum: music teacher students need to have the ability to care for the elderly, so the Curriculum covers a wide range of knowledge and skill areas, involving the integration of music education, elderly care and psychological counselling. The Curriculum emphasizes the application of teaching practice in primary and secondary schools, pays equal attention to theory and practice, and improves

students' practical skills through field practice and social practice. At the same time, the Curriculum evaluation criteria are flexible and sensitive, pay close attention to the development of students' psychological quality, cultivate their humanistic care spirit and sense of social responsibility, and finally shape interdisciplinary professionals with comprehensive quality.

Curriculum Principles

This Curriculum aims to cultivate the comprehensive understanding and professional practice ability of music teacher students on elderly education, combined with the professional background of students and the learning needs of the elderly, the following Curriculum syllabus is designed to meet the core curriculum of education, basic education philosophy and social needs:

Respect and care: Emphasizing respect and care for the elderly, and cultivating students' values of understanding and respecting the life experience and cultural background of the elderly.

Knowledge Inheritance and Cultural Protection: Focus on the inheritance and protection of the musical and cultural heritage of the elderly, and promote the inheritance and protection of culture through the transmission of musical knowledge and artistic skills of the elderly through Curriculums.

Combination of professional ability and practice: Combined with the professional ability of music education and the actual needs of elderly education, students will be trained to practice in music teaching and geriatric education, so that they can effectively carry out education in the field of elderly education.

Social Responsibility and Public Service: Emphasizing students' sense of responsibility as social citizens, encouraging them to provide public services and educational support for the elderly, and promoting social attention and support for the education of the elderly.

Innovation and adaptability: Encourage innovation in curriculum content and teaching methods, adapt to the learning characteristics and individual

differences of the elderly, and improve the pertinence and effectiveness of the curriculum.

Evaluation and Continuous Improvement: Establish an effective evaluation mechanism to regularly evaluate the effectiveness of curriculum implementation, adjust and improve curriculum content and teaching strategies based on the evaluation results, and continuously improve curriculum quality and educational effectiveness.

Through the implementation of these principles, this Curriculum aims to provide students with comprehensive theoretical and practical training in senior education so that they can play a professional and humanistic role in their future educational work.

Curriculum Objectives

1. To study the planning and needs of geriatric Curriculums
2. To design the pension Curriculum for undergraduate students majoring in music teachers in Sichuan Province, China
3. To investigate the effectiveness of the Curriculum of caring for the elderly for students at the undergraduate level of music teachers in Sichuan Province, China.

Knowledge and skills

1. Systematically introduce the theoretical basis of elderly care services, including geriatric psychology, nursing basics, health management, etc.
2. Learn practical operations and skills such as aged care techniques, daily living support and health monitoring.
3. Develop communication skills and interpersonal relationship management skills to improve the ability to interact effectively with the elderly and their families.

Process and methodology

The study of the elderly care Curriculum for undergraduate students majoring in music in Sichuan Province involves multiple key processes and methods.

Through theoretical Curriculums and practical case analysis, the Curriculum will deeply explore the theoretical basis and practical operation of elderly care services, and students will learn the physiological and psychological characteristics of the elderly and the best practices of elderly care services. In addition, the curriculum is designed to focus on practical operation and simulation training, including the practical operation of geriatric care technology and the simulation of daily life support, aiming to improve students' practical ability in elderly care services. Through interdisciplinary cooperation and comprehensive competence development, students will be able to integrate multidisciplinary knowledge such as medicine, psychology, and social work to address the complex challenges of elderly care services. At the same time, it emphasizes the observance of ethical norms and professional ethics, respects the privacy and dignity of the elderly, and cultivates students' professional quality and moral concepts in elderly care services. The combination of these methods and processes provides students with the ability to develop holistically and respond to the needs of future aged care services.

Emotional, attitudinal and value aspects

Studying the elderly care Curriculum for undergraduate students majoring in music teacher training in Sichuan Province not only pays attention to the cultivation of knowledge and skills, but also attaches importance to the shaping of emotions, attitudes and values. The Curriculum aims to develop students' respect and care for the elderly through education and practice. Students will learn how to improve the quality of life and well-being of older adults by respecting and understanding their individual differences. In addition, the Curriculum will emphasize students' professional attitudes and values, and encourage them to demonstrate responsibility, integrity and empathy in aged care services. Through the realization of these educational goals, students will not only be equipped with professional elderly care service skills, but also become elderly care service professionals with a sense of social responsibility and humanistic care.

Nature of the Curriculum

This Curriculum is an interdisciplinary Curriculum for undergraduate students majoring in music teacher training, aiming to develop students' ability in elderly care and psychological counseling in addition to music education. The Curriculum has a wide range of contents, involves multidisciplinary knowledge, emphasizes the combination of theory and practice, and pays attention to the improvement of comprehensive quality. Through the implementation of the Curriculum, students can not only master the basic knowledge and skills of elderly care services, but also improve their practical ability and humanistic care spirit in practical operation. The evaluation criteria of the Curriculum are flexible, pay attention to students' psychological quality and sense of social responsibility, and aim to cultivate professionals with comprehensive ability and interdisciplinary literacy.

Student's Condition Requirements

In line with the philosophy, objectives and learning guidelines of the programme, the eligibility requirements for students are as follows:

1. Professional background in music education, such as music theory foundation, music teaching skills, etc.;
2. Have a strong interest and enthusiasm for elderly education, and have the desire to provide music education services for the elderly;
3. Have good communication skills and interpersonal skills, and be able to interact effectively with the elderly;
4. Be innovative and adaptable, and be able to flexibly apply the knowledge and skills learned in different elderly education scenarios.

The position and role of the curriculum in the structure of the profession

The syllabus of the Pension Curriculum for Undergraduate Students of the Music Normal Program in Sichuan Province, China plays an important role in the structure of the major. As an interdisciplinary Curriculum, it not only expands students' knowledge and introduces nursing and psychological counseling, but also enhances

students' practical ability and humanistic care spirit through the combination of theory and practice. This Curriculum not only helps students to further their studies in the field of music education, but also cultivates their professional ethics and sense of social responsibility in elderly care services, laying a solid foundation for future career development.

A brief overview of curriculum development and cutting-edge trends

The development process of the senior care Curriculum for undergraduate students majoring in music in Sichuan Province, China, shows its unique position and important role in the field of education. With the increasing problem of social aging and the increasing demand for elderly services, the introduction of the discipline of elderly care not only enriches the curriculum of music teacher major, but also more effectively meets the social demand for professional elderly service talents. The curriculum has expanded from a single music education concept to include elderly care, psychological counseling and other aspects, providing students with a broader professional vision and practical opportunities.

In the future, the cutting-edge trends of the Curriculum are mainly reflected in the following aspects: first, the deepening of interdisciplinary integration, the closer integration of music education and elderly care services, and the cultivation of professionals with comprehensive ability and interdisciplinary literacy. The second is the application of technology and innovation, with the advancement of information technology, the Curriculum may introduce virtual reality, intelligent equipment and other modern scientific and technological means to improve the efficiency and quality of elderly care services. In addition, it pays attention to personalized and humanistic care, and cultivates students not only to have professional skills in elderly care services, but also to pay attention to the psychological needs and social emotions of the elderly, so as to improve the humanistic quality of services.

In general, the undergraduate program of music teacher education in Sichuan Province, China, will continue to move forward on the innovative path of

combining music education and elderly care services, and strive to cultivate high-quality and socially responsible professionals.

Moral and ethical issues that may be addressed in the Curriculum

In the development of the curriculum of the elderly care discipline for undergraduate students majoring in music in Sichuan Province, special attention needs to be paid to several moral and ethical issues. The first is the issue of privacy and dignity, ensuring that the private information of students and their family members is handled in strict compliance with the principle of confidentiality and respects their right to privacy. The second is the moral sensitivity of the Curriculum content, which requires careful handling of topics involving caregiver responsibilities and power relations to avoid causing discomfort or offense. The choice of teaching methods should also take into account the emotional and psychological impact of students, providing the necessary support and guidance to safeguard their learning experience and mental health. Finally, the education of professional ethics and professional standards is emphasized, and students are guided to abide by ethical norms and professional codes of conduct, so as to ensure that their future professional behaviors in the field of elderly care services meet social expectations.

The relationship between this Curriculum and economic and social development

This Curriculum is closely related to the relationship between economic and social development. With the change of demographic structure and the intensification of the aging trend, the demand for professional elderly care services is increasing. The development of the pension Curriculum for undergraduate students majoring in music in Sichuan Province can not only provide students with the necessary knowledge and skills for the elderly, so that they can be competent for the elderly care service in the future, but also respond to and adapt to the needs of the elderly care service industry in social and economic development. Through this Curriculum, students will learn how to effectively manage and provide elderly care services, promote the rational allocation and utilization of social resources, and also enhance the professional

level of the elderly care service industry. Therefore, the design of the Curriculum is not only to support the career development of individuals, but also to make a positive contribution to the development of the entire social pension service system.

The necessity of learning this Curriculum

The necessity of studying the senior care Curriculum for undergraduate students majoring in music in Sichuan Province is obvious, especially in the context of the current economic and social development. With the increasing problem of population ageing and the significant increase in demand for elderly care services, this Curriculum can provide students with the necessary professional knowledge and skills for future career in elderly care services. Through the study of this Curriculum, students can not only understand the theoretical basis and practical skills of elderly care services, but also develop the ability to cope with the challenges of an aging society, including the effective management and delivery of elderly care services, and the promotion of the development and progress of the elderly care service industry. In addition, this Curriculum can help students understand and respect the ethics and ethics of elderly care services, and enhance their professional quality and sense of social responsibility. Therefore, the study of pension Curriculums for undergraduate students majoring in music in Sichuan Province not only meets the needs of personal career development, but also is an inevitable choice to adapt to and promote economic and social development.

Do's and don'ts for taking this Curriculum

When studying the pension Curriculum for undergraduate students majoring in music in Sichuan Province, it is first necessary to have an in-depth understanding of the background of the aging problem in the current economic and social development. With the aging of the population and the increasing demand for elderly care services, students should fully understand the far-reaching impact of this trend on social and personal development, and understand the changes in relevant policies and systems, so that they can better cope with the challenges and opportunities in their future work.

Secondly, students should emphasize the cultivation of practical and applied abilities in the learning process. Elderly care service is a very practical discipline, and the Curriculum design should include practical operation, case analysis and scenario simulation, etc., to help students improve their ability to solve practical problems and enhance their ability to cope with various complex situations in elderly care services. In addition, emphasis is placed on cultivating students' communication skills and interpersonal skills, which are essential for improving the quality of elderly care services and the life satisfaction of the elderly.

In addition, the cultivation of ethics and professional ethics is equally important. Elderly care services involve many sensitive and private matters, and students must strictly abide by ethical norms and professional ethics in the learning process, and respect and protect the dignity and privacy of the elderly. Ethical discussions and moral case studies should be included in the curriculum to help students establish correct professional values and moral concepts, and ensure that they can serve the elderly with a high sense of responsibility and professionalism in their future work.

Finally, students also need to have the ability to continuously learn and adapt to change. With the continuous development of the elderly care service industry and the emergence of new technologies and methods, students should maintain their enthusiasm for learning, pay attention to industry trends, and update their knowledge and skills in a timely manner. In addition, interdisciplinary cooperation and the cultivation of comprehensive ability are equally important, and students should learn to integrate and apply the knowledge of medicine, psychology, sociology and other disciplines, improve their comprehensive ability to solve problems, and make positive contributions to the development of elderly care service.

The structure of the learning unit of the undergraduate curriculum of the Elderly Care Discipline for Undergraduate Students of the Music Normal Program in Sichuan Province, China

Table 21 Draft results of the review of the education curriculum for the elderly.

Units of study	Learning Outcomes	Learning content	Time(Hours)	Fraction	Percentage of class hours
Unit1 Learning Needs of Older Adults and Music Applications	1.Learn about older people	1.Physical and psychological of older people . 2.The learning needs and motivations of	10	50	Theoretical Foundations of Elderly Care Services 4
	2. Choose music that is appropriate for seniors	3.Choose music that is suitable for seniors 4.Teaching Methods and Techniques			Communication & Relationship Management 6
		5.Assessment & Feedback			

Table 21 (Continued)

Unit2 Theoretical Foundations of Music Education	1,Music therapy	Basic concepts of music therapy Methods of application of music therapy Music therapy practice	10	50	Theoretical Foundations of Elderly Care Services 6 Communication and Relationship Management 10
	2.Look for teaching techniques that are suitable for older adults	combined with education Teaching techniques suitable for the elderly Assessment & Feedback			
		total	20	100	

Curriculum content

A summary of the content of the Curriculum

This Curriculum is divided into 2 units

Unit 1: Introduction to Education for the Elderly

Session 1: Understanding the Elderly

Session 2: Choosing Music for the Elderly

Unit 2: Theoretical Foundations of Music Education

Session 1: Music Therapy

Session 2: Finding Teaching Techniques for the Elderly

Teaching focus and difficulty

The teaching of this Curriculum focuses on mastering the theory of geriatric education, music education methods and piano teaching skills, with a special focus on adapting to the learning characteristics and needs of older students. At the same time, students will learn how to use music therapy to promote the physical and mental health of the elderly, as well as design personalized teaching programs. Teaching challenges include a comprehensive understanding of complex gerontology theories and the effective application of age-appropriate teaching strategies and methods in practical teaching, which requires teachers to have in-depth professional knowledge and flexible teaching skills.

Curriculum implementation

The implementation of this Curriculum will focus on an in-depth understanding of the theoretical foundations of education for the elderly and the practical application of music education. Students will learn how to assess and understand the physical and psychological characteristics of older students, as well as their needs and challenges in learning music, especially piano. The Curriculum will develop students' ability to design and implement music teaching plans suitable for older students through theoretical lectures, case studies and practical teaching simulations. In particular, learning how to use music therapy to improve the mental health and quality of life of older students will be an important part of the curriculum. Through these implementation steps, students will gain a well-rounded education and preparation in theory and practice, laying a solid foundation for the future provision of high-quality music education services at senior universities.

Unit 1: Introduction to Education for the Elderly (10 hours)

In the development of the curriculum of elderly care for undergraduate students majoring in music in Sichuan Province, China, the introduction to geriatric education is the key to understanding the learning needs and social background of elderly students. This unit aims to explore how the theory of schools for the elderly can provide practical experience and conceptual basis for curriculum

design. As an important platform for the elderly to provide lifelong learning and social participation opportunities for the elderly, the school for the elderly provides a valuable reference for the design of elderly care Curriculums that meet the characteristics of elderly students. In this unit, I will introduce OBE theory (Outcome-Based Education) to establish clear learning objectives and assessment criteria to suit the practical abilities and learning needs of older students. The OBE theory emphasizes learning outcomes and ability assessment, rather than just the transfer of knowledge, which is crucial to the design of the elderly care curriculum. By combining the practical cases of the school for the elderly and the theory of OBE, the curriculum content and learning activities can be effectively adjusted to meet the learning needs and expectations of the elderly students to the greatest extent.

Section 1: Understanding the Elderly

Teaching Dates: Weeks 1-3

Teaching Objectives (Supporting Curriculum Objectives 1 & 3)

1.Knowledge Objectives: Students will be able to grasp the physical, psychological and social characteristics of the elderly; Understand the main social problems and challenges faced by the elderly; be familiar with the learning characteristics and needs of the elderly.

2.Skill Objectives: To develop students' empathy and respect for the elderly; Enhance the ability to learn and analyze the living conditions and needs of the elderly; Enables students to apply what they have learned to design educational activities that are appropriate for older adults.

3.Attitude goal: to stimulate students' interest and enthusiasm for the education of the elderly; Establish the concept of active aging and advocate the society's proof and cognition of the elderly.

Teaching content (including key points and difficult points)

(1) Physiological characteristics of the elderly: changes in physical functions (such as vision, hearing, memory, etc.); common chronic diseases and their effects; Health management and maintenance methods.

(2) Psychological characteristics of the elderly: psychological adaptation process and emotional changes; coping strategies for loneliness, loss, and fear; The importance of maintaining a positive mindset.

(c) Social Characteristics of the Elderly: Role Change and Identity; social engagement and interpersonal relationships; Social-to-social patterns of interaction.

(iv) Learning characteristics and needs of the elderly: learning motivation and purpose; preference for learning style; Adaptability of Curriculum content and teaching methods.

(5) Case Study: Successful Case Study of Elderly Education; Analyze the success factors and lessons learned from the case study.

[Focus]: Comprehensively analyze the physiological characteristics and changes of the elderly, psychological characteristics and needs, social characteristics and their interaction with society, and emphasize the cultivation of students' empathy and respect for the elderly. Through in-depth explanation of the physical function changes, psychological and emotional adjustments, social role changes of the elderly, as well as their characteristics and needs in learning, combined with case analysis and practical operation, students can fully understand the living conditions of the elderly, and provide theoretical support and practical guidance for the design of educational activities suitable for the elderly.

[Difficulty]: Students need to deeply understand the complex physiological, psychological and social characteristics of the elderly across age and experience differences, and at the same time translate these theoretical knowledge into practical applications, and design innovative educational activities that are not only in line with the characteristics of the elderly. In addition, developing students' empathy and

respect so that they can truly understand and pay attention to the needs and feelings of older people is also a major challenge in teaching. This requires teachers to adopt diversified teaching methods to help students overcome these difficulties and comprehensively improve their cognitive and practical ability in elderly education.

Section 2: Choose music that is appropriate for the elderly

Teaching Dates: Weeks 4-6

Teaching Objectives (Supporting Curriculum Objectives 1 & 3)

1. Cognitive development goals

Improve musical comprehension: Improve the understanding of musical structure, melody and rhythm among older adults by learning piano.

Enhancing memory: Exercise and improve the short- and long-term memory of older adults by memorizing musical notation and fingering.

Improves cognitive flexibility: Enhance cognitive flexibility and adaptability in older adults by learning different repertoire and styles.

2. Skills development goals

Master Basic Piano Techniques: Learn and master the basic piano playing techniques, including fingering, velocity control, and pedal use.

Develop improvisational skills: Encourage older adults to try their hand at improvisation to improve their musical creativity and expressive skills.

Improve musical expression: Through the practice of different styles of repertoire, cultivate the musical expression and emotional communication ability of the elderly.

3. Emotional and social goals

Enhance self-confidence: Improve the self-efficacy and self-confidence of the elderly through piano learning.

Promote emotional expression: Provide a platform for older adults to express their emotions and experiences through music.

Promote social interaction: Promote social interaction and teamwork among older adults through activities such as ensembles and concerts.

