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# Diversified promotion: A practical analysis of Macao's continuing education development and improvement program

Jiamin Yu\*, Shenghua Lou

School of Humanities and Social Sciences, Macao Polytechnic University, Macao 999078, China

\* **Corresponding author:** Jiamin Yu, [p2209639@mpu.edu.mo](mailto:p2209639@mpu.edu.mo)

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**Abstract:** Macao's Continuing Education Development and Improvement Program aims to create lifelong learning conditions for Macao residents who have reached the age of 15 and encourage them to pursue continuing education or obtain certification to improve their personal qualities. This paper analyzes the entire implementation process of the Continuing Education Development and Improvement Program in Macao, using the traditional means of policy analysis from three perspectives. For the government, successful implementation ensures the quality of continuing education and promotes the building of a learning society in Macao. For educational institutions, this program provides residents with multiple learning pathways to meet diversified needs. For residents, it alleviates the cost pressure caused by education and promotes individual development in various aspects. However, there are still some problems in the subsequent implementation process that need to be improved, such as unclear positioning, inadequate administrative supervision mechanisms, and a weak guarantee of curriculum quality.

**Keywords:** continuing education development and improvement program; continuing education; policy analysis

## 1. Introduction

The education policies implemented in the Macao SAR, especially the 15-year free education system, have become a focus of research, which attracts the attention of worldwide experts and scholars. Different from the 9-year compulsory education in the mainland, the 15-year free education system included compulsory preschool education (3 years), which provided preschool education service with high quality. Compared to the education policy in Hong Kong SAR, the Macao government has increased a certain amount of financial support in addition to providing free education, ensuring that beneficiaries of all ages can learn more professional knowledge and skills and cultivate lifelong learning habits. Among them, a special program aimed at helping individuals build capacities for continuous learning was known as the Continuing Education Development and Improvement Program (CEDIP) in Macao.

The CEDIP administered by the Education and Youth Development Bureau (EYDB), aimed to create lifelong learning conditions for Macao residents who have reached the age of 15 and encourage them to pursue continuing education or obtain certification to improve their personal qualities and skills, which was in line with the diversified development of the economic industry and towards a learning society.

This program began in 2007 and was formerly known as the Continues Development and Improvement Program. A total of eight sessions were held from 2007 to 2011. Residents got financial support of around MOP 2500 per session. As of

today, the program has been completed in three phases. In the first phase (2011–2013), each qualified resident was financially offered MOP 5000, and MOP 500 million was distributed. In the second phase (2014–2016), each qualified resident was financially offered MOP 6000, and MOP 700 million was distributed. In the third phase (2017–2019), each qualified resident received MOP 6000, and MOP 850 million was distributed. During the fourth phase (2020–2023), each qualified resident was financially supported with an amount of MOP 6000 (Gao, 2020a). Currently, the fifth phase (2023–2026) has been started and the maximum amount of subsidy for each qualified resident was MOP 6000.

Based on practical and full consideration, the CEDIP was not only focus on advanced education but also supported various vocational licenses and qualification exams. Overall, implementing the CEDIP ignited Macao residents' passion to learn actively, provided a good educational atmosphere, and fully utilized funds in education, laying a solid foundation for building a learning society and developing diversified talents.

However, some assessment reports suggested that there were some problems in the implementation process. For example, the total amount of government funding was insufficient than the actual cost of obtaining certification, which needed continuous subsidies from residents. Due to the imperfections in laws and regulations on administrative supervision, the government funding was misused, and the real funds were not utilized for personal learning.

Diverse participants and multiple levels of social governance were involved in terms of the implementation process of the CEDIP. According to the above situation, this paper focused on how to evaluate the effectiveness of the CEDIP in terms of different social groups.

## **2. A literature review on the CEDIP in Macao**

Due to the short implementation time, there was a limited number of relevant literatures, and no relevant English literature or books were found in databases such as Web of Science and Scopus. In the databases of CNKI, various university libraries in Macao, such as the Macao Polytechnic University Library, Wu Yee Sun Library of the University of Macao, and the Macao University of Science and Technology Library, and Academic journals, the author searched the keyword CEDIP in Macao and reviewed the following literature.