4. Physical and mental health goals

Improve physical and mental health: Through regular piano practice, the elderly can improve hand-eye coordination, reduce stress, and improve overall physical and mental health.

Delay cognitive decline: Delay cognitive decline and prevent Alzheimer's disease through continuous musical activities.

5. Cultural and Educational Objectives

Passing on Culture: Passing on and appreciating music from different cultures and historical periods by learning classical repertoire.

Lifelong learning: Encourage the elderly to establish the concept of lifelong learning, and experience the joy and sense of achievement of learning through piano learning.

Teaching content (including key points and difficult points)

1. Basic knowledge of music theory

Music Symbol Recognition: Learn basic music notations such as staves, notes, beats, pitches, rhythms, etc.

Scales and Chords: Understand and master major and minor scales, as well as basic chord formation.

Music Terminology: Learn common musical terms such as crescendo, crescendo, legato, skip, etc.

2. Piano playing skills

Hand Shape & Fingering: Correct Hand Placement and Basic Fingering Training.

Velocity Control: Learn how to control volume and tone with different touch methods.

Pedal: Master the correct use of piano pedals (sustain pedals, muted pedals, etc.).

3. Repertoire learning and performance

Easy Tracks: Start with simple tracks, such as children's songs, classic oldies, etc., and gradually increase the difficulty.

Classics: Learn some classic piano works suitable for the elderly, such as Beethoven's "To Alice", Chopin's "Nocturne", etc.

Folk music: Introduce some piano repertoire with national characteristics to increase cultural diversity.

4. Improvisational accompaniment and composition

Chord accompaniment: Learn how to match melodies with chords for simple improvisational accompaniment.

Experimentation: Older adults are encouraged to try their own little melodies or variations.

5. Music appreciation and analysis

Music style recognition: Identify different music styles, such as classical, romantic, jazz, etc.

Work analysis: Analyze the structure, melody, harmony and other characteristics of different works.

6. Health & Wellness

Body posture: Learn proper sitting and body posture to protect spine and hand health.

Relaxation techniques: Learn relaxation techniques before and after playing to prevent muscle tension and strain.

7. Socializing & Performance

Ensemble practice: Organize ensemble activities to enhance communication and cooperation among students.

Concerts & Presentations: Regular mini-concerts give seniors the opportunity to showcase their learning.

8. Use of technology and tools

Music software applications: Introduce some music software and apps to help the elderly learn and practice the piano better.

Recording & Playback: Learn how to use recording equipment, record your own performances and self-assess.

[Focus]: Through the learning of basic music theory knowledge, the training of piano performance skills, and the learning and performance of repertoire, to improve the musical literacy and performance ability of the elderly, and at the same time pay attention to the cultivation of improvisational accompaniment and creation, so as to stimulate their creativity and expressiveness, and promote the physical and mental health and social interaction of the elderly through activities such as music appreciation and analysis, health and wellness, socialization and performance.

[Difficulty]: Adapt to the physical conditions and cognitive abilities of the elderly, such as the loss of finger dexterity and memory, and how to maintain their interest and motivation to learn, to ensure that the teaching content is not only in line with their actual level, but also can effectively improve their musical skills and enjoy the learning process.

Teaching process

1. Physical and psychological characteristics of the elderly

Teaching process:

Introduction: Introduce the basic concepts of physiological and psychological changes in older adults through discussions and video materials.

Explanation: Explain in detail the sensory, cognitive, emotional, and social changes in older adults.

Case Studies: Analyze specific cases to enable participants to understand how these changes affect the daily life and learning of older adults.

Group Discussion: Discuss in groups the specific impact of the physical and psychological characteristics of older adults on educational practice.

Summary: Summarize the main points of discussion and emphasize the importance of considering these characteristics in the education of the elderly.

2. The learning needs and motivations of older adults

Questionnaires: Questionnaires are used to understand the learning needs and motivations of the elderly.

Data Interpretation: Analyze survey results to identify the main drivers of learning among older adults.

Experience sharing: Seniors are invited to share their learning experiences and discuss their learning needs.

Role-playing: Simulating the learning scenarios of the elderly, allowing participants to experience the learning process from the perspective of the elderly.

Strategy development: Based on the results of the discussion, develop teaching strategies that meet the learning needs of the elderly.

3. Choose music that is suitable for seniors

Music appreciation: Different styles of music are played to give students a sense of what the elderly may like.

Needs Analysis: Discuss the music preferences of older adults and the type of music that is appropriate for them.

Repertoire selection: Based on the results of the analysis, a series of repertoire suitable for the elderly is selected.

Hands-on application: Have learners try to apply selected tracks to their teaching and gather feedback.

Feedback adjustment: Adjust the repertoire selection based on practical feedback to optimize the teaching content.

4. Teaching Methods and Techniques

Theoretical Learning: Introduce teaching methods and techniques suitable for the elderly.

Demonstration Teaching: Demonstration of the practical application of these methods and techniques through demonstration lessons.

Hands-on exercises: Students practice these methods and techniques in a simulated teaching environment.

Peer Review: Participants review each other's teaching practices and provide constructive feedback.

Skill optimization: According to the evaluation results, optimize teaching methods and skills to improve teaching effectiveness.

5. Evaluation and Feedback

Introduction to Assessment Methods: Explain different assessment methods, such as self-assessment, peer assessment and teacher assessment.

Assessment tool development: Instruct participants to create or select assessment tools suitable for the elderly.

Simulated assessment: Practical application of these assessment tools in simulated teaching.

Feedback Collection: Discuss how to effectively collect and utilize assessment feedback to improve instruction.

Feedback Implementation: Based on the feedback received, adjust the teaching plan and methodology to improve the quality of teaching.

Assignment and post-class reflection

Assignment Schedule:

1. To write a short article on the role and importance of the university for the elderly in social education, in order to analyze its position in the social education system and discuss its significance to the learning and social life of the elderly.

2 Students are required to complete a report on the characteristics of education for older persons and their role in promoting the health and well-being of older persons, emphasizing their importance at the psychological and physical levels.

3 Students will engage in a discussion about how the characteristics of older learners affect their motivation and ability to learn. Each assignment is completed over a period of one week and is designed to promote students' ability to think independently and gain a deeper understanding of education for the elderly.

Reflections after class:

Focus on the student's understanding and application of each assignment. Through a detailed analysis of students' challenges and difficulties in completing assignments, teachers will be able to effectively adjust instructional strategies and provide individualized support and guidance to ensure maximum learning outcomes for each student. This reflection not only helps to improve the quality of teaching, but also stimulates students' progress and growth in future learning.

Preparation and other relevant special requirements

Preparation:

Students are expected to read the relevant chapters and materials in advance so that they can actively participate in the class discussions.

Students are encouraged to actively participate in class activities and group discussions to share their personal views and insights.

Special requirements include:

Assignment Submissions: All assignments must be submitted on time.

Participation Assessment: Students' classroom participation will be the basis for part of the Curriculum evaluation.

Unit 2 Theoretical Foundations of Music Education (10 hours)

The Theoretical Foundations of Music Education unit delves into the core theories and practices of music education. Understanding and applying music education theories is essential to design a curriculum that can effectively promote the

participation and growth of older learners. I will focus primarily on the application of Orff's music pedagogy and constructivist theory. The Orff Music Pedagogy emphasizes developing students' musical ability and creativity through experiential and interactive learning. The Orff Music Pedagogy is particularly suitable for older students, as it emphasizes practice and participation, stimulates students' interest and motivation to learn, and improves their understanding and expression of music.

Constructivist theory, on the other hand, emphasizes that learners acquire knowledge and understanding through interaction and construction with their environment. In music education, constructivist theory can guide curriculum design and encourage older students to deepen their understanding and application of music education content through practical experience and creative activities. By combining Orff's music pedagogy and constructivist theories into the music education curriculum, we are able to provide a dynamic and engaging learning experience for older students that enhances their musical skills and quality of life.

Section 1: Music Therapy

Dates: Weeks 7-10

Teaching Objectives (Supporting Curriculum Objectives 1 & 3)

1. Knowledge and understanding

Students are able to define music therapy and understand its application in older age groups.

Students are able to describe the historical development and scientific foundations of music therapy.

Students are able to identify and explain the main theoretical frameworks of music therapy, including psychodynamic, behaviorist, and humanistic theories.

2. Skills & Applications

Students are able to design and implement individual and group music therapy programs for older populations.

Students are able to apply different music therapy techniques, such as music and movement therapy, to improve mood and cognitive function in older adults.

Students are able to use assessment tools and methods to measure the effectiveness of music therapy and adjust treatment based on feedback.

3. Emotions and attitudes

Students are able to demonstrate empathy and understanding for the needs of music therapy in older populations.

Students are able to recognize the value and importance of music therapy in improving the quality of life of older adults.

Students are able to develop an awareness of the ethics and legal responsibilities of the music therapy profession.

4. Analysis and evaluation

Students are able to analyze cases of the use of music therapy in the management of geriatric diseases and evaluate their effectiveness.

Students are able to evaluate ethical and legal issues in music therapy and make sound decisions in practice.

5. Communication and cooperation

Students are able to effectively communicate the concepts and practices of music therapy in group discussions and role-plays.

Students are able to work with peers to co-design and execute music therapy activities.

6. Innovation and research

Students are able to explore new ways to integrate music therapy with modern technology, such as digital music and virtual reality.

Students are able to come up with new ideas for interdisciplinary collaboration to promote the application and development of music therapy in older age groups.

7. Lifelong learning and self-development

Students are able to identify and utilize instructional resources and recommended reading in the field of music therapy to support lifelong learning and self-development.

Students are able to reflect on their personal experiences in the music therapy learning process and develop a personal career development plan.

Teaching content (including key points and difficult points)

1. Overview of music therapy

Definition and History of Music Therapy: An introduction to the basic concepts, origins, and development of music therapy.

The Scientific Basis of Music Therapy: Explores how music affects a person's mental and physiological state.

2. The theoretical framework of music therapy

Psychodynamic Theory: Analyzes how music serves as a medium for the expression of emotions and inner conflicts.

Behaviorist Theory: Explores the role of music in behavior change.

Humanistic Theory: Discusses how music can promote individual self-realization and personal growth.

3. Application areas of music therapy

Geriatric disease management: such as Alzheimer's disease, Parkinson's disease, etc.

Emotion regulation: how to improve the emotional state of older adults through music therapy.

Cognitive Maintenance: The Role of Music in Delaying Cognitive Decline.

Fourth, the implementation method of music therapy

Individual Music Therapy: A music therapy program designed to meet individual needs.

Group Music Therapy: Promote social and emotional communication through group music activities.

Music & Movement Therapy: Activities that combine music and body movement.

5. Evaluation and feedback of music therapy

Assessment Tools and Methods: Describe how to evaluate the effectiveness of music therapy.

Feedback collection: How to collect feedback from participants and adjust treatment accordingly.

6. Practical case analysis of music therapy

Case Study: Analyze several successful cases of music therapy and discuss their effects and experiences.

Role-play and simulation: Simulate the implementation of music therapy and allow students to experience the role of a therapist.

7. Ethical and Legal Issues of Music Therapy

Confidentiality and Privacy: Discuss the importance of protecting participant privacy in music therapy.

Professional Responsibility: The professional ethics and legal responsibilities that music therapists are expected to follow.

8. Future trends in music therapy

Technology Integration: Explores the integration of music therapy with modern technologies (e.g., digital music, virtual reality).

Interdisciplinary collaborations: prospects for collaboration with other fields such as medicine, psychology, sociology.

9. Teaching Resources and Recommended Reading

Textbooks & Bibliography: Provides classic and up-to-date literature in the field of music therapy.

Online Resources: Recommend websites, databases, and online Curriculums related to music therapy.

[Focus]: To develop students' in-depth understanding of the application of music therapy in older age groups, including mastery of the basic theories, technical methods and practical skills of music therapy, as well as assessment and feedback mechanisms, while emphasizing empathy and understanding of the emotional needs of older adults, as well as ethical and legal standards to be followed in the practice of music therapy.

[Difficulty]: The difficulty of music therapy teaching for the elderly group lies in how to transform the abstract music therapy theory into specific practical skills suitable for the elderly, while taking into account the physiological and psychological characteristics of the elderly, to ensure that the teaching content is both scientific and effective, easy to understand and accept, in addition, it is also necessary to solve how to accurately evaluate the effect of music therapy, ensure the safety and ethics of treatment, and how to stimulate and sustain interest and motivation in older adults to participate in music therapy activities.

Section 2: Finding Teaching Techniques for Older Adults

Dates: 11-15 Instructional Weeks

Teaching Objectives (Supporting Curriculum Objectives 1 & 3)

1. Understanding Older Learner Characteristics: Students are able to identify and understand the physical and psychological challenges that older adults may face in music learning.

2. Mastering Adaptive Teaching Strategies: Students are able to master and apply teaching strategies and techniques that are adapted to the characteristics of older adults.

3. Designing appropriate teaching content: Students are able to design music education content that meets the needs and abilities of older adults.

4. Improve teaching interaction skills: Students can increase the learning interest and participation of older adults through effective teaching interaction.

5. Assessing and Adapting Teaching Methods: Students are able to assess the effectiveness of teaching methods and make adjustments based on feedback to accommodate the learning progress of older adults.

6. Promoting Social Participation of Older Adults: Students are able to promote social participation and emotional communication among older adults through music instruction.

7. Cultivating Innovative Thinking: Students are able to innovate music teaching methods to adapt to changing educational needs and technological developments.

8. Understanding and Applying Teaching Ethics: Students are able to understand and apply teaching ethics and respect for the individual differences of older adults in music education for the elderly.

9. Interdisciplinary knowledge integration: Students are able to integrate interdisciplinary knowledge such as music, psychology, gerontology, etc., to enrich teaching content and methods.

10. Self-Reflection and Professional Development: Students are able to enhance their teaching practices through self-reflection and plan their own professional development paths in the field of music education for the elderly.

Teaching content (including key points and difficult points)

1. Characteristics of music learning for the elderly

The impact of physiological changes on learning: to explore the impact of physiological changes such as hearing loss and finger dexterity on music learning.

Psychological and social factors: analysis of the psychological needs, desire for social participation, and their impact on learning among older adults.

2. Theoretical basis of teaching techniques

Adult Learning Theory: Introduce music learning theories suitable for the elderly, such as adult education theory, experiential learning theory, etc.

Psychological Foundations of Teaching Techniques: Discuss how to use psychological principles to design teaching techniques to improve the learning efficiency of the elderly.

3. Selection and application of teaching techniques

Diverse Teaching Techniques: Introduce different teaching techniques, such as demonstration teaching, interactive discussions, group work, etc.

Adaptive Adaptation of Techniques: Teaches how to adapt teaching techniques to the characteristics of older people.

Fourth, the design of teaching content

Age-appropriate Curriculum content: Design music education content suitable for the elderly, including repertoire selection, teaching progress, etc.

Interdisciplinary content integration: How to integrate interdisciplinary content such as health and culture in music teaching.

5. Teaching interaction and communication skills

Building Teacher-Student Relationships: Teach how to build trusting and respectful relationships with older students.

Effective Communication Skills: Develop skills to communicate effectively with older adults, including verbal and non-verbal communication.

6. Evaluation and feedback

Evaluation of Teaching Effectiveness: Introduces how to evaluate the effectiveness of teaching techniques, including quantitative and qualitative methods.

Feedback collection and application: Teach how to collect feedback from older students and adjust teaching methods accordingly.

7. Exploration of innovative teaching techniques

The use of technology in teaching: Explores how modern technologies, such as digital music software and online platforms, can be used to assist music teaching.

Innovative Teaching Activity Design: Students are encouraged to design innovative music teaching activities to enhance the learning interest of the elderly.

8. Teaching ethics and the rights and interests of the elderly

Respect and Inclusion: Emphasis is placed on respecting the individual differences and learning rhythms of older adults in teaching.

Discussion of ethical issues: Discuss ethical issues that may be encountered in music education for the elderly, such as privacy protection, Curriculum selection, etc.

9. Practice and Reflection

Teaching Practice: Students are assigned to engage in practical teaching practice to apply and test the teaching techniques they have learned.

Reflection and Improvement: Students are encouraged to reflect after practice, identify successes and challenges in teaching, and propose ways to improve.

[Focus]: In-depth understanding of the physiological and psychological needs of the elderly, mastering and applying teaching strategies and techniques adapted to the characteristics of the elderly, designing music education content suitable for the elderly, cultivating skills of effective communication with the elderly, evaluating teaching effects and adjusting according to feedback, exploring innovative teaching methods, especially the application of modern technology, and emphasizing teaching ethics and respecting the individual differences of the elderly. These focuses aim to enhance the music learning experience and outcomes for older adults while promoting their social engagement and emotional well-being.

[Difficulty]: Effectively translate theoretical knowledge into practical teaching techniques suitable for the physiological and psychological characteristics of the elderly, while ensuring that these techniques can stimulate the interest and participation of older learners, and how to accurately evaluate and timely feedback the teaching effect in order to continuously optimize the teaching method, in addition, it is

also necessary to overcome the learning barriers that may exist in the elderly, such as hearing loss, memory loss, etc., while respecting their individual differences and learning rhythm to maintain the coherence and systematization of teaching.

Teaching process

1. Basic concepts of music therapy

Introduction: An introduction to the definition of music therapy, including how it can affect a person's mental and physical state through music as a means of psychotherapy.

Explanation: Explain in detail the historical background, scientific foundations, and development of music therapy in different cultures.

Interactive Discussion: Have students discuss how music can be used as a nonverbal form of communication and its role in therapy.

2. How to apply music therapy

Theoretical Learning: Explain the different types of music therapy, including receptive, re-creative, and improvisational music therapy.

Case Study: Through specific case studies, students will understand the practical application of music therapy.

Hands-on: Through simulated activities, students experience different types of music therapy.

3. The practice of music therapy combined with education

Educational Integration: To explore how to integrate music therapy into music education, especially in the education of the elderly.

Instructional Design: Design music education programs that incorporate music therapy, emphasizing interactivity and participation.

Role-playing: Students play the role of teachers and older students to practice the use of music therapy in teaching.

4. Teaching techniques suitable for the elderly

Technique introduction: Introduce music teaching techniques suitable for the elderly, such as relaxation training methods, music games, etc.

Skills training: Workshops and hands-on sessions are used to teach how to use these techniques.

Feedback Adjustments: Based on feedback from older adults, adjust teaching techniques to better suit their needs.

5. Evaluation and Feedback

Assessment Methods: Introduce different assessment tools and methods and how to measure the effectiveness of music therapy.

Feedback collection: Teach how to collect feedback from older students and adjust treatment accordingly.

Case Study: Analyze success stories and discuss the importance of assessment and feedback in music therapy.

Assignment Schedule:

1. Essay on the application of music therapy in the education of the elderly

Task Description: To write a short essay to explore the application of music therapy in the education of the elderly, and analyze its role in improving the quality of life and social interaction of the elderly.

Time to complete: one week.

Submission format: 1000-1500 words short essay.

2. Characteristics of music education in older adults and its impact on health and well-being

Task Description: To complete a presentation on the characteristics of music education for older adults and explore its role in promoting the mental and physical well-being of older adults.

Time to complete: one week.

Submission format: 2000-2500 word report, which can include charts and case studies.

3. Prepare for the discussion of the characteristics and motivation of older learners

Task Description: Prepare a class discussion that explores how the characteristics of older learners affect their motivation and ability to learn, and how music therapy can help overcome these challenges.

Time to complete: one week.

Submission Format: Prepare an outline and key points for discussion, and give oral presentations and discussions in class.

Reflections after class:

Assignment Comprehension and Application: After each assignment, students are required to submit a personal reflection describing their understanding and application of the theoretical foundations of music education in the Curriculum of completing the assignment, as well as the challenges they encountered and how they overcame them.

Adjustment of Teaching Strategies: Teachers will analyze students' difficulties in understanding the theoretical foundations of music therapy and geriatric education based on students' assignments and reflection reports, and then adjust teaching methods and content to better meet students' learning needs.

Individualized support: Teachers will provide individualized guidance and support based on student feedback to help students deepen their understanding of the application of music therapy in older education.

Preparation and other relevant special requirements:

Pre-class Reading: Students are expected to read the assigned chapters on the theoretical foundations of music education and music therapy before class in order to be able to fully participate in class discussions and activities.

Active Participation: Students are encouraged to speak up in class and share their own insights and findings from assignments to promote deep learning and understanding.

Assignment Submissions: All assignments must be submitted by the specified deadline, late submissions will affect the final grade.

Classroom Participation: Students' classroom participation will be included as part of the Curriculum evaluation, including discussion contributions and activity participation.

Respect and Inclusion: In discussions and assignments, students are expected to demonstrate respect and tolerance for different perspectives and learning approaches to create a positive learning environment.

Curriculum Requirements:

Requirements for students to study on their own

1. In order to better prepare for the study of elderly care Curriculums, students should first preview the relevant textbooks and Curriculumware of each lesson to ensure that they master the basic concepts and contents. Secondly, students are encouraged to expand their knowledge horizons through in-depth reading of academic literature and case studies, and to be able to think independently and summarize the key points of classroom learning. In addition, students are expected to prepare questions or ideas for class discussions, and actively participate in discussions and exchanges on online learning platforms, so as to deepen their understanding of the discipline of elderly care and enhance their learning effectiveness.

2. After each lesson, students should reflect on their learning, summarize the difficulties and solutions encountered in the learning process, and how to apply the knowledge they have learned to the actual elderly care service. These self-study requirements not only help students to actively participate in the classroom, but also develop their independent learning skills and critical thinking, which will lay a solid foundation for future professional development.

Requirements for reading outside of class

Students are required to complete certain extracurricular reading tasks to deepen their understanding of the discipline of elderly care and expand their knowledge horizons. Each semester, students are required to read 2-3 relevant academic journal articles or professional books, covering the theory, practical experience and policy research of elderly care services. In addition, it is necessary to

analyze 1-2 practical cases of elderly care services to discuss their applications, effects and challenges. Interdisciplinary reading, including literature in the fields of sociology, psychology and public health, is recommended to understand the role and contribution of aged care services in interdisciplinary research. At the end of each semester, students are required to submit a reading report, including an abstract, key points and personal reflections, demonstrating their comprehension and application of reading outside the classroom. These reading tasks are designed to cultivate students' independent thinking ability, deepen their comprehensive understanding and practical application ability of the discipline of elderly care.

Requirements for class discussions

In the senior music education curriculum, classroom discussion is an important platform for academic deepening and practical exploration. Students are expected to be prepared to present practical questions and perspectives through thorough theoretical content and case studies, as well as engage in active academic exchanges with classmates and teachers. On the basis of respecting diversity and sharing experiences, they apply theoretical knowledge to the practice of senior music education, and jointly explore successful teaching experiences and solutions to challenges. After each discussion, students will summarize and reflect on their learning gains to promote an in-depth understanding of the Curriculum and the improvement of practical application skills.

Requirements for Curriculum Practice

The practice of the senior music education Curriculum requires students to transform the theoretical knowledge they have learned into the key aspects of practical ability. Students will design and implement a teaching plan for senior music education, including setting teaching goals, selecting appropriate teaching methods and resources, and evaluating teaching effectiveness. In addition, students will participate in field internships or community service projects, interact with older people, and use senior music education methods for practical operation and experience accumulation. In the process of practice, they will analyze cases, reflect on challenges

and solutions in implementation, and promote the growth and development of individuals and teams through teamwork and communication, sharing experiences and solving problems. At the end of each practice project, students will write a practice summary and report, which will record the learning gains and experiences in the implementation process in detail, and provide suggestions and prospects for improvement in the future practice of music education for the elderly. These practical requirements are designed to cultivate students' practical ability, sense of teaching innovation and sense of social responsibility, and lay a solid foundation for their future career development.

Curriculum assessment

Requirements for attendance (late arrival, early departure, etc.), class discussions, assignments, etc

Teachers are called according to the list before each class, and all kinds of false slips must be submitted to the teacher before class.

Attendance and classroom discipline are the guarantee of classroom teaching, and students must abide by the school's discipline and rules. Public holidays must be signed by the counselor and signed by the head of the hospital; Personal leave must have an approval certificate issued by the college: sick leave must have a secondary (or above) hospital diagnosis certificate or medical certificate (oral leave is allowed, and leave is made up afterwards): if you do not meet the leave rules, you will be disqualified from attending this class if you are late for more than 10 minutes, and if you enter the classroom for the second class, you will be treated as late, and you will be treated as absent from class if you exceed one class. Teachers and students must prepare for class before the class bell rings, and stepping on the bell to enter the classroom is considered late; It is forbidden to talk or play with mobile phones in class, but you can choose to read the books according to your level of acceptance of the Curriculum.

3 points will be deducted for absenteeism, 3 points will be deducted for class discipline violations, 2 points will be deducted for being late once, 1 point will

be deducted for personal leave and sick leave, and all attendance deductions will be deducted from the usual grades.

Explanation of the composition of the grades and the scoring rules

Score composition

The Curriculum grading is composed of 20% of the total score, including class participation, pre-class preparation and homework completion; 15% of the class discussion assesses students' critical thinking and academic communication skills; The content of the two units accounts for 10% to 20% of the total score, covering basic concepts and meanings, psychological foundations and characteristics, teaching methods and strategies, practice and case analysis, and future development and prospects. 15% of the Curriculumwork examines the application of theories and the ability to reflect on learning; Finally, 15% of the exams or final projects assess the ability to acquire comprehensive theoretical knowledge and analysis. These scoring items comprehensively reflect students' academic performance and practical abilities in the Senior Music Education programme, ensuring an overall score of 100% to fully assess learning outcomes and ability development.

3. Part III (Devopment : D2)

3.1 Results of the review of the education curriculum for the elderly (draft)

The draft curriculum for older education is reviewed through Focus Groups to refine and evolve to the final version. The discussion focused on the development of a curriculum for undergraduate students majoring in music in Sichuan Province, China, with a total of 6 participants: 2 music education experts, 1 gerontology expert, 1 music teacher student, 1 curriculum development expert, and 1 geriatric school student.

Based on the results of the focus group discussions, the draft curriculum has been improved to include the following elements: curriculum objectives, principles, Curriculum description, learning outcomes, content highlights, organization of learning activities, learning resources, assessment and evaluation methods, curriculum structure, and learning plan. The specific details are shown in the table below, which compares the education curriculum for the elderly before and after the focus group discussion.

Table 22 Results of the review of the education curriculum for the elderly (draft)

Curriculum components:	Expert advice:	According to the experts' suggestions, the revision of the pension Curriculum for undergraduate students majoring in music is adjusted
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Table 22 (Continued)

Curriculum Evaluation	<p>1. Multiple Methods: Use self, peer, and teacher assessments for a full picture of progress.</p> <p>2. Process Assessment: Focus on participation and skills, not just final exams.</p> <p>3. Performance-Based: Assess through real projects and cases.</p> <p>4. Feedback: Provide timely feedback to support improvement.</p> <p>5. Reflection: Encourage self-reflection on learning.</p> <p>6. Diversity: Adapt assessments to different backgrounds and learning styles.</p> <p>7. Technology: Use online tools for efficient assessments and data.</p> <p>8. Review: Regularly update assessments based on feedback.</p>	<p>This Curriculum focuses on context-based assessment, involving active participation from both students and teachers. It includes quizzes to evaluate student learning and real-time assessments during teaching activities. The aim is to offer a clear understanding of students' progress and skills in music education and therapy for the elderly. These assessments not only give feedback to students but also help teachers adjust their strategies, improve the curriculum, and better meet the needs of older learners.</p>
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Table 22 (Continued)

Curriculum Objectives:	<p>1.Ensure integration with gerontology Curriculums to promote the holistic development of learning for older adults.</p> <p>2. After completing gerontology-related Curriculums, students will be able to understand the needs and characteristics of the elderly, and master effective teaching strategies for elderly learners.</p> <p>3. Adjust the Curriculum content to suit the teaching environment of the school and the actual situation of the student body.</p>	<p>This Curriculum aims to develop students' knowledge and practical abilities in gerontology, and its objectives are as follows:</p> <p>To enable students to understand the basic concepts and related knowledge of gerontology.</p> <p>To enable students to integrate knowledge of gerontology with music education.</p> <p>Equip students with the skills to communicate and interact with older adults.</p> <p>Develop students' ability to design music activities that are suitable for older adults.</p> <p>Equip students with the skills to evaluate and improve musical activities.</p>
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Table 22 (Continued)

Curriculum Principles:	<p>1. Ensure that the curriculum is consistent with the integration of the discipline of elderly care, and pay attention to the role of music education in the learning of the elderly.</p> <p>2. Identify topics that complement the curriculum and involve integrated areas such as music education, gerontology and social interaction.</p>	<p>The curriculum for Sichuan Provincial Music Teacher Training focuses on:</p> <p>1. Elderly-Centered: Design teaching to meet the learning and living needs of the elderly.</p> <p>2. Interdisciplinary: Combine music education with elderly care knowledge for practical skills.</p> <p>3. Practice-Based: Offer hands-on experiences to solve real problems.</p> <p>4. Teamwork: Foster collaboration, mutual support, and social responsibility.</p> <p>5. Self-Directed Learning: Encourage independent learning and reflection for lifelong growth.</p>
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Table 22 (Continued)

Curriculum Description:	<p>1. Content Coverage: The curriculum covers elderly care topics, including their physiological, psychological needs, and music therapy methods.</p> <p>2. Learning Outcomes: Students will learn gerontology theory and practice, and how to design music activities for the elderly.</p> <p>3. Teaching Methods: Use project-based learning, group discussions, and case studies to apply knowledge and improve problem-solving.</p> <p>4. Practical Application: Students will apply their knowledge to improve elderly care, health, and design community programs.</p>	<p>This curriculum teaches elderly education and music therapy through research and practical application. Students will: Identify Issues: Explore topics in senior care through research. Curriculum Design: Plan curriculum and data collection methods. Data Collection & Analysis: Gather and analyze data for insights. Discussion & Presentation: Share findings and collaborate. Inquiry-Based Learning: Create solutions based on interests. This approach develops creativity, teamwork, and problem-solving, preparing students for careers in elderly education.</p>
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Table 22 (Continued)

Learning Outcomes	<p>Learning Outcomes:</p> <p>Students will understand elderly needs, music therapy, and the psychological and physical characteristics of the elderly. They will develop skills in designing services, teamwork, and innovation.</p> <p>Appropriateness:</p> <p>Outcomes should match the level of undergraduate music teacher training, ensuring practical application of knowledge.</p> <p>Alignment: Learning outcomes should align with the curriculum content, meet objectives, and be achievable within the given time frame with available resources.</p>	<p>Understand the theory of elderly education, including geriatric psychology, nursing, and policies.</p> <p>Identify and analyze practical challenges in elderly care services.</p> <p>Design innovative teaching programs combining music and geriatric education.</p> <p>Use music education to showcase and exchange elderly care learning outcomes.</p> <p>Apply music education skills in senior education settings.</p> <p>Communicate effectively with the elderly and families, and work well in teams.</p> <p>Value contributions in elderly education and build a strong career foundation.</p>
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Table 22 (Continued)

Curriculum content	<p>Content should align with learning outcomes, ensuring students can apply their knowledge. Information should be accurate, up-to-date, and meet academic standards in aged care and music education. Cover key topics like geriatric psychology, nursing, and music therapy. Present content through case studies, exercises, and discussions to engage students. Content should match students' level, ensuring it's neither too simple nor complex.</p> <p>Organize content logically, making it easy to understand and apply in practice. Develop skills like analytical thinking, problem solving, communication, and teamwork for future .</p>	<p>The curriculum includes:</p> <p>Understanding Older Adults: Explore learning needs and challenges to design effective teaching strategies.</p> <p>Choosing Appropriate Music: Analyze preferences to create personalized music activities promoting emotional and cognitive well-being.</p> <p>Music Therapy: Learn music therapy techniques to improve mental health and address cognitive issues.</p> <p>Teaching Techniques: Use step-by-step methods, visual aids, and interactive approaches to engage older adults.</p>
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Table 22 (Continued)

Methods for organizing learning activities	<p>Focus on Learner Needs: Design curriculum based on the interests and needs of older learners, encouraging their participation and feedback.</p> <p>Promote Cooperative Learning: Use group activities to improve teamwork, communication, and social interaction in a relaxed setting.</p> <p>Use Diverse Methods: Incorporate music, videos, and field trips to make learning engaging and effective.</p> <p>Encourage Independent Learning: Provide opportunities for research and discussion to promote independent thinking and lifelong learning.</p>	<p>This curriculum for music students in Sichuan includes six steps:</p> <p>Stimulate Thinking: Discuss elderly needs and share experiences.</p> <p>Set Goals: Co-create goals and analyze topics like music therapy.</p> <p>Design Solutions: Develop music programs for older adults.</p> <p>Create Work: Implement music and teaching methods.</p> <p>Evaluate: Assess and adjust based on feedback.</p> <p>Reflect: Showcase and improve teaching methods.</p> <p>This process enhances practical skills in geriatric education.</p>
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Table 22 (Continued)

Learning medium	<p>Appealing Design: Use bright colors and clear layout to engage students, with concise, easy-to-understand content.</p> <p>Real-Life Relevance: Connect media to students' daily life to highlight its practical value.</p> <p>Promote Participation: Encourage active student interaction with the media.</p> <p>Age and Level-Appropriate: Tailor content to students' age, education level, and interests.</p> <p>Flexibility: Ensure media can be adapted to different learning contexts and needs.</p>	<p>Curriculum Manual: Provides basic knowledge and framework for geriatric education.</p> <p>Practical Worksheets: Track and assess the learning progress of older adults.</p> <p>Teaching Materials & Equipment: Includes music tools and props for elderly learning.</p> <p>Multimedia & Resources: Enhance learning with video, audio, and online materials.</p> <p>Internet: Access research, information, and resources on elderly-related topics.</p> <p>Community Resources: Partner with elderly care institutions and universities for practical learning.</p>
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Table 22 (Continued)

Curriculum structure	<p>The music education curriculum for the elderly should include:</p> <p>Step-by-Step Content: Start with basic elderly characteristics, then move to music education and therapy.</p> <p>Up-to-Date Information: Include the latest research, policies, and case studies.</p> <p>Skill & Knowledge Integration: Combine music education with elderly care for practical use.</p> <p>Diverse Activities: Include composition, performance, and music therapy to boost participation and teamwork.</p> <p>This structure helps students gain knowledge and practical skills for working with the elderly.</p>	<p>The Seniors Music Education curriculum has two units:Module 1: Foundations of Music Education for Older Adults5 study plans (20 hours) focusing on the physical and psychological characteristics of older adults, their learning needs, and designing suitable music programs.Module 2: Music Therapy and Social Interaction 5 study plans (20 hours) covering music therapy concepts and methods, teaching students to create music activities for older adults. These units equip students with core knowledge and practical skills for serving the elderly in music education.</p>
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Table 22 (Continued)

Lesson plan	<p>Clear Outcomes: Set goals for easy assessment.</p> <p>Structured Content: Progress from basic to complex concepts.</p> <p>Varied Activities: Use lectures, group work, and music practice to engage students.</p> <p>Continuous Assessment: Assess progress in composition and program design.</p> <p>Relevant Materials: Choose resources that suit older learners' needs.</p> <p>Flexibility: Adjust based on student needs and context.</p>	<p>The "Curriculum Plan for Elderly Care for Undergraduate Students Majoring in Music Teachers in Sichuan Province, China" includes the following:</p> <p>Unit1: Fundamentals of Music Education for the Elderly, with a total of 5 lesson plans totaling 20 hours.</p> <p>Unit 2: Music Therapy and Practice, consists of 5 lesson plans totaling 20 hours.</p>
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Table 22 (Continued)

<p>Learn how to organize the activity</p>	<p>Clear Goals: Set clear objectives and assessment criteria.</p> <p>Modular Design: Break content into modules for step-by-step learning.</p> <p>Interactive Learning: Include discussions, case studies, and activities to enhance teamwork.</p> <p>Flexible Adjustment: Adapt plans based on feedback and progress.</p> <p>Diversified Assessment: Use self-assessment, peer review, and teacher evaluation.</p> <p>Practical Application: Focus on real-world teaching and music activities for the elderly.</p>	<p>Understand the Elderly: Study traits to stimulate learning.</p> <p>Choose Music: Select music based on emotional impact.</p> <p>Implement Therapy: Demonstrate music therapy's benefits.</p> <p>Teach Skills: Boost confidence with simple music skills. Explore Learners: Discuss older learners' traits.</p> <p>Select Music: Choose suitable music for seniors.</p> <p>Create Activities: Design music therapy for social interaction.</p> <p>Evaluate: Assess therapy effects.</p> <p>Show Skills: Share success stories.</p> <p>Summarize: Reflect and plan future steps.</p>
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3.2 Quality evaluation and inspection results of the elderly care curriculum for undergraduate students majoring in music in sichuan province, china

After the researchers adjusted according to the discussion opinions of the expert group, the researchers invited 6 experts to conduct a re-review to confirm the quality of the undergraduate music teacher professional nursing discipline Curriculum. The six experts include 2 music education experts, 1 gerontology expert, 1 music teacher trainee, 1 curriculum development expert and 1 senior school student. A 5-point rating scale was used for the assessment. As shown in Fig

The results of the applicability analysis of the Curriculum quality of the elderly care discipline for undergraduate students majoring in music in Sichuan Province, China

Table 23 The results of the applicability analysis of the curriculum quality of the elderly care discipline for undergraduate students majoring in music in sichuan province, china

numbering	project	M	SD	level of quality	serial number	percentage
1 1	Curriculum name	4.67	0.52	Very good	2	93.40%
2 2	Curriculum Principles:	4.67	0.52	Very good	2	93.40%
3 3	Curriculum Objectives:	4.67	0.52	Very good	2	93.40%
4 4	Curriculum Description:	4.50	0.55	Very good	3	90.00%

Table 23 (Continued)

5	Learning	4.67		Very	2	93.40%
5	Outcomes		0.52	good		
6	Curriculum	4.33		Very	4	86.60%
6	content		0.52	good		

Table 23 (Continued)

numbering		project	M	SD	level of quality	serial number	percentage
77		Methods for organizing learning activities	4.33	0.52	Very good	5	86.60%
88		Learning medium	4.67	0.52	Very good	2	93.40%
99		Measurement and evaluation methods	4.33	0.52	Very good	5	86.60%
110		Curriculum structure	4.67	0.52	Very good	2	93.40%
111		Lesson plan	4.83	0.41	Very good	1	96.60%
	overview		4.57	0.51	Very good		91.52%

According to the analysis results of the course quality of undergraduate students in Sichuan Province, which is aimed to promote innovation ability and teamwork skills, the overall quality score of the highest level was 4.83 (M=4.67,

SD=0.52). Considering item by item, the first item with the highest average score was article 11 teaching plan (M=4.83, SD=0.41), followed by 4.67 in item 1, 4.67 in article 2 and 4.67 in article 3 (both M=4.67, SD=0.52), 4.67 in course instructions and 4.67 in learning media. This was followed by 4.5 points for article 4 course description (M=4.50, SD=0.55), 4.33 points for course content in Article 6, 4.33 points for organizational learning activities in article 7, and 4.33 points for measurement and evaluation methods in Article 9. This shows that, on the whole, the developed pension subject courses are very suitable in quality, and can effectively promote the learning and practical ability of undergraduate students majoring in music teachers in the field of elderly care.