Yan (2021) from the City University of Macao based on the education system and model in Macao, mainly described the basic concept, current development status, and significance of the CEDIP. An (2018) calculated the participation rate described demographic characteristics of Macao residents in the CEDIP, and conducted a detailed evaluation of the implementation effectiveness of the program. Given the characteristics of continuing education, Chao (2013) highlighted the people-oriented concept and educational fairness in the CEDIP.

Regarding the future development of the CEDIP, Gao (2020b) examined the historical development and practical relevance of non-tertiary and continuing education in Macao and compared the CEDIP in Macao with the Skills-Future Program which proposed by the Singapore government. He believed that the

sustainable development of this program required coordination between the EYDB and other participating groups (Gao, 2020c). Liang (2014) conducted a literature review on Macao's education policy and stressed the need to set a goal of talent cultivation and quality of higher education while establishing a framework to promote the standardization of non-tertiary education. Zheng (2012), from the perspective of industry diversification, believed that the short-term goal of continuing education was to improve the employment rate of residents. Setting a specific and relevant curriculum could moderately promote the diversification of industries in Macao. Using quantitative analysis, Wu (2015) launched a survey questionnaire and concluded that adult learners in Macao were more willing to continue learning due to the CEDIP. Shi and Ke (2012) used an empirical study to analyze the importance of continuing education. He concluded that there was still educational inequality across terms of age and gender, although the Macao SAR has increased educational expenditure.

In addition to the above journals and academic papers, many government officials, experts, and scholars also mentioned continuing education in government reports or blue books. The Macao SAR government mentioned in its latest policy address in the Social and Cultural Sector, that it would complete public consultation on the Medium-and-Long-Term Planning for Non-Tertiary Education (2021–2030), formulate a new round of education planning, and outline the blueprint to four directions for the development of non-tertiary education in the next decade. In the Annual Report on the Economy and Society of Macao (2012–2013), Huang (2013) elaborated on the implementation and prospects of Macao's CEDIP. She suggested that the administrative regulations and implementation supervision mechanisms were not inadequate, although the Macao SAR has adopted different promotion methods to encourage continuing education. The Macao SAR needed to cultivate key development projects and coordinate them with relevant policies in the future.

Given the considerable attention to the CEDIP in Macao, this paper summarized the reports and comments of major Macao newspapers to systematically clarify the focus of social attention on the implementation process. When searching the CEDIP in Macao through the WiseSearch Huike news search engine, the author found the following important reviews issued recently.

In January 2022, Macao Daily reported that three phases of the CEDIP have been completed since its launch in 2011. The third phase witnessed approximately 180,000 residents and 450,000 participants, with a funding of MOP 850 million. The vast majority of participating institutions and residents abide by the law, and serious violations were committed by less than 1% of the number of those completing the courses.

According to a report of Macao Daily in March 2022, an audit report on the CEDIP released by the Audit Commission of Macao at the end of November 2012, noted four findings related to curriculum supervision, including the failure of the Education and Youth Affairs Bureau to implement the inspection mechanism for participating institutions and the failure of monitoring to achieve the anticipated effects; the lack of effective monitoring of the deposit system; the lack of a mechanism to prevent the misappropriation of personal privacy for the “back-up enrolment program”; and the existence of the situation in which trainers enrolled in their courses they taught. The Audit Commission initiated a project to follow up on the four audit

results of the year and found that three of them still had deficiencies.

In April 2022, the EYDB proposed to build an inspection information system for the CEDIP, to support the supervision work through digitization and further strengthen risk management supervision. Combining data analysis, case sampling, post-interview, and other information measures of monitoring, the information system was more conducive to identifying institutions' non-compliance and violations. After improving and optimizing various electronic supervision measures, relevant administrative regulations and guidance would be introduced to provide corresponding support.