The structure of the learning unit of the undergraduate Curriculum of the Elderly Care Discipline for Undergraduate Students of the Music Normal Program in Sichuan Province, China

Table 24 The structure of the learning unit of the undergraduate curriculum of the elderly care discipline for undergraduate students of the music normal Program in sichuan province, china

Units of study	Unit subsections	Study plan	Time (hours).	Learning medium
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Table 24 (Continued)

Unit 1 Learning Needs of Older Adults and Music Applications	1.Learn about older people	Elderly Characteristics	20	Curriculum Manual: Basic knowledge and framework of geriatric education. Practical Worksheets: Record and assess older adults' learning progress.
	2.Choose music that is appropriate for the elderly.	Learning Needs & Motivation Suitable Music Teaching Methods Assessment & Feedback		
Unit 2 Music Therapy and Social Interaction	3.Music therapy	1. The basic concept of music therapy	20	Teaching Materials: Music equipment and tools to support learning. Multimedia Resources: Enhance learning with videos, audio, and online content. Internet: Access research and resources on elderly topics. Community Resources: Collaborate with care institutions and universities for practical learning.
	4.Look for teaching techniques that are suitable for older adults	2. Methods of application of music therapy 3. Music therapy practice combined with education 4. Teaching techniques suitable for the elderly 5. The importance of assessment and feedback in music therapy		

After the improvement of the expert group discussion, the researchers invited six experts to confirm the development of the elderly care Curriculum for undergraduate students majoring in music in Sichuan Province, China. The participating

experts included 2 music education experts, 1 gerontology expert, 1 music teacher training student, 1 curriculum development expert and 1 senior school student. A 5-point grading scale was used during the assessment process to ensure the comprehensiveness and accuracy of the Curriculum quality.

Feasibility analysis results of the quality of the elderly care Curriculum for undergraduate students majoring in music in Sichuan Province, China

Table 25 Feasibility analysis results of the quality of the elderly care curriculum for undergraduate students majoring in music in sichuan province, china

numbering	project	M	SD	level of quality	serial number	percentage
1 1	Curriculum name	4.50	0.55	Very good	4	93.40%
2 2	Curriculum Principles:	4.50	0.55	Very good	4	93.40%
3 3	Curriculum Objectives:	4.67	0.52	Very good	3	93.40%
4 4	Curriculum Description:	4.67	0.52	Very good	3	90.00%

Table 25 (Continued)

5	Learning	4.50		Very	4	93.40%
5	Outcomes		0.55	good		
6	Curriculum	5.00		Very	1	86.60%
6	content		0.00	good		
7	Methods for	4.50		Very	4	86.60%
7	organizing		0.55	good		
	learning					
	activities					
8	Learning	4.67		Very	3	93.40%
8	medium		0.52	good		
9	Measurement	4.83		Very	2	86.60%
9	and		0.41	good		
	evaluation					
	methods					
1 10	Curriculum	4.50		Vvery	4	93.40%
	structure		0.55	good		
1 11	Lesson	5.00		Very	1	96.60%
	plan		0.00	good		
overview		4.57		Very good		91.47%
			0.42			

The results of the quality analysis of the senior care courses for undergraduate students majoring in music teachers in Sichuan Province, China, show that the overall quality scores are at the level of "very good", indicating that the course design is excellent. The average score of the course content was 5.00 points ($M=5.00$, $SD=0.00$), indicating that the course has a strong foundation in terms of knowledge

transfer and practical ability. The lesson plan also scored highly with a score of 5.00 ($M=5.00$, $SD=0.00$), highlighting the systematic and organized nature of the curriculum. In addition, the average score of the course objectives was 4.67 ($M=4.67$, $SD=0.52$), the average score of the course description was 4.67 ($M=4.67$, $SD=0.52$), the average score of the learning medium was 4.67 ($M=4.67$, $SD=0.52$), and the average score of the measurement and evaluation method was 4.84 ($M=4.83$, $SD=0.41$). Other items such as the average score of 4.5 for course titles, 4.5 for curriculum principles and 4.5 for learning outcomes, 4.5 for course structure, and 4.5 for methods of organizing learning activities also remained at a high level ($M=4.50$, $SD=0.55$), indicating that the curriculum has good quality standards in all aspects. To sum up, this course not only meets the educational requirements, but also can effectively promote the learning and practical ability of undergraduate students majoring in music teacher education in the field of elderly care, and lay a solid foundation for students' future career development.

CHAPTER 5

SUMMARY DISCUSSION AND SUGGESTION

1. Summarize the results

This study aims to improve students' understanding and practical ability of geriatric education by developing a Curriculum for undergraduate students majoring in music teacher training in Sichuan Province, China. It focused on undergraduate students majoring in music teachers in Sichuan Province, China, and aimed to develop a curriculum suitable for this group of elderly care students.

The objectives of the research include

1. To study the planning and needs of geriatric Curriculums
2. To design the pension Curriculum for undergraduate students majoring in music teachers in Sichuan Province, China
3. To investigate the effectiveness of the Curriculum of caring for the elderly for students at the undergraduate level of music teachers in Sichuan Province, China.

Research methods

I will use a mixed research approach, combining qualitative and quantitative methods, using a variety of research tools. First, I will design questionnaires and individual interviews to qualitatively understand the needs, interests, and expectations of older adults for music lessons, while exploring their music learning experiences and perceptions. Secondly, I will conduct a literature review to systematically review the relevant literature on music education for older adults and obtain existing research results and best practices. In addition, I will consult with experts in the field of music education, communicate and discuss with them, gain their experience and insights, and gain an in-depth understanding of the learning needs and socio-cultural factors of the elderly, so as to design a practical and effective music curriculum for the elderly.

The research and development process is divided into three stages. Firstly, in Phase 1 (R1), basic data are collected to explore the importance and current status of the music curriculum for the elderly, and at the same time, the relevant concepts and concepts are studied to lay a theoretical foundation for curriculum design. Then, in

Phase 2 (D1), the framework of the music curriculum for the elderly is developed, the core content is determined, and a specific teaching plan is designed, including the curriculum objectives, the teaching process, and the assessment method, according to the learning needs and sociocultural factors. Finally, in Phase 3 (E1), an expert assessment is carried out, the purpose and scope of the assessment are clarified, and criteria and indicators are developed to ensure the quality and applicability of the Curriculum. Through the above three stages, this study will provide a targeted and practical music Curriculum for the elderly for undergraduate students majoring in music teacher training, so as to meet the learning needs of students and the expectations of society for music education for the elderly.

Findings

A study on the geriatric nursing course for undergraduates majoring in music in Sichuan Province

1. Current Situation of Geriatric Nursing Courses

This study analyzed the learning status of undergraduate students majoring in the field of geriatric nursing in Sichuan Province, and found that students generally have a high demand for geriatric nursing courses, especially in providing physical and mental health support for the elderly. The survey shows that the existing geriatric nursing courses can effectively improve students' innovation ability, social responsibility and practical skills in geriatric care services, but some students still believe that the curriculum design needs to be further optimized to better meet the actual needs of the geriatric care industry.

2. Students' achievements in learning

According to the results of the course design and evaluation, the undergraduate students of Sichuan Provincial Music Normal Major have achieved the following achievements in the geriatric nursing course:

Professional competence: Students can understand and apply the basic theories related to geriatric nursing, master the application of music therapy in geriatric nursing, and have the ability to provide basic nursing services for the elderly.

Innovation & Interdisciplinary Thinking: Through creative service solutions and the integration of interdisciplinary knowledge in the curriculum, students develop strong creative thinking skills and are able to design and implement musical activities that meet the needs of older adults.

Social Responsibility and Humanistic Care: The course strengthens students' sense of social responsibility, enhances students' awareness of the care of the elderly, and enables students to identify social problems in elderly care and provide psychological and emotional support to the elderly.

Teamwork and Communication Skills: With an emphasis on teamwork, students develop the skills to work as a team and communicate effectively with peers, aged care professionals and older people and their families through group projects and interdisciplinary collaboration.

3. Teaching methods

The geriatric nursing course of the Sichuan Provincial Undergraduate Music Teacher Training Program adopts a variety of teaching methods to improve students' learning interest and practical ability, mainly including:

Classroom Teaching and Case Analysis: Through classroom teaching of theoretical knowledge and case analysis, students can deeply understand the practical problems and needs of elderly care.

Group Collaboration and Interdisciplinary Discussion: The curriculum emphasizes cooperative learning among students and develops students' ability to solve practical problems through group discussions and role-plays, especially in interdisciplinary cooperation, where students are able to apply knowledge from different fields synthesically.

Combination of practice and reflection: The curriculum design includes a large number of practical activities, such as simulated nursing and music therapy practice, to help students deepen their understanding and improve their practical ability through classroom reflection and summarization.

Multimedia and digital tools: Use multimedia resources and digital tools (such as online courses, video cases, virtual simulation platforms, etc.) to assist teaching and improve students' sense of participation and practical ability.

4. Analysis of course quality and applicability

The overall quality score of the course was 4.67 (standard deviation = 0.52), indicating that the quality of the course design was high. Specifically:

The instructional program was rated highest (4.83, standard deviation=0.41). The course title, course principles and objectives are all 4.67, the course description is 4.50, and the course content and learning activities are organized 4.33, showing that the overall quality is very good.

According to the survey, participants generally agreed on the importance of systematic curriculum planning, believing that it can significantly improve their professional ability and sense of social responsibility in elderly services.

About 40.8% of the respondents believed that the course could effectively improve service ability, and 35.32% emphasized that the comprehensiveness of the course content is very important for the improvement of service ability. 37.81% of the respondents believed that the relevant course content could enhance their sense of social responsibility, and 40.3% believed that the course could help to understand the psychological needs of the elderly.

5. Feasibility analysis of curriculum implementation

The feasibility analysis of the undergraduate geriatric nursing program in Sichuan Province showed that the course design was excellent, with an overall quality score of 4.57 (standard deviation=0.42).

The course content scored the highest (5.00, standard deviation = 0.00), reflecting the strong foundation of the course in terms of knowledge transfer and practical ability.

The lesson plan also received a high score of 5.00 (standard deviation = 0.00), highlighting the systematic and organized nature of the curriculum.

The scores of 4.67 for the course objectives, course description, and learning media all showed a good balance in all aspects of the course design.

6. Innovation and Practice in Aged Care Curriculum

This course showcases a number of innovative features in the design and implementation process:

Interdisciplinary Integration: Integrate music education with aged care to promote students' knowledge application and innovation in different disciplines.

Practice-oriented: Through practical cases and practical activities, the course enables students to deepen their understanding of elderly education and improve their ability to solve practical problems through practical operations.

Group Projects and Social Responsibility: Through group work, the curriculum promotes teamwork among students and enhances students' sense of social responsibility.

Multiple evaluation methods: A combination of self-evaluation and mutual evaluation is adopted to encourage students to continuously improve through feedback and improve their learning effectiveness.

7. Effectiveness and outlook of curriculum implementation

Overall, the course not only meets the educational requirements, but also effectively promotes the learning and practical ability of undergraduate students majoring in the field of geriatric nursing in Sichuan Province, and lays a solid foundation for students' future career development.

The promotion and implementation of this course is of great significance for improving the quality of life of the elderly, promoting the harmonious development of society, and promoting the development of related industries.

2. Summary and discussion

2.1 The current situation of the study of geriatric care courses for undergraduates majoring in music

In the professional education of undergraduate music teachers in Sichuan Province, the geriatric care course has not been fully emphasized and implemented. Despite the growing problem of an aging society, there is almost no content on geriatric care in the professional curriculum system of music teachers in most colleges. Here are a few important features of the current situation:

Course vacancies: There is a lack of courses related to geriatric care in the music teacher major

At present, the music teacher profession in Sichuan Province does not have a specific curriculum for elderly care in the curriculum. This phenomenon reflects the neglect of the needs of older groups in the curriculum. Although some colleges and universities include basic content such as health education and psychology in their music education courses, these courses do not provide in-depth discussions on the special needs of the elderly group. In fact, many undergraduates in the music teaching program have not been exposed to the knowledge and skills related to geriatric care throughout their academic career, and they lack practical experience in integrating music education with geriatric care. As Bradt & Dileo (2014) points out, despite the significant role of music therapy in improving the quality of life of older adults, the lack of educational curricula prevents music teachers from effectively applying this knowledge to practical geriatric care. The need for a course in aged care

Although there is no special geriatric care course in the current music teacher profession, with the increasing aging of society and the increasing needs of the elderly group, the impact of music education on the quality of life of the elderly cannot be ignored. Music therapy and music education have been shown to have positive effects in improving mental health, cognitive function, and emotional communication in older adults. However, to achieve this impact, music teachers must have professional knowledge and skills. The current curriculum lacks such education, which makes it

impossible for students to effectively meet the special needs of older populations after graduation. As noted, the education system needs to be aligned with the real needs of society, and elderly care is an important part of the future of education.

The potential and challenges of combining music education with aged care

Despite the current lack of aged care courses, there is great potential for the integration of music education and aged care. Music can be effective in alleviating loneliness, anxiety, and depression in the elderly. However, to achieve this, music teachers need to know how to design lessons for older people, use age-appropriate musical activities, and understand the physical and psychological characteristics of older people. This means that music teachers must not only have the basic skills of music teaching, but also need to understand the special needs of the elderly, such as cognitive deterioration, emotional regulation, decreased motor ability, etc. As pointed out, curriculum design should focus on the combination of theory and practice, especially in the face of special groups, the lack of practical links often leads to the difficulty of students to transform theory into practical ability.

The impact of the lack of curriculum

Due to the lack of aged care courses, many music teacher students may feel overwhelmed when dealing with the elderly population. In some education systems, although students may be exposed to basic health education or psychology knowledge, these are less integrated with music education, especially in terms of practical application for older groups. As noted, courses that lack practical training do not develop students' ability to cope in real-world situations. While students may theoretically understand the health needs of older adults, they lack the opportunity to translate knowledge into practical skills.

2.2 Curriculum development plan

Principles of the course

In order to ensure that the pension education of the music teacher major in Sichuan Province can meet the growing needs of the elderly and meet the standards of the national education policy, the following curriculum principles are formulated:

1) Elderly-centered: The curriculum content should pay close attention to the individual needs of the elderly, promote their physical and mental health, and adopt people-oriented teaching methods to improve their quality of life.

2) Interdisciplinary integration: integrate the knowledge of music, psychology, nursing and other related disciplines to cultivate students' diversified abilities and enable them to be comprehensively used in elderly care services.

3) Strong practicality: Through community practice, internship courses and interactive activities, students can enhance their practical ability in the real elderly care environment.

4) Emphasize the spirit of collaboration: Encourage students to cooperate in learning and project implementation, and enhance the sense of teamwork and social responsibility.

5) Self-directed learning ability training: Encourage students to carry out independent learning and research, pay attention to reflection in the learning process, and cultivate lifelong learning ability.

Objectives of the course

1. To study the planning and needs of geriatric Curriculums
2. To design the pension Curriculum for undergraduate students majoring in music teachers in Sichuan Province, China
3. To investigate the effectiveness of the Curriculum of caring for the elderly for students at the undergraduate level of music teachers in Sichuan Province, China.

Learning outcomes of the course

The course sets out seven learning outcomes, which are as follows:

- 1) Explain the basic concepts of elderly education and music education and their mutual influence.
- 2) Identify the problems and solutions that may be encountered in the implementation of pension education.

3) Combine music, psychology and social studies to create effective teaching plans.

4) Demonstrate and share the learning results achieved through music activities.

5) Apply the knowledge learned in innovative and practical activities in the field of elderly care.

6) Have teamwork skills and work with others to complete projects.

7) Appreciate and value the collective achievements of the team and be proud of their contributions.

The structure of the Elderly Care curriculum

This course is designed as two units of study:

Learning Unit 1: Learning Needs and Music Applications for the Elderly, including 5 learning plans with a total duration of 20 hours;

Learning Unit 2: Music Therapy and Social Interaction, consists of 5 learning plans with a total duration of 20 hours.

Course Description

This course will explore the application of music and art in the education of the elderly, with an emphasis on how music can promote the mental and physical well-being of the elderly. Students will learn how to analyse the learning needs of older adults, design appropriate music activities, understand the theory and practice of music therapy, and master effective teaching strategies. The course covers learning disabilities in the elderly, appropriate music choices, the application of music therapy in improving mental health, and the corresponding teaching methods. Through the course, students will be able to creatively apply what they have learned, design research proposals, and conduct data collection and analysis to effectively improve the quality of life of the elderly. At the same time, this course will also enhance students' teamwork skills and innovative thinking to solve real-life challenges.

2.3 Course development results: elderly care course design for undergraduate music education students in sichuan province

The quality analysis of the elderly care course for undergraduate music education students in Sichuan Province indicates that the overall quality score is at a "very good" level, reflecting the excellence of the course design. The average score for the course content is the highest ($M=5.00$, $SD=0.00$), indicating a solid foundation in both knowledge transmission and practical skill development (Liu & Wang, 2022). The teaching plan also scored highly ($M=5.00$, $SD=0.00$), highlighting the systematic and organized nature of the course. Additionally, the course objectives ($M=4.67$, $SD=0.52$), course description ($M=4.67$, $SD=0.52$), learning mediums ($M=4.67$, $SD=0.52$), and assessment methods ($M=4.83$, $SD=0.41$) all performed well, demonstrating a balanced approach to various aspects of the course (Zhang, 2021). Items such as the course name, course principles, and learning outcomes also maintained high scores ($M=4.50$, $SD=0.55$), suggesting that the course meets high-quality standards in all areas. Overall, the elderly care course not only meets educational requirements but also effectively promotes the learning and practical abilities of undergraduate music students in elderly care, laying a solid foundation for their future careers (Yang & Li, 2020).

However, some scholars have pointed out that despite the generally positive evaluation of the course content and design, there are still issues during implementation. For example, Sun (2022) argues that the course's practical applicability and relevance need further enhancement, especially in addressing the actual needs of the elderly care industry, rather than staying solely at the theoretical level. Furthermore, while the course design is comprehensive, some students have reported that the integration of interdisciplinary knowledge is insufficient, and the course lacks a comprehensive consideration of the multi-dimensional nature of elderly care (Wang & Chen, 2023).

Quality Analysis of the Elderly Care Course for Music Education Students in Sichuan Province

The analysis of the elderly care course quality for undergraduate music education students, aimed at promoting innovation ability and teamwork skills, shows that the overall quality score is at the highest level ($M=4.67$, $SD=0.52$). Specifically, the highest scoring item is the 11th teaching plan ($M=4.83$, $SD=0.41$), followed by the 1st course name, 2nd course principle, and 3rd course objective (all $M=4.67$, $SD=0.52$). Close behind are the 4th course description ($M=4.50$, $SD=0.55$), 6th course content, and 7th method of organizing learning activities (both $M=4.33$, $SD=0.52$). This indicates that overall, the developed elderly care curriculum is highly suitable in terms of quality and can effectively promote the learning and practical abilities of undergraduate music students in the field of elderly care (Li, 2021).

Research on the Elderly Care Course for Music Education Students in Sichuan Province

Current situation of elderly care courses

This study analyzed the learning situation of undergraduate students majoring in elderly care in Sichuan Province and found that students generally have a high demand for elderly care courses, especially in providing physical and mental health support for the elderly. The survey revealed that the existing elderly care curriculum can effectively enhance students' innovation ability, social responsibility, and practical skills in elderly care services (Yang & Zhang, 2022). However, some students still feel that the course design needs further optimization to better meet the actual needs of the elderly care industry (Chen, 2021). This view is consistent with several other studies on elderly care education. For instance, Liang et al. (2020) argue that the design of elderly care courses should focus more on interventions for the mental health of the elderly, rather than just traditional physical care.

Students' achievements in learning

Based on the course design and evaluation results, undergraduate students in music education in Sichuan Province have achieved the following in elderly care courses:

Professional Competence: Students are able to understand and apply basic theories related to elderly care, master the use of music therapy in elderly care, and possess the ability to provide basic nursing services for the elderly (Xu, 2022).

Innovation and Interdisciplinary Thinking: Through the integration of creative service solutions and interdisciplinary knowledge in the curriculum, students develop strong creative thinking skills and are able to design and implement music activities that meet the needs of the elderly (Wang & Li, 2022). However, some scholars have pointed out that the course still lacks sufficient interdisciplinary integration, requiring more hands-on experience and cross-disciplinary communication (Liu & Zhang, 2023).

Social Responsibility and Humanistic Care: This course strengthens students' social responsibility and enhances their awareness of elderly care, enabling them to identify social issues in elderly care and provide psychological and emotional support for the elderly (Zhao, 2021). However, some scholars have suggested that the course does not sufficiently address the social and cultural backgrounds of elderly care, nor does it fully reflect the individualized needs of the elderly (Wu & Li, 2022).

Teamwork and Communication Skills: The course emphasizes teamwork, helping students develop teamwork skills and effectively communicate with peers, elderly care professionals, and family members (Zhang & Liu, 2020).

Conclusion

The elderly care course for undergraduate music education students in Sichuan Province provides students with a solid theoretical foundation and practical abilities, especially in areas like innovative thinking, social responsibility, and teamwork, achieving significant results (Wang & Zhao, 2021). However, some scholars have raised concerns about issues in the course design, such as the lack of targeted interdisciplinary integration and insufficient consideration of the actual needs of the elderly care industry. Overall, the course design meets educational standards and effectively promotes the development of students' comprehensive abilities in elderly care, laying a solid foundation for their future professional careers.

3.Suggestion

Based on the study of the curriculum design of the elderly care discipline for undergraduate students majoring in music in Sichuan Province, China, the following are specific suggestions for curriculum design and future research:

Curriculum design recommendations

Reasonable arrangement of Curriculum content: Although the Curriculum has not yet been implemented, it is recommended to ensure that the time allocation for each unit is reasonable during the Curriculum design stage, so that students have enough time to master the Curriculum content. Teachers should adjust to the importance and complexity of the subject matter to ensure that students are able to understand it progressively and further as they learn.

Strengthen the integration of theory and practice: Curriculum design should focus on the combination of theoretical knowledge and practical cases, especially in the fields of science, technology, engineering, arts and mathematics (STEAM). It is advisable to develop relevant case studies so that students can see practical applications while learning theoretically, enhancing their interest and understanding of the Curriculum.

Cultivation of innovation ability: It is recommended to include a variety of innovative activities in the curriculum to motivate students to explore different creative solutions. Consider setting up creative workshops or design challenges to encourage students to share their ideas and results in small groups to enhance their creative thinking and practical skills.

Clarify roles and responsibilities: During the Curriculum design phase, consider how to clearly define the roles and responsibilities of each student in a group project. This will help to enhance students' sense of teamwork and improve their sense of responsibility and collaboration skills.

Diversified assessment methods: It is recommended to design a variety of assessment methods, including self-assessment, peer assessment, and teacher assessment, in order to have a comprehensive understanding of students' learning

outcomes. Multiple assessments can encourage reflection and promote continuous improvement.

Recommendations for future research

Project-based learning research: Future research could focus on how project-based learning can be integrated with the Aged Care curriculum to assess its impact on students' practical skills. By designing specific projects, we can better understand the impact of project-driven learning on student learning outcomes.

Discussion on interdisciplinary integration: It is suggested that future research should focus on the integration of elderly care Curriculums with other disciplines (such as psychology, sociology, etc.), and explore its impact on the improvement of students' comprehensive quality. This can provide theoretical support for subsequent curriculum development.

Long-term tracking of student development: Future research should also consider tracking the long-term impact of curriculum design and assessing students' career development in the retirement field after graduation. Through data analysis, it can provide a reference for curriculum improvement.

Exploration of industry cooperation: It is recommended to study how to establish cooperative relationships with institutions related to the elderly care industry in order to provide students with internship and practical opportunities. Through practical industry experience, students are able to better understand market needs and enhance their employability.

Through the above suggestions, the aim is to provide more comprehensive support for the design of the elderly care Curriculum for undergraduate students majoring in music in Sichuan Province, China, and help students better adapt to the needs of future career development.

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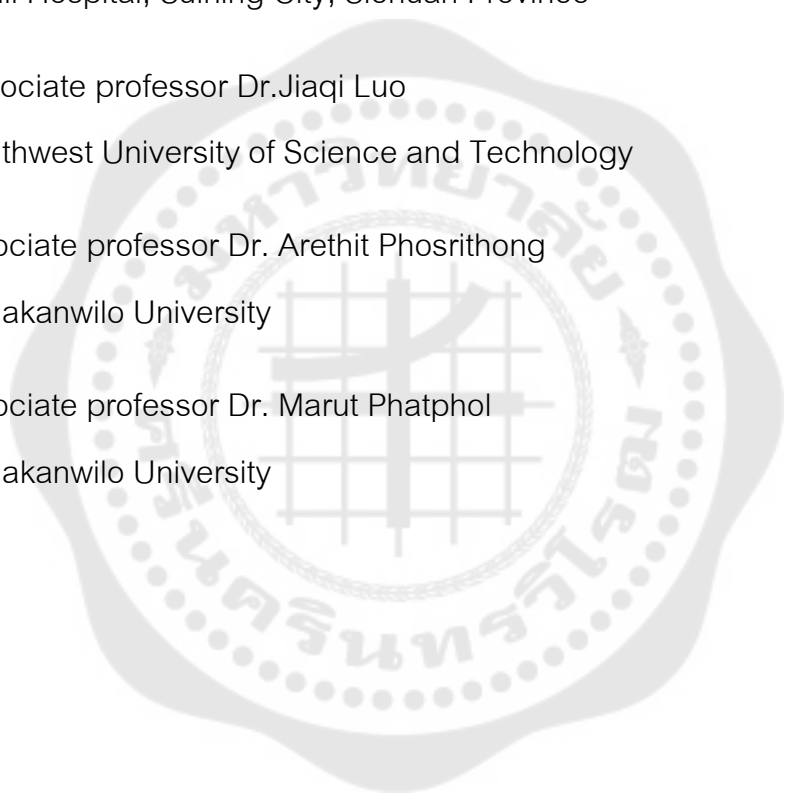
APPENDIX



Appendix A

List of experts for evaluating research tools and competency assessment

List of experts in research tools and capability assessment

1. Professor Rao Jianhua
Sichuan Conservatory of Music
 2. Dean of hedong hospital Li Zhenhu
Renli Hospital, Suining City, Sichuan Province
 3. Associate professor Dr.Jiaqi Luo
Southwest University of Science and Technology
 4. Associate professor Dr. Arethit Phosrithong
Srinakanwilo University
 5. Associate professor Dr. Marut Phatphol
Srinakanwilo University
- 

Determining the reliability (IOC) test for questionnaires

IOC (Item-Objective Congruence) refers to the Item Objective Congruence Indicator System, established by Rovinelli and Hambleton for evaluating the development phase of a project, whose main purpose is to provide a mathematized extension model applicable to multidimensional metrics and a common set of test theoretical procedures for development. In research and test development, IOC can be applied to test the reliability and validity assessment of questionnaires to help researchers derive a more objective and comprehensive evaluation from questionnaires. In addition, IOC analysis can be used to quantify the agreement between reading test questions and cognitive processing, providing quantitative data for content validity. Thus, the validity of the data is assessed in relation to the rigor and appropriateness of the process.

IOC analysis is a process whereby an expert's IOC value is derived from an expert's review of the research questionnaire, which is the accuracy value of the questionnaire. Depending on the question in question, the expert rates the extent to which individual topics agree or disagree with the specific objectives listed by the test developer.

1. score +1 if you are sure that the question was measured against the objectives.
2. Score 0 if you are unsure if the question was measured against the objectives.
3. Score -1 if you are certain that the issue being tested did not meet the objectives.

The IOC index is calculated by the formula:

IOC = consistency of objectives and test methods.

R=Total number of expert review scores.

N= Total number of experts.

Criteria.

1. questions with an IOC value of 0.50-1.00 have an accuracy value that can be used.
2. questions with IOC values below 0.50 must be improved and cannot be used

IOC results of the questionnaire

This analysis will provide a comprehensive assessment of the current situation and needs regarding the development of the senior care curriculum for undergraduate students majoring in music in Sichuan Province, China. The results of the study will be scientific and rigorous.

PROJECTS FOR WHICH COMMENTS ARE SOUGHT		RATING BY EXPERTS (Composed of 5 experts)					IOC AVER AGE	REMARKS
		1	2	3	4	5		
PART I. BASIC PERSONAL INFORMATION OF THE RESPONDENT								
1	Type of respondent	+1	+1	+1	0	+1	0.8	Accepted
2	Gender	+1	+1	+1	+1	+1	1	Accepted
3	age	+1	+1	+1	+1	+1	1	Accepted
4	background	+1	+1	+1	+1	+1	1	Accepted
PART II. CONTENTS OF THE QUESTIONNAIRE								
This section addresses Research on the planning and needs of geriatric courses for the purpose of data analysis.								
The planning of the elderly care course has a positive impact on the improvement of the service ability of undergraduates majoring in music teacher training in the elderly.								
A1	I believe that if undergraduate students majoring in music can participate in the planning of elderly care courses, their ability to serve the elderly will be enhanced.	+1	+1	+1	0	+1	0.8	Accepted
A2	I believe that for undergraduate students majoring in music normal, systematic retirement curriculum planning can significantly improve their professional skills.	+1	+1	+1	0	+1	0.8	Accepted
A3	I believe that the more comprehensive the content of the course planning, the more helpful it will be for the undergraduate students majoring in music to improve their practical ability to serve the elderly.	+1	+1	+1	+1	+1	1	Accepted
A4	I believe that the elderly care courses that undergraduates majoring in music can better meet the needs of the elderly group.	+1	+1	0	+1	+1	0.8	Accepted

A5	I believe that systematic curriculum planning can effectively improve the practical service ability of undergraduate students majoring in music teaching.	+1	+1	+1	+1	+1	1	Accepted
The systematic curriculum design of the elderly care discipline can meet the needs of undergraduates majoring in music to understand and cope with the psychological needs of the elderly.								
B6	I believe that the systematic curriculum design of the elderly care discipline can help undergraduates majoring in music to better understand the psychological needs of the elderly.	+1	+1	0	+1	+1	0.8	Accepted
B7	I believe that undergraduate students majoring in music can receive systematic education in the elderly care course, which will help to better cope with the psychological needs of the elderly group.	+1	+1	+1	0	+1	0.8	Accepted
B8	I believe that systematic curriculum design can improve students' ability to cope with the psychological needs of the elderly.	+1	+1	+1	0	+1	0.8	Accepted
B9	I believe that the curriculum design can effectively meet the understanding of the psychological needs of the elderly undergraduates in the music teacher training program.	+1	+1	+1	+1	+1	1	Accepted
B10	I think that the systematic curriculum design of the elderly care discipline is helpful to improve the sensitivity of undergraduate students majoring in music to the psychological needs of the elderly.	+1	+1	+1	+1	+1	1	Accepted
The perception of the elderly group's demand for the elderly care courses participated by undergraduates majoring in music teaching has a positive impact.								
C11	I think that the elderly in Sichuan Province in China have a high demand perception for the elderly care courses for undergraduates majoring in music.	+1	+1	+1	+1	+1	1	Accepted
C12	I believe that the Elderly Care courses offered by undergraduate students in the Music Teacher Training program can effectively meet their needs.	+1	+1	0	0	+1	0.6	Accepted
C13	I believe that there is a clear need for senior care courses for undergraduates in the music teacher training program among the elderly and look forward to the implementation of these courses.	+1	+1	0	+1	+1	0.8	Accepted
C14	I believe that there is a high demand for elderly care courses among the elderly, and	+1	+1	+1	+1	+1	1	Accepted

	I look forward to the participation of undergraduate students majoring in music teaching.							
C15	I believe that the courses in which undergraduates in the music teacher training program participate are of great importance in meeting the needs of the elderly population.	+1	+1	0	0	+1	0.6	Accepted
Increasing the course content of elderly care services has a positive effect on the improvement of the sense of social responsibility of undergraduates majoring in music teachers.								
D16	I believe that increasing the content of courses related to elderly care services has a positive effect on enhancing the sense of social responsibility of undergraduate students majoring in music teaching.	+1	+1	+1	+1	+1	1	Accepted
D17	I believe that the sense of social responsibility of the elderly group will be significantly enhanced after the undergraduate students majoring in music teacher training will take the course on elderly care services.	+1	+1	+1	+1	+1	1	Accepted
D18	I believe that the sense of social responsibility of undergraduate students majoring in music teacher training will improve after the completion of the course.	+1	+1	+1	+1	+1	1	Accepted
D19	I think the increase in senior care courses helps students pay more attention to the elderly population in their careers.	+1	+1	+1	+1	+1	1	Accepted
D20	I believe that the introduction of the Elderly Care course will help to raise the awareness of social responsibility among undergraduates majoring in music teaching.	+1	+1	+1	+1	+1	1	Accepted
The development and implementation of the curriculum of elderly care can effectively promote the innovation and development of music education and expand the application scope of music education in the mental health and social integration of the elderly.								
E21	I believe that the development of the curriculum of elderly care can promote the innovative development of music education in the field of mental health of the elderly.	+1	+1	+1	+1	+1	1	Accepted
E22	I believe that the implementation of the elderly care curriculum can expand the application of music education in promoting the social integration of the elderly.	+1	+1	+1	+1	+1	1	Accepted
E23	I believe that music education, in the context of the Aged Care curriculum, can	+1	+1	+1	+1	+1	1	Accepted

	be more effective in promoting their mental health and social inclusion.							
E24	I believe that the introduction of the elderly care curriculum has a positive effect on the innovation and development of the field of music education.	+1	+1	+1	0	+1	0.8	Accepted
E25	In my opinion, the implementation of the elderly care curriculum has effectively expanded the scope of application of music education in the social integration and mental health of the elderly.	+1	+1	+1	0	+1	0.8	Accepted



IOC results of semi-structured Interviews with education experts

This analysis will provide a comprehensive assessment of the current situation and needs regarding the development of the senior care curriculum for undergraduate students majoring in music in Sichuan Province, China. The results of the study will be scientific and rigorous.