In August 2022, Macao Daily reported that residents could apply to participate in a new phase of the CEDIP and the government budget was MOP 800 million. The EYDB would approve the applications based on the institutions' past performance and strictly review the courses submitted by the institutions. Institutions needed to introduce electronic registers and electronic check-in.

In October 2022, the Commission Against Corruption of Macao detected a subsidy scam involving the CEDIP. Nearly 170 residents were involved and the amount involved was over MOP 1 million. A person in charge and a staff member of the education center involved, through offering cash rebates or free enrolment in other courses, attracted residents to apply for the subsidized courses. However, the relevant courses were never started and the students never attended the courses.

Summarizing the news mentioned above, it appears that the Macao SAR government has introduced multidimensional monitoring patterns, such as using electronic and information technology to improve implementation, ensuring information transparency for both institutions and students, despite weak supervision and less rigorous review in the implementation of the CEDIP.

### **3. Policy formulation and implementation of the CEDIP in Macao**

To understand the effectiveness of the CEDIP in Macao, this paper analyzed the specific steps (including policy formulation and policy execution) in the program's implementation process.

#### **3.1. Policy formulation**

The CEDIP followed the spirit of "lifelong learning" advocated by UNESCO. In 2001, UNESCO proposed the concept of "lifelong education" in an article titled "Learning: The Treasure With". Afterwards, this concept was widened to the whole society (Delors, 1996). In response to the call of UNESCO, the national concept of building a "learning society", and compensate for the absence of education during the governance of the Macao Portuguese government, the Macao SAR government has issued a series of laws and regulations and launched the CEDIP. To clarify the policy framework of the program, this paper sorted out the laws and regulations related to continuing education by year in **Table 1**.

**Table 1.** Laws and regulations related to continuing education.

Laws and Regulations	No.	Year	Issuing Authority	Main contents
1 General Framework for the Establishment of the Education System in Macao	No.11/91/M	1991	the Macao Portuguese government	<p>Adult education is intended for individuals over the age of formal education at various levels, to increase knowledge and develop potential, and complement or compensate for deficiencies of school education under the premise of continuing education. Although the concept of adult education comes from the formal education model, there is a flexible learning plan designed to suit the characteristics of adults, and a diploma with the same validity as formal education is awarded.</p> <p>——Article 14</p>
2 Establishing a Framework for the Organization and Development of Adult Education in the Field of Recurrent Education and Continuing and Social Education	No.32/95/M	1995	the Macao Portuguese government	<p>The decree law further divides adult education into recurrent education and continuing education and points out that continuing education is a series of systematic educational activities with sequence or alternation, and these educational activities are organized outside the school and can be coordinated with recurrent education and formal education. Continuing education aims to:</p> <p>promote the improvement and updating of knowledge and perfection of personality, to replace or complement school education; eliminate illiterate and semi-illiterate; advocate for participating in creative and training activities in their spare time.</p> <p>——Articles 12 and 13</p>
3 The Outline of the Non-tertiary Education System	No.9/2006	2006	the Macao SAR Government	<p>Education includes formal education and continuing education.</p> <p>Types of continuing education: Continuing education refers to various educational activities other than formal education, including family education, recurrent education, community education, vocational training, and other educational activities;</p> <p>Continuing education embodies the concept of lifelong learning and is a supplement and development to formal education.</p> <p>The goals of continuing education: to provide lifelong learning opportunities and to enhance the overall education level of learners; to eliminate illiterate and semi-illiterate; to provide education opportunities in different stages for educators who cannot or fail to complete formal education; 4) to create opportunities for personal development and to enhance the overall productivity and competitiveness of the Macao SAR; 5) to utilize family and community education to promote communication and cooperation with schools and relevant educational institutions; 6) to promote civic education and cultural activities.</p> <p>——Articles 5 and 13</p>