PROJECTS FOR WHICH COMMENTS ARE SOUGHT		RATING BY EXPERTS (Composed of 5 experts)					IOC AVER AGE	REMARKS
		1	2	3	4	5		
PART I. BASIC PERSONAL INFORMATION OF THE RESPONDENT								
1	Your company name	+1	+1	+1	+1	+1	1	Accepted
2	Interview date	+1	+1	+1	+1	+1	1	Accepted
3	Interview sample	+1	+1	+1	+1	+1	1	Accepted
PART II. INTERVIEW CONTENT								
This section addresses Research on the planning and needs of geriatric courses for the purpose of data analysis.								
A1	What do you see as the importance of developing a curriculum for music education majors in Sichuan Province, China, focused on elderly care?	+1	+1	+1	+1	+1	1	Accepted
A2	In designing such a curriculum, what elderly needs and characteristics do you believe should be prioritized?	+1	+1	+1	+1	+1	1	Accepted
A3	How do you view the challenges and opportunities of integrating music with elderly care and social work?	+1	+1	+1	+1	+1	1	Accepted
A4	Based on your experience, what teaching methods and strategies are most effective when teaching music courses to elderly individuals?	+1	+1	+1	+1	+1	1	Accepted
A5	What skills and knowledge do you believe music education majors should possess to effectively teach music courses to the elderly?	+1	+1	+1	+1	+1	1	Accepted
A6	When assessing the learning outcomes of elderly participants in music courses, what methods do you recommend?	+1	+1	+1	+1	+1	1	Accepted
A7	Do you have any specific recommendations or successful cases to share regarding the practical integration of undergraduate students and elderly learners in teaching practices?	+1	+1	+1	+1	+1	1	Accepted
A8	what are your expectations and suggestions for promoting and developing the curriculum for music education majors focused on elderly care in Sichuan Province, China, in the future?	+1	+1	+1	+1	+1	1	Accepted

IOC results of semi-structured interviews with interior designers

This analysis will provide a comprehensive assessment of the current situation and needs regarding the development of the senior care curriculum for undergraduate students majoring in music in Sichuan Province, China. The results of the study will be scientific and rigorous.

PROJECTS FOR WHICH COMMENTS ARE SOUGHT		RATING BY EXPERTS (Composed of 5 experts)					IOC AVER AGE	REMARKS
		1	2	3	4	5		
PART I. BASIC PERSONAL INFORMATION OF THE RESPONDENT								
1	Your company name	+1	+1	+1	+1	+1	1	Accepted
2	Interview date	+1	+1	+1	+1	+1	1	Accepted
3	Interview sample	+1	+1	+1	+1	+1	1	Accepted
PART II. INTERVIEW CONTENT								
This section addresses Research on the planning and needs of geriatric courses for the purpose of data analysis.								
A1	What role do you believe music education majors can play in addressing the educational needs of the elderly population in Sichuan Province?	+1	+1	+1	+1	+1	1	Accepted
A2	From your perspective, what are the key educational objectives that should guide the development of courses for music education majors focused on elderly care?	+1	+1	+1	+1	+1	1	Accepted
A3	How should curriculum content be structured to effectively integrate music education and elderly care principles?	+1	+1	+1	+1	+1	1	Accepted
A4	In your experience, what teaching methodologies have proven effective in engaging undergraduate students in practical experiences related to elderly care through music education?	+1	+1	+1	+1	+1	1	Accepted
A5	Considering cultural diversity and regional characteristics in Sichuan Province, how can the curriculum be adapted to best serve the elderly population's needs?	+1	+1	+1	+1	+1	1	Accepted
A6	What are the potential challenges in implementing such a curriculum, and how can they be mitigated?	+1	+1	+1	+1	+1	1	Accepted
A7	From a pedagogical standpoint, what skills and competencies should music education majors develop to excel in teaching elderly care courses?	+1	+1	+1	+1	+1	1	Accepted
A8	Looking forward, what are your recommendations for future research or development initiatives in integrating music education and elderly care within the curriculum of Sichuan Province's music education maiors?	+1	+1	+1	+1	+1	1	Accepted

List of experts for evaluating the applicability and feasibility of curriculum

1. Gerontology Specialist

Li Zhenhu

Renli, Suining City, Sichuan Province

2. Specialist in music education

Zhou Qianqian

Sichuan Province The One Music Company / University for the Elderly

3. Curriculum Development Specialist

Luan Tian

Huatu Education

4. Graduated from the music teacher training class

Liang Zhi

Sichuan Provincial Vocational and Technical College

5. Specialist in music education

Zhang Weiwei

Sichuan Provincial Vocational and Technical College

6. Senior School Cadets

Liang Xiuying

Sichuan Provincial University for the Elderly

Appendix B

Tools used in the research

1. Survey questionnaire on the course of elderly care for undergraduate students majoring in music education in sichuan province, china
2. Semi conducted Interviews with education experts table
3. Semi conducted Interviews with senior music curriculum development expert table
4. Focus groups information table
5. Evaluation of the feasibility and applicability of the elderly care curriculum for undergraduate students majoring in music in sichuan province, china table

Development of a curriculum for undergraduate students majoring in music in sichuan province, china

Hello!

The purpose of this study is to develop a Curriculum for undergraduate students majoring in music in Sichuan Province, so as to improve the professional quality and application ability of undergraduate students majoring in music demonstration in Sichuan Province, China.

The questionnaire in this study was aimed at undergraduate students majoring in music teacher training in Sichuan Province, China, elderly groups, teachers of schools for the elderly, and teachers related to elderly care Curriculums in Sichuan Province, China.

The questionnaire is divided into two parts:

1. The first part covers the basic information of the respondents.
2. The second part involves an analysis of the current situation of the elderly care Curriculum for undergraduate students majoring in music in Sichuan Province, China.

Please fill in the paperwork truthfully to collect comprehensive data.

Before filling out the questionnaire, please read the definitions to better understand the specific words and facilitate the response.

The information provided in this questionnaire is for research purposes only. All data will be kept confidential and used only for statistical analysis and will not have an impact on the respondents.

Through a combination of questionnaires and research results, the researchers hope to develop a curriculum for undergraduate students majoring in music teachers in Sichuan Province, China, so as to bring maximum benefits to all students and society. Please complete the questionnaire and send it to the researchers. I would like to thank you from the bottom of my heart for your enthusiastic support and wish you all the best in your studies.

Wei Xu

Doctor of Arts Education

Srinakanwilo University

Music lessons

A music Curriculum is an organized program of study designed to teach music-related knowledge, skills, and understanding. It helps students improve their musical literacy, cultivate their interest in music, and develop their musical expression skills through systematic teaching activities. The elements of a music curriculum include clear learning objectives, appropriate teaching content, effective teaching methods, and a scientific assessment mechanism. The structure is generally divided into an introductory, intermediate and advanced level, with each stage focusing on different levels of music theory, skills and practice.

This study focuses on the development of piano Curriculums for undergraduate and elderly students in Sichuan Province, China. As a sub-subject Curriculum, the piano Curriculum aims to help students master piano performance skills, music theory knowledge and musical expression skills through systematic teaching activities. In teaching practice, this study comprehensively applied OBE (Outcome-Based Education) theory, music education theory, gerontology theory, Orff music pedagogy, curriculum development theory, and constructivist theory. These theoretical frameworks provide guiding principles and methods for the design and implementation of piano lessons, emphasizing student learning outcomes, basic principles of music learning, learning characteristics of older students, effective ways of music teaching, the importance of curriculum design and evaluation, and students' active participation. By applying these theories together, the piano Curriculum will be a learning space that fosters the holistic development of students, providing older students with the opportunity to explore the world of music and promote their continued learning and development in the field of music.

Part I: Basic information of the survey respondents, please tick the appropriate options (✓)

1. Type of respondent

- ☐ Undergraduate student majoring in music teacher
- ☐ Older age groups
- ☐ Teacher of the school for the elderly
- ☐ Teachers related to the elderly care Curriculum

2. Your gender:

☐ man

☐ woman

3. Your age:

☐ 18-29 years old

☐ 30-39 years old

☐ 40-59 years old

☐ over 60 years old

4. Your work/study background:

☐ Undergraduate college for music teacher training (if you are a student).

☐ School for the Elderly (if you are a teacher or student).

☐ Institutions related to the retirement Curriculum (if you are a teacher or practitioner).

☐ Other

The second part involves an analysis of the current situation of the elderly care Curriculum for undergraduate students majoring in music in Sichuan Province, China.

Please mark a space ($\sqrt{\quad}$) in the actual questionnaire answer of your choice. According to the questionnaire in the second part, the "assessment scale levels" are divided into five levels, and the meaning of each level is as follows:

1 strongly disagrees

2. Disagree

3 indicates uncertain

4. Agree

5 indicates strong agreement

Research on the planning and needs of geriatric curriculums.	Grade level				
	1	2	3	4	5
The planning of the elderly care curriculum has a positive impact on the improvement of the service ability of undergraduates majoring in music teacher training in the elderly.					
1.I believe that if undergraduate students majoring in music can participate in the planning of elderly care curriculums, their ability to serve the elderly will be enhanced.					
2. I believe that for undergraduate students majoring in music normal, systematic retirement curriculum planning can significantly improve their professional skills.					
3. I believe that the more comprehensive the content of the curriculum planning, the more helpful it will be for the undergraduate students majoring in music to improve their practical ability to serve the elderly.					

4. I believe that the elderly care curriculums planned by undergraduates majoring in music can better meet the needs of the elderly group.					
5. I believe that systematic curriculum planning can effectively improve the practical service ability of undergraduate students majoring in music normal.					
The systematic curriculum design of the elderly care discipline can meet the needs of undergraduates majoring in music to understand and cope with the psychological needs of the elderly.					
6. I believe that the systematic curriculum design of the elderly care discipline can help undergraduates majoring in music to better understand the psychological needs of the elderly.					
7. I believe that it is believed that the systematic education of undergraduates majoring in music teacher training will help them better cope with the psychological needs of the elderly group.					
8. I believe that systematic curriculum design can improve students' ability to cope with the psychological needs of the elderly.					
9. I believe that the curriculum design can effectively meet the understanding of the psychological needs of the elderly undergraduates in the music teacher training program.					
10. I think that the systematic curriculum design of the elderly care discipline is helpful to improve the sensitivity of undergraduate students majoring in music to the psychological needs of the elderly.					
The perception of the elderly group's demand for the elderly care curriculums participated by undergraduates majoring in music teaching has a positive impact.					

11. I think that the elderly in sichuan province in china have a high demand perception for the elderly care curriculums for undergraduates majoring in music.					
12. I believe that the aged care Curriculum for undergraduate students in the music teacher training program is an effective way to meet their needs.					
13. I feel that there is a clear demand for senior care curriculums for undergraduates majoring in music teacher training among the elderly and look forward to the implementation of these curriculums.					
14. I believe that there is a high demand for elderly care curriculums among the elderly, and I look forward to the participation of undergraduate students majoring in music teaching.					
15. I believe that the curriculums in which undergraduates in the music teacher training program participate are of great importance in meeting the needs of the elderly population.					
Increasing the curriculum content of elderly care services has a positive effect on the improvement of the sense of social responsibility of undergraduates majoring in music teachers.					
16. I believe that increasing the content of curriculums related to elderly care services has a positive effect on enhancing the sense of social responsibility of undergraduate students majoring in music teaching.					
17. I believe that the sense of social responsibility of the elderly group will be significantly enhanced after the undergraduate students majoring in music teacher training will take the curriculum on elderly care services.					
18. I believe that the sense of social responsibility of					

undergraduate students majoring in music teacher training will improve after the completion of the curriculum.					
19. I think the increase in senior care curriculums helps students pay more attention to the elderly population in their careers.					
20. I believe that the introduction of the elderly care curriculum will help to raise the awareness of social responsibility among undergraduates majoring in music teaching.					
The development and implementation of the curriculum of elderly care can effectively promote the innovation and development of music education and expand the application scope of music education in the mental health and social integration of the elderly.					
21. I believe that the development of the curriculum of elderly care can promote the innovative development of music education in the field of mental health of the elderly.					
22. I believe that the implementation of the elderly care curriculum can expand the application of music education in promoting the social integration of the elderly.					
23. I believe that music education, in the context of the aged care curriculum, can be more effective in promoting their mental health and social inclusion.					
24. I believe that the introduction of the elderly care curriculum has a positive effect on the innovation and development of the field of music education.					
25. In my opinion, the implementation of the elderly care curriculum has effectively expanded the scope of application of music education in the social integration and mental health of the elderly.					

Development of the elderly care curriculum for Undergraduate students of music teachers in sichuan province, china

The purpose of this study is to develop a new curriculum to improve the professional quality of undergraduate students majoring in music teacher training in Sichuan Province in the field of elderly care.

- (1) The first part is the basic information of the respondents.
- (2) Analysis of the needs of the curriculum development of the elderly care discipline for undergraduate music teachers in Sichuan Province

Before the interview, please read the definitions of the terms provided to better understand the vocabulary and facilitate your response. The information provided in this interview will be used for research purposes only, all data will be kept confidential and used for statistical analysis only and will not have any impact on the respondents.

Through the combination of interviews and research results, the researchers hope to establish an effective curriculum development model to improve the knowledge and skills of undergraduate students majoring in music training in Sichuan Province, so as to benefit all students and society. We sincerely thank you for your enthusiastic support and wish you success in your career.

Wei Xu

Doctor of Arts Education

Sirnakharinwirot University

Semi-structured interviews with education experts

The purpose of this study is to develop a new curriculum to improve the professional quality of undergraduate students majoring in music teacher training in sichuan province in the field of elderly care.

Researcher:

Ms. Wei Xu , Doctor of Arts Education,, Srinakh|inwirot University,Thailand

1.Your school:

.....

2.Interview date:

.....

3.Interview sample:

.....

Interview questions:

1. What do you see as the importance of developing a curriculum for music education majors in Sichuan Province, China, focused on elderly care?

.....

2. In designing such a curriculum, what elderly needs and characteristics do you believe should be prioritized?

.....

3. How do you view the challenges and opportunities of integrating music with elderly care and social work?

.....

4. Based on your experience, what teaching methods and strategies are most effective when teaching music curriculums to elderly individuals?

.....

5. What skills and knowledge do you believe music education majors should possess to effectively teach music Curriculums to the elderly?

.....

6. When assessing the learning outcomes of elderly participants in music curriculums, what methods do you recommend?

.....

7. Do you have any specific recommendations or successful cases to share regarding the practical integration of undergraduate students and elderly learners in teaching practices?

.....

8. What are your expectations and suggestions for promoting and developing the curriculum for music education majors focused on elderly care in sichuan province, china, in the future?

.....

**Semi-structured Interviews with senior music curriculum
development expert**

Development of the elderly care curriculum for undergraduate students of music teachers in sichuan province, china

Ms. Wei Xu , Doctor of Arts Education, , Srinakhjinwirot University,Thailand

1.Your company name

.....

2.Interview dates

.....

3.Interviaw sample:

.....

Interview question

1.What role do you believe music education majors can play in addressing the educational needs of the elderly population in sichuan province?

.....

2. From your perspective, what are the key educational objectives that should guide the development of curriculums for music education majors focused on elderly care?

.....

3. How should curriculum content be structured to effectively integrate music education and elderly care principles?

.....

4. In your experience, what teaching methodologies have proven effective in engaging undergraduate students in practical experiences related to elderly care through music education?

.....

5. Considering cultural diversity and regional characteristics in sichuan province, how can the curriculum be adapted to best serve the elderly population's needs?

.....

6. What are the potential challenges in implementing such a curriculum, and how can they be mitigated?

.....

7. From a pedagogical standpoint, what skills and competencies should music education majors develop to excel in teaching elderly care curriculums?

.....

8. Looking forward, what are your recommendations for future research or development initiatives in integrating music education and elderly care within the curriculum of sichuan province's music education majors?

.....

Panel Discussion Format (Focus Groups)

Topic: Development of the elderly care curriculum for undergraduate students of music teachers in sichuan province, china

For

1. 2 music education experts
2. 1 gerontology expert
3. 1 student in the normal category of music
4. 1 curriculum development expert
5. 1 student of the school for the elderly

6 people in total

illustrate

The purpose of this panel discussion (focus group) is to examine opinions on curriculum development as a basis for curriculum development, targeting undergraduate students in sichuan province, china. The discussion was divided into three parts with a total of 12 questions.

Part I: Status and general information of the participants in the discussion, with a total of 5 questions

Part 2: Opinions on the necessity and importance of curriculum development, aimed at undergraduate students of music teachers in sichuan province, with a total of 4 questions

Part III: Comments and further suggestions on curriculum development, 7 questions

Focus group discussion topics

Part I: Status and general information of the participants in the discussion.

1.Name..... Gender..... Age..... year

2.Education level

3. Position Work Experience year.....

4. Status

() Music Education Specialist

() Gerontology Expert

() Senior School Members

() Music Teacher Training Students

() Cadets of schools for the elderly

5. Do you know the music care curriculum? () Don't understand () Understand, the content is.....

Part II: Observations on the necessity and importance of curriculum development

1. What do you think if the school wants to adopt the curriculum of the undergraduate students majoring in music in sichuan province, china?

.....

2.If you adopt the Pension curriculum for undergraduate students in sichuan province, china, what do you think are the important things that students should learn, especially about undergraduate students majoring in music normal?

.....

.....

3. How do you think students should integrate music with the living needs of the elderly in the elderly care curriculum?

.....

.....

4. How do you see the role of interdisciplinary collaboration in the curriculum development of the discipline of aged care, especially in relation to psychology and social work?

.....

.....

.Part III: Observations and further recommendations on curriculum development

1. What do you want your undergraduate students to learn about the pension curriculum for undergraduate students in sichuan province, china, and what can they do?

.....

.....

2. What do you think students should learn about the content and theoretical/practical structure/timeline of the elderly care curriculum for undergraduate students majoring in music in Sichuan province, china?

.....

.....

3. What kind of approach do you think should be used for learning?

.....

.....

4. In terms of curriculum assessment, what criteria do you think should be used to measure student learning outcomes?

.....

.....

5. How do you think you can guide students to develop empathy and understanding for the elderly in the elderly care curriculum?

.....

.....

6. How do you think the theory and practice of music therapy should be arranged in the curriculum of the elderly care to ensure that students can effectively master the relevant skills?

.....

.....

7. Other recommendations to ensure that this curriculum development achieves the objectives of our local curriculum

.....

.....

List of participants in the panel discussion

Tencent Meeting Room

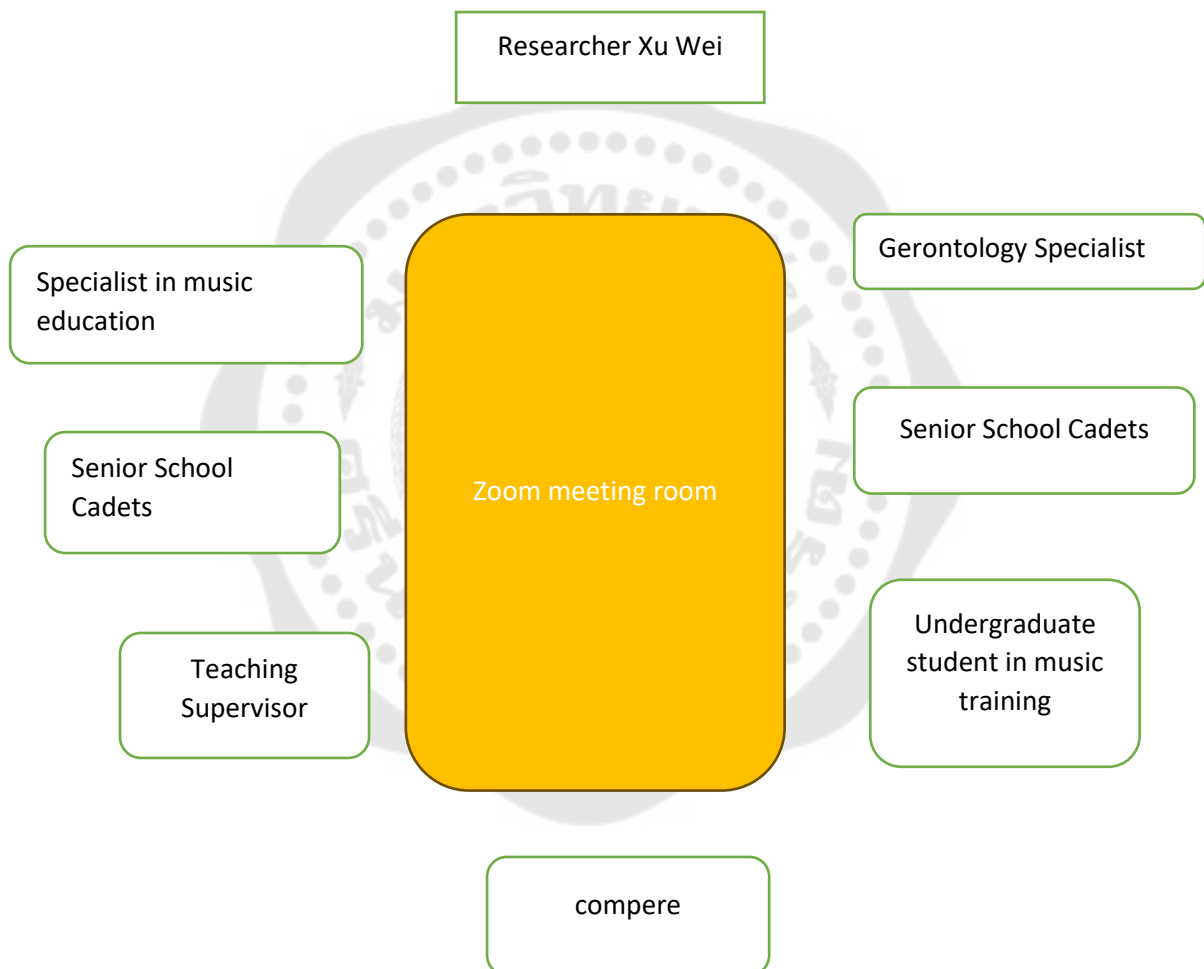
Date: Wednesday, October 2, 2024

List of Panel Discussion Participants (Focus Groups)	office
Li Zhenhu	Gerontology Specialist
Zhou Qianqian	Specialist in music education
Luan Tian	Curriculum Development Specialist
Li Chunlin	Music Teacher Trainee
Zhang Weiwei	Specialist in music education
Liang Xiuying	Senior School Cadets

Panel discussion moderator

1. Tan Hongyan is a researcher

Panel discussion venue arrangement: Tencent meeting room



Evaluation of the feasibility and applicability of the elderly care curriculum for undergraduate students majoring in music in sichuan province, china

Evaluate the interpretation of the lesson:

1.The content of the first part of the study: the Curriculum of elderly care for undergraduate students majoring in music in sichuan province, china

2.Consider the applicability and feasibility of the second part of the curriculum and mark it.

Please mark a space (✓) in the selected answer. According to the applicability and feasibility of the second part, the "assessment scale levels" are divided into five levels, and the meaning of each level is as follows:

Applicability of the curriculum:

- 5 means very suitable
- 4 indicates that it is more appropriate
- 3 indicates suitability
- 2 indicates inappropriate
- 1 indicates that it is very inappropriate

The feasibility of the curriculum is on:

- 5 indicates that the implementation of the curriculum is highly likely
- 4 indicates that the likelihood of the curriculum is high;
- 3 indicates that the curriculum has a medium likelihood of implementation;
- 2 indicates that the probability of implementation of the curriculum is low;
- 1 indicates that the likelihood of implementation of the curriculum is extremely low.

Example of curriculum evaluation

content	applicability					viability				
	5	4	3	2	1	5	4	3	2	1
The name of the style	√						√			
More suggestions: (suggestion)										

1. Applicability and feasibility of the Curriculum title

" Pension Curriculum for undergraduate students majoring in music teacher training in Sichuan Province, China"

content	applicability					viability				
	5	4	3	2	1	5	4	3	2	1
The name of the style										
More suggestions:										

2.Applicability and feasibility of the principles of the curriculum

1) Oriented to the needs of the elderly: The curriculum design closely focuses on the learning and living needs of the elderly

2) Interdisciplinary integration: Organically combine music education with the knowledge of elderly care to cultivate students' comprehensive literacy, improve their ability in practical application, and enable them to flexibly apply the knowledge they have learned.

3) Practice-oriented: Through community service, field teaching and case analysis, students can exercise and improve their ability to solve practical problems in a real environment.

4) Focus on teamwork: Encourage students to work as a team in the learning process, enhance their collaboration ability and collective awareness, promote mutual learning and support, and cultivate a sense of social responsibility.

5) Self-directed learning and reflection: Cultivate students' self-directed learning ability, encourage them to reflect on the learning process, and improve their self-driven learning attitude and lifelong learning ability.

1. Applicability and feasibility of learning outcomes

1) Explain the basic knowledge of pension education and music education and their interrelationship.

2) Identify the challenges and problems faced in senior education.

and 3) the design of innovative teaching programs by integrating knowledge of music, psychology and sociology.

4) Demonstrate and exchange the learning results of elderly education through music activities and practical cases.

5) Have the ability to carry out innovative activities in the field of elderly education.

6) Ability to work in a team and work with others to plan and implement projects.

7) Recognize the value of the team's work and be proud of their contributions.

content	applicability					viability				
	5	4	3	2	1	5	4	3	2	1
Learning Outcomes										
More suggestions:										
.....										
.....										
.....										

2. Applicability and feasibility of the Curriculum content

The curriculum consists of two learning units: Learning Unit 1: Learning needs of older adults and music applications, with a total of 5 learning plans totaling 20 hours; Learning Unit 2: Music therapy and social Interaction, 5 learning programs totaling 20 hours.

1) Understanding the elderly: Understanding the learning needs and motivations of the elderly, and exploring the various needs and motivations faced by the elderly in the learning process, will help them design more effective teaching strategies to meet the expectations and interests of older learners.

2) Choose music that is suitable for the elderly: Choosing music that is suitable for the elderly is an important part of promoting their physical and mental health and social interaction. This Curriculum will explore how to meet the emotional needs and cognitive development of older adults by analyzing their musical preferences and cultural backgrounds. First, students will examine the effects of different music genres on the emotional and psychological states of older adults, including emotional responses such as relaxation, recollection, and happiness. Secondly, the curriculum will emphasize the importance of individualized music choices, encouraging students to tailor music playlists to enhance their sense of engagement and well-being based on the life experiences and personal preferences of older adults. In addition, students will learn to design age-appropriate music activities, such as choirs, instrumental performances, and music appreciations, to promote social interaction and emotional expression among older adults. By integrating relevant music education

theory and practice, students will learn how to use music to improve the quality of life of older adults and help them feel more happy and fulfilled in their daily lives.

3) Music therapy: The application of music therapy in the education of the elderly is an important means to promote the physical and mental health of the elderly. This Curriculum will provide an in-depth exploration of the basic concepts, principles and methods of music therapy through a combination of theory and practice. First, students will learn how music therapy can improve the mental health of older adults by stimulating emotional responses and memories through specific musical forms and activities. The curriculum will introduce a variety of music therapy techniques, including the role of melody, rhythm, harmony and other elements in emotional regulation.

Second, students will analyze different case studies to understand the practical effects of music therapy in coping with common problems in older adults, such as loneliness, anxiety, and cognitive impairment. Through role-playing and simulation therapy, students will practice how to design a personalized music therapy program for older adults that effectively meets their specific needs.

In addition, students will be encouraged to reflect on the design and implementation of musical activities, and explore how group music activities can enhance the social skills and participation of older adults. Eventually, students will be equipped with the skills to use music therapy to improve the quality of life of older adults, and build a strong foundation for future careers in aged education and nursing.

4) Find teaching techniques that are suitable for the elderly

In the education of the elderly, it is crucial to choose teaching techniques that are suitable for the elderly to ensure that they are able to have a positive experience and sense of accomplishment in their music learning. This curriculum will focus on a variety of teaching techniques for older adults to help students master how to effectively impart music.

First, the curriculum will introduce teaching methods suitable for older learners, such as step-by-step teaching and simplifying the curriculum content so that they can understand and master the basic knowledge in a shorter period of time. In addition, the use of visual and auditory aids, such as illustrations and audio materials, can enhance learning and make it easier for older adults to understand the basic concepts of music.

Second, encouraging students to use interactive and participatory teaching methods, such as group activities and discussions, can promote participation and social interaction among older adults. This approach not only stimulates their interest in learning, but also helps them share their experiences in a relaxed atmosphere.

Finally, the curriculum will also emphasize the importance of individualized instruction, encouraging students to design a learning plan tailored to each older learner's interests and abilities. This flexible teaching strategy ensures that every older person can find joy in learning music, achieve personal goals and boost self-confidence. Through these senior-friendly tips, students will be better served by the older population in their future educational practice.

content	applicability					viability				
	5	4	3	2	1	5	4	3	2	1
Curriculum content										
More suggestions:										

6. Applicability and feasibility of the organization and guidance of learning activities

This curriculum is designed for senior education and is designed to help students meet the needs of older adults through an integrated teaching approach that uses an inquiry-based learning process. Students will investigate, analyze, identify problems, retrieve information, and find answers to questions about the learning and life of older adults. Students can conduct research based on individual or group interests and creatively develop educational programs suitable for the elderly. The organization of curriculum activities is divided into six steps, which are as follows:

Step 1: Stimulate thinking and clarify needs. Through questioning, students are guided into activities that connect with relevant things in their daily lives, such as the physical and psychological characteristics of the elderly, their learning needs and motivations. Have students share their experiences and brainstorm questions that meet the needs of older learners.

Step 2: Gather knowledge and set goals. Co-set learning goals and scope with students, involve students in the development of goals, select topics of interest to them, such as music education and music therapy for seniors, and sequencing. Study learning management skills related to the education of the elderly, analyze the problem, identify the selected problem, and summarize the feasible solutions.

Step 3: Plan to solve the problem and design. Through teamwork and integration, students connect what they have learned and creatively design music teaching programs and activities that are appropriate for older adults.

Step 4: Create a work through integration. According to the design results, students select music materials and methods suitable for the elderly, and use various music resources to create and implement teaching activities.

Step 5: Pass the actual evaluation of the work. To test the effectiveness of teaching programmes and musical activities to ensure they meet the needs of older learners and reflect the integrated application of what has been learned. Based on the results of the assessment, the teaching plan and activities are adjusted, the students check whether their work has achieved the expected goals, and the teacher and students participate in the assessment.

Step 6: Demonstrate and reflect on the continuity. Evaluate the value of the success of the teaching activity and discuss the effectiveness of the problem-solving process. Demonstrate the lesson plans and musical activities you have created, and express your views on the benefits of the content you have created. Reflect on the knowledge, skills and methods acquired and how this knowledge can be applied in future teaching practice, and explore directions for further development and improvement.

Content	applicability					viability				
	5	4	3	2	1	5	4	3	2	1
Organization and guidance of learning activities										
More suggestions:										

7. Applicability and feasibility of learning mediums

- 1) Curriculum manual: Provides the basic knowledge and theoretical framework of geriatric education.
- 2) Practical Worksheets: Designed to record and assess the learning progress and needs of older adults.
- 3) Teaching materials and equipment: including music equipment, teaching props and other practical tools to support the learning of music and skills by the elderly.
- 4) Multimedia & Electronic Resources: Enrich the learning experience with video, audio, and online curriculums.
- 5) Internet: As an important tool for accessing the latest research, information, and resources to help students understand hot topics related to older adults.
- 6) Community learning resources: Cooperate with elderly care institutions, universities for the elderly, and related organizations to provide practical learning and communication platforms.

content	applicability					viability				
	5	4	3	2	1	5	4	3	2	1
Learning medium										
More suggestions:										

8. Applicability and feasibility of measurement and evaluation methods

- 1) The method of collecting the assessment data is divided into three parts, and the total score of each part is 100 points.

1.2 The assessment in progress of learning activities is based on the student's performance in music composition or performance, with a total score of 80 points, and the assessment method is as follows:

1.2.2 40 points on the assessment form for the demonstration of skills

1.2.4 10 points for the Behavior Observation Record Form

2) Score grading criteria

75-79 on a scale of 3.5 very good grades

65-69 on a scale of 2.5 quite high grades

60-64 score scale 2 good grades

55-59 on a scale of 1.5 very good grades

50-54 on a scale of 1 pass

Minimum requirements

Below 49 Score Grade 0 grade low

Minimum threshold

content	applicability					viability				
	5	4	3	2	1	5	4	3	2	1
Measurement and evaluation methods										
More suggestions:										

9. Applicability and feasibility of the curriculum structure

The Curriculum consists of two learning units: Learning Unit 1: Learning needs of older adults and music applications, with a total of 5 learning plans totaling 20 hours; Learning Unit 2: Music therapy and social Interaction, 5 learning programs totaling 20 hours.

content	applicability					viability				
	5	4	3	2	1	5	4	3	2	1
Curriculum structure										
More suggestions:										
.....										
.....										
.....										

10. Applicability and feasibility of the learning management program

The curriculum for the education of the elderly contains the following elements: 1) Learning outcomes. 2) Important content. 3) Learning content. 4) Learning objectives. 5) Key Capabilities. 6) Expectation traits. 7) Projects/Tasks. 8) Measurement and evaluation. 9) Learning activities. 10) Media/Learning Resources. A total of 10 programs are as follows:

Program 1: Understanding older people and stimulating learning needs

Plan 2: Choose music that is suitable for seniors to enhance the learning experience

Program 3: Implement music therapy to promote physical and mental health

Plan 4: Master age-appropriate skills to enhance quality of life

Program 5: Stimulate thinking and explore the characteristics of older learners

Plan 6: Gather knowledge and choose music that is suitable for the elderly

Plan 7: Create music therapy activities to increase participation

Programme 8: Evaluate the effects of music therapy, reflecting on practical experience

Plan 9: Demonstrate tips for older adults and share success stories

Program 10: Lessons learned and future learning activities planned



Appendix C



บันทึกข้อความ

ส่วนงาน งานบริหารและธุรการ บัณฑิตวิทยาลัย โทร. 12412

ที่ อว 8718.1/1332

วันที่ 24 ตุลาคม 2567

เรื่อง ขอความอนุเคราะห์เชิญเป็นผู้เชี่ยวชาญ

เรียน รองศาสตราจารย์ ดร.มารุต พัฒนาผล

เนื่องด้วย นางสาวWei Xu นิสิตระดับปริญญาเอก สาขาวิชาศิลปศึกษา มหาวิทยาลัยศรีนครินทรวิโรฒ ได้รับอนุมัติให้ทำปริญญานิพนธ์ เรื่อง “การพัฒนาหลักสูตรรายวิชาดนตรี สำหรับการดูแลผู้สูงอายุของนักศึกษาวิชาชีพครูดนตรี ระดับปริญญาตรีมณฑลเสฉวนประเทศจีน” โดยมี ผู้ช่วยศาสตราจารย์ ดร.เทพิกา รอดสการ และผู้ช่วยศาสตราจารย์ ดร.ปิยวดี มากพา เป็นอาจารย์ที่ปรึกษาปริญญานิพนธ์

ในการนี้ บัณฑิตวิทยาลัยขอเรียนเชิญ ท่าน เป็นผู้เชี่ยวชาญตรวจค่าความเที่ยงตรงของแบบสอบถาม ทั้งนี้ นิสิตได้ติดต่อประสานงานเบื้องต้นกับท่านแล้ว และจะประสานงานในรายละเอียดดังกล่าวต่อไป สามารถสอบถามข้อมูลเพิ่มเติมได้ที่ โทร. 8618380580257

จึงเรียนมาเพื่อขอความอนุเคราะห์เชิญเป็นผู้เชี่ยวชาญ ให้นางสาวWei Xu และขอขอบพระคุณมา ณ โอกาสนี้

(อาจารย์ ดร.วงศ์วathy เสนะวงศ์)

รองคณบดีฝ่ายบริหารและวางแผน รักษาการแทน

คณบดีบัณฑิตวิทยาลัย





บันทึกข้อความ

ส่วนงาน งานบริหารและธุรการ บัณฑิตวิทยาลัย โทร. 12412

ที่ อว 8718.1/1332

วันที่ 24 ตุลาคม 2567

เรื่อง ขอความอนุเคราะห์เชิญเป็นผู้เชี่ยวชาญ

เรียน ผู้ช่วยศาสตราจารย์ ดร.อาทิตย์ โพธิ์ศรีทอง

เนื่องด้วย นางสาวWei Xu นิสิตระดับปริญญาเอก สาขาวิชาศิลปศึกษา มหาวิทยาลัยศรีนครินทรวิโรฒ ได้รับอนุมัติให้ทำปริญญานิพนธ์ เรื่อง “การพัฒนาหลักสูตรรายวิชาดนตรี สำหรับการดูแลผู้สูงอายุ ของนักศึกษาวิชาชีพครูดนตรี ระดับปริญญาตรีมณฑลเสฉวนประเทศจีน” โดยมี ผู้ช่วยศาสตราจารย์ ดร.เทพิการอดสการ และผู้ช่วยศาสตราจารย์ ดร.ปิยวดี มากพา เป็นอาจารย์ที่ปรึกษาปริญญานิพนธ์

ในการนี้ บัณฑิตวิทยาลัยขอเรียนเชิญ ท่าน เป็นผู้เชี่ยวชาญตรวจค่าความเที่ยงตรงของแบบสอบถาม ทั้งนี้ นิสิตได้ติดต่อประสานงานเบื้องต้นกับท่านแล้ว และจะประสานงานในรายละเอียดดังกล่าวต่อไป สามารถสอบถามข้อมูลเพิ่มเติมได้ที่ โทร. 8618380580257

จึงเรียนมาเพื่อขอความอนุเคราะห์เชิญเป็นผู้เชี่ยวชาญ ให้นางสาวWei Xu และขอขอบพระคุณมา ณ โอกาสนี้

(อาจารย์ ดร.วงศ์วิทย์ เสนะวงศ์)

รองคณบดีฝ่ายบริหารและวางแผน รักษาการแทน

คณบดีบัณฑิตวิทยาลัย



HESI. 8718/1497



Graduate School
Srinakharinwirot University
114 Sukhumvit 23, Bangkok 10110

24 October 2024

Topic: Invitation for the interview

To: Professor Li Zhenhu

Ms. WEI XU, a PhD student in the Doctor of Education Program in Arts Education, Faculty of fine arts, Srinakharinwirot university, has been approved to conduct research on "THE DEVELOPMENT OF SUBJECT CURRICULUM FOR CARING FOR THE ELDERLY AMONG MUSIC TEACHERS PROFESSION STUDENTS AT THE UNDERGRADUATE LEVEL IN SICHUAN PROVINCE, CHINA." Her thesis advisor is Asst. Prof. Dr. Tepika Rodsakan and her thesis co-advisor is Asst. Prof. Dr. Piyawadee Makpa.

The Graduate School would like to invite you to be the expert in the interview on the research topic "THE DEVELOPMENT OF SUBJECT CURRICULUM FOR CARING FOR THE ELDERLY AMONG MUSIC TEACHERS PROFESSION STUDENTS AT THE UNDERGRADUATE LEVEL IN SICHUAN PROVINCE, CHINA." The student has already contacted you initially and will coordinate the details further.

We would like to ask for your kind cooperation to be the expert for Ms. WEI XU and thank you for this opportunity.

Best regards,

A handwritten signature in blue ink, appearing to be 'Wongwit Senavongse'.

(Lecturer Dr. Wongwit Senavongse)
Deputy Dean for Administration and Planning
Acting Dean of the Graduate School

HESI. 8718/1497



Graduate School
Srinakharinwirot University
114 Sukhumvit 23, Bangkok 10110

24 October 2024

Topic: Invitation for the interview

To: Professor Zhou Qianqian

Ms. WEI XU, a PhD student in the Doctor of Education Program in Arts Education, Faculty of fine arts, Srinakharinwirot university, has been approved to conduct research on "THE DEVELOPMENT OF SUBJECT CURRICULUM FOR CARING FOR THE ELDERLY AMONG MUSIC TEACHERS PROFESSION STUDENTS AT THE UNDERGRADUATE LEVEL IN SICHUAN PROVINCE, CHINA." Her thesis advisor is Asst. Prof. Dr. Tepika Rodsakan and her thesis co-advisor is Asst. Prof. Dr. Piyawadee Makpa.

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(Lecturer Dr. Wongwit Senavongse)

Deputy Dean for Administration and Planning

Acting Dean of the Graduate School

HESI. 8718/1497



Graduate School
Srinakharinwirot University
114 Sukhumvit 23, Bangkok 10110

24 October 2024

Topic: Invitation for the interview

To: Professor Luan

Ms. WEI XU, a PhD student in the Doctor of Education Program in Arts Education, Faculty of fine arts, Srinakharinwirot university, has been approved to conduct research on "THE DEVELOPMENT OF SUBJECT CURRICULUM FOR CARING FOR THE ELDERLY AMONG MUSIC TEACHERS PROFESSION STUDENTS AT THE UNDERGRADUATE LEVEL IN SICHUAN PROVINCE, CHINA." Her thesis advisor is Asst. Prof. Dr. Tepika Rodsakan and her thesis co-advisor is Asst. Prof. Dr. Piyawadee Makpa.

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Best regards,

A handwritten signature in blue ink, appearing to be "W. Senavongse".

(Lecturer Dr. Wongwit Senavongse)

Deputy Dean for Administration and Planning

Acting Dean of the Graduate School

Graduate School

Tel. 0 2649 5064

Note: Please give the student a call if you would like further information on 8618380580257

HESI. 8718/1497



Graduate School
Srinakharinwirot University
114 Sukhumvit 23, Bangkok 10110

24 October 2024

Topic: Invitation for the interview

To: Professor Liang Xiuying

Ms. WEI XU, a PhD student in the Doctor of Education Program in Arts Education, Faculty of fine arts, Srinakharinwirot university, has been approved to conduct research on "THE DEVELOPMENT OF SUBJECT CURRICULUM FOR CARING FOR THE ELDERLY AMONG MUSIC TEACHERS PROFESSION STUDENTS AT THE UNDERGRADUATE LEVEL IN SICHUAN PROVINCE, CHINA." Her thesis advisor is Asst. Prof. Dr. Tepika Rodsakan and her thesis co-advisor is Asst. Prof. Dr. Piyawadee Makpa.

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(Lecturer Dr. Wongwit Senavongse)

Deputy Dean for Administration and Planning
Acting Dean of the Graduate School

Graduate School

Tel. 0 2649 5064

Note: Please give the student a call if you would like further information on 8618380580257

HESI. 8718/1497



Graduate School
Srinakharinwirot University
114 Sukhumvit 23, Bangkok 10110

24 October 2024

Topic: Invitation for the interview

To: Professor Rao Jianhua

Ms. WEI XU, a PhD student in the Doctor of Education Program in Arts Education, Faculty of fine arts, Srinakharinwirot university, has been approved to conduct research on "THE DEVELOPMENT OF SUBJECT CURRICULUM FOR CARING FOR THE ELDERLY AMONG MUSIC TEACHERS PROFESSION STUDENTS AT THE UNDERGRADUATE LEVEL IN SICHUAN PROVINCE, CHINA." Her thesis advisor is Asst. Prof. Dr. Tepika Rodsakan and her thesis co-advisor is Asst. Prof. Dr. Piyawadee Makpa.

The Graduate School would like to Invite experts to inspect research tools "Project Objective Alignment Index (IOC) table" The student has already contacted you initially and will coordinate the details further.

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(Lecturer Dr. Wongwit Senavongse)

Deputy Dean for Administration and Planning

Acting Dean of the Graduate School

Graduate School

Tel. 0 2649 5064

Note: Please give the student a call if you would like further information on 8618380580257

HESL 8718/1497



Graduate School
Srinakharinwirot University
114 Sukhumvit 23, Bangkok 10110

24 October 2024

Topic: Invitation for the interview

To: Professor Li Zhenhu

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(Lecturer Dr. Wongwit Senavongse)

Deputy Dean for Administration and Planning
Acting Dean of the Graduate School

Graduate School

Tel. 0 2649 5064

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HESI. 8718/1497



Graduate School
Srinakharinwirot University
114 Sukhumvit 23, Bangkok 10110

24 October 2024

Topic: Invitation for the interview

To: Associate professor Jiaqi Luo

Ms. WEI XU, a PhD student in the Doctor of Education Program in Arts Education, Faculty of fine arts, Srinakharinwirot university, has been approved to conduct research on "THE DEVELOPMENT OF SUBJECT CURRICULUM FOR CARING FOR THE ELDERLY AMONG MUSIC TEACHERS PROFESSION STUDENTS AT THE UNDERGRADUATE LEVEL IN SICHUAN PROVINCE, CHINA." Her thesis advisor is Asst. Prof. Dr. Tepika Rodsakan and her thesis co-advisor is Asst. Prof. Dr. Piyawadee Makpa.

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Best regards,

A handwritten signature in blue ink, appearing to read "Wf Ar".

(Lecturer Dr. Wongwit Senavongse)

Deputy Dean for Administration and Planning

Acting Dean of the Graduate School

Graduate School

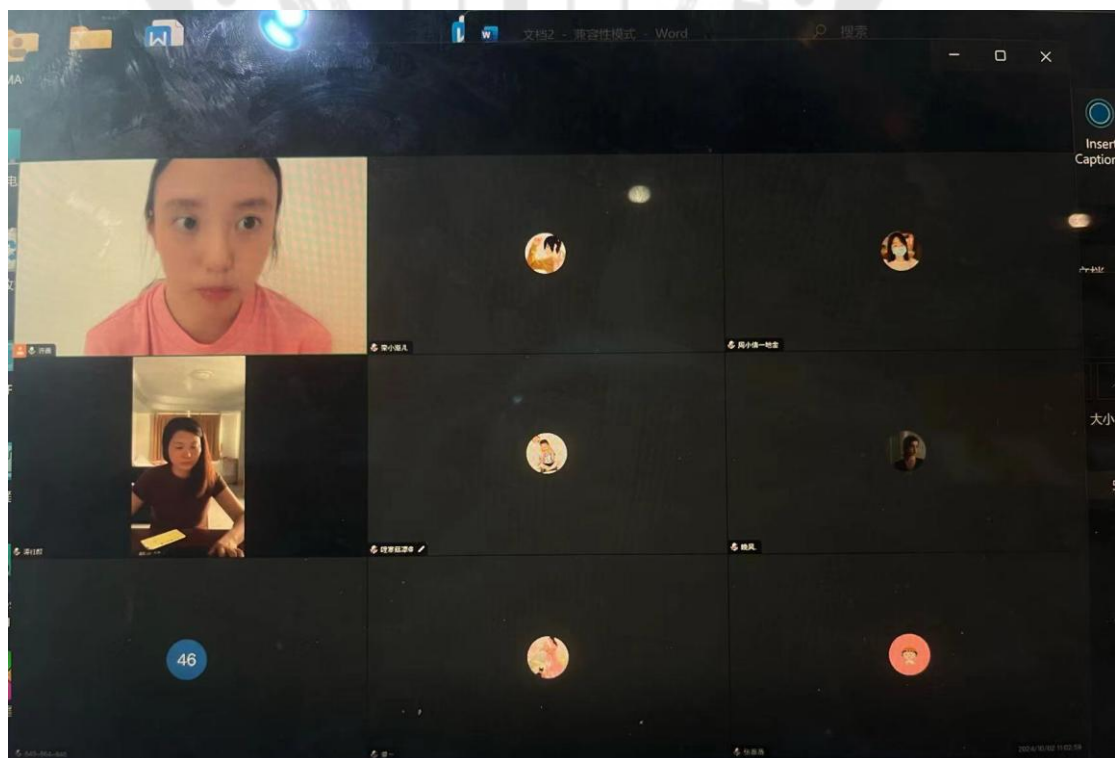
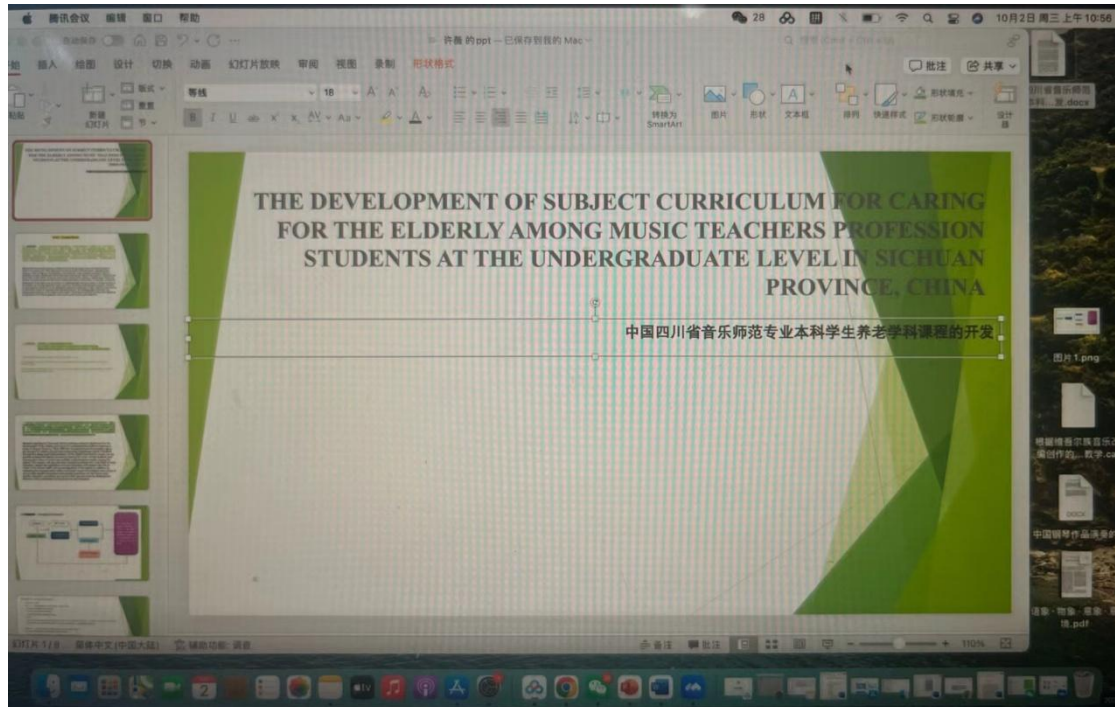
Tel. 0 2649 5064

Note: Please give the student a call if you would like further information on 8618380580257

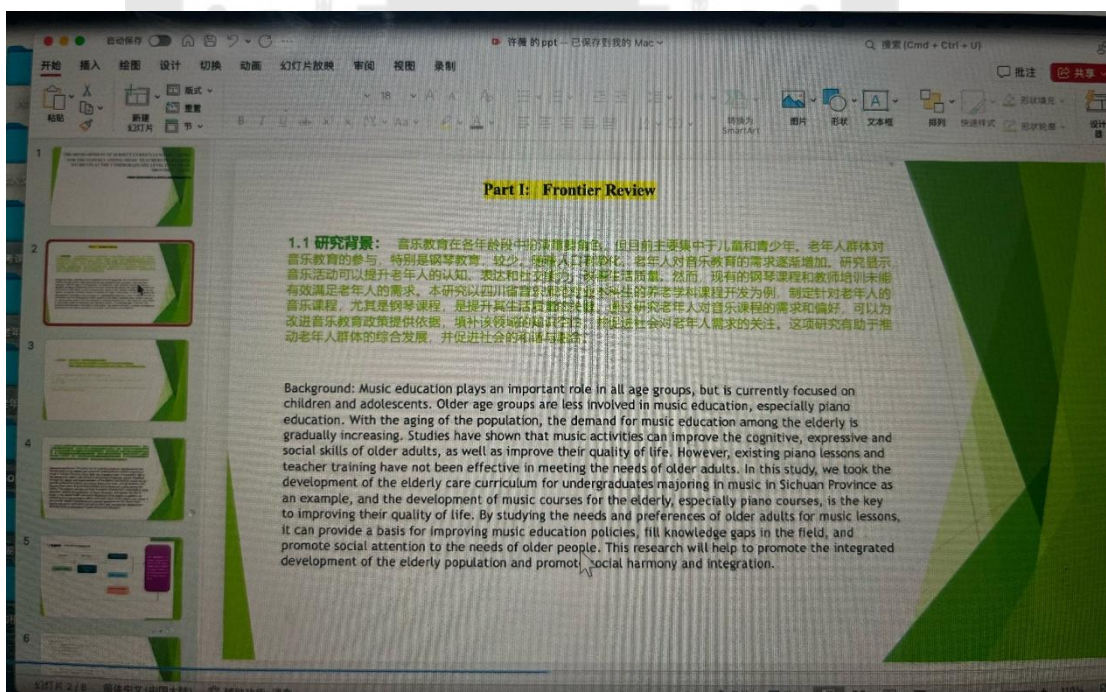
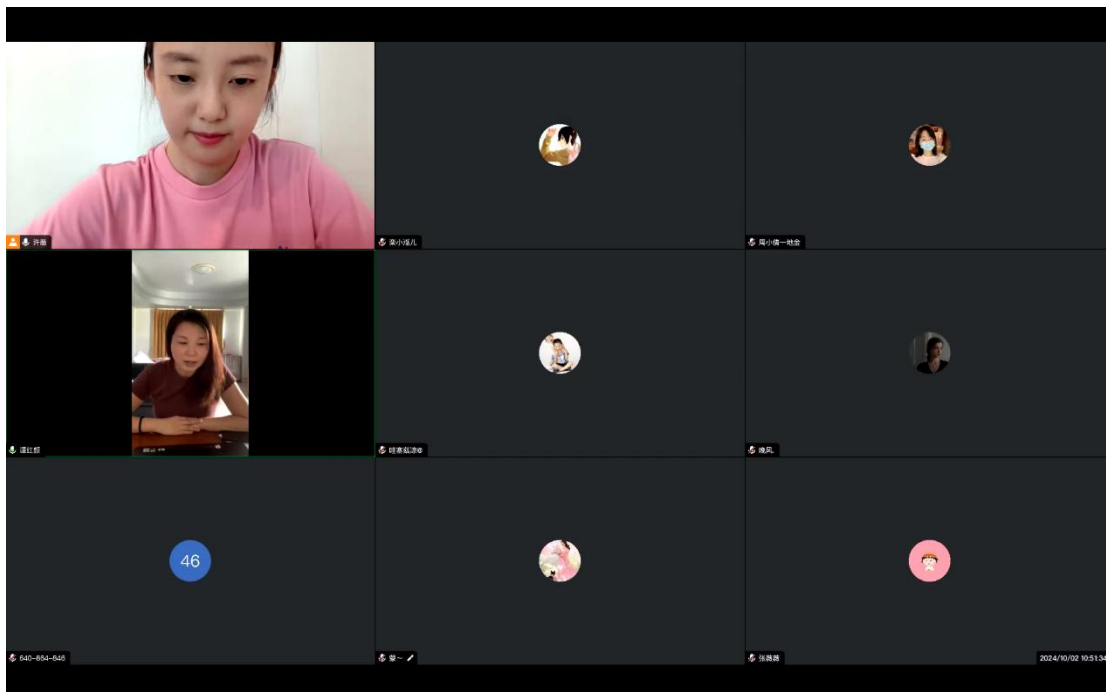


Appendix D
Activity Pictures

Focus group



Focus group



VITA

NAME	Wei Xu
DATE OF BIRTH	27 May 1995
PLACE OF BIRTH	China