**Table 1. (Continued).**

	Laws and Regulations	No.	Year	Issuing Authority	Main contents
4	Continuing Education Development and Improvement Program	Administrative Regulation No.16/2011	2011	the Macao SAR Government	The purpose of this program is to encourage Macao's residents to increase their knowledge through continuous learning, to enhance their literacy and skills, and to promote the overall progress and development of Macao. —Article 1
5	Continuing Education Development and Improvement Program 2014–2016	Administrative Regulation No.10/2014	2014	the Macao SAR Government	This program aims to encourage Macao's residents to increase their knowledge through continuous learning, to enhance their literacy and skills, and to adapt to the diversification of industries and the building of a learning society. —Article 1
6	Continuing Education Development and Improvement Program 2017–2019	Administrative Regulation No.10/2017	2017	the Macao SAR Government	This program is intended to attract Macao's residents to participate and enhance their literacy and skills through continuing education or taking qualifications exams, which adapts to the diversification of industries and the building of a learning society. —Article 1
7	Continuing Education Development and Improvement Program 2022–2023	Administrative Regulation No.34/2020	2020	the Macao SAR Government	This program is intended to create favorable conditions for lifelong learning and encourage Macao's residents to enhance their literacy and skills through continuous education or taking qualification exams, which adapts to the diversification of industries and the building of a learning society. —Article 1

1 Law No. 11/91/M, General Framework for the Establishment of the Education System in Macao.

[https://bo.io.gov.mo/bo/i/91/34/lei11\\_cn.asp](https://bo.io.gov.mo/bo/i/91/34/lei11_cn.asp)

2 Decree-Law No. 32/95/M, Establishing a framework for the organization and development of adult education in the field of recurrent education and continuing and social education.

[https://bo.io.gov.mo/bo/i/95/29/declei32\\_cn.asp#:~:text=%E4%B8%80%E3%80%81%E8%A1%8C%E6%94%BF%E7%95%B6%E5%B1%80%E5%B0%8D%E5%9B%9E%E6%AD%B8,%E8%AA%B2%E7%A8%8B%E8%80%85%E5%85%B7%E5%84%AA%E5%85%88%E6%AC%8A%E3%80%82](https://bo.io.gov.mo/bo/i/95/29/declei32_cn.asp#:~:text=%E4%B8%80%E3%80%81%E8%A1%8C%E6%94%BF%E7%95%B6%E5%B1%80%E5%B0%8D%E5%9B%9E%E6%AD%B8,%E8%AA%B2%E7%A8%8B%E8%80%85%E5%85%B7%E5%84%AA%E5%85%88%E6%AC%8A%E3%80%82)

3 Law No. 9/2006, The Outline of the Non-tertiary Education System.

[https://bo.io.gov.mo/bo/i/2006/52/lei09\\_cn.asp](https://bo.io.gov.mo/bo/i/2006/52/lei09_cn.asp)

4 Administrative Regulation No. 16/2011, Continuing Education Development and Improvement Program. [https://bo.io.gov.mo/bo/i/2011/27/regadm16\\_cn.asp](https://bo.io.gov.mo/bo/i/2011/27/regadm16_cn.asp)

5 Administrative Regulation No. 10/2014, Continuing Education Development and Improvement Program during 2014-2016. [https://bo.io.gov.mo/bo/i/2014/17/regadm10\\_cn.asp](https://bo.io.gov.mo/bo/i/2014/17/regadm10_cn.asp)

6 Administrative Regulation No. 10/2017, Continuing Education Development and Improvement Program during 2017-2019. [https://bo.io.gov.mo/bo/i/2017/15/regadm10\\_cn.asp?printer=1](https://bo.io.gov.mo/bo/i/2017/15/regadm10_cn.asp?printer=1)

7 Administrative Regulation No. 34/2020, Continues Development and Improvement Program during 2020-2023. [https://bo.io.gov.mo/bo/i/2020/35/regadm34\\_cn.asp](https://bo.io.gov.mo/bo/i/2020/35/regadm34_cn.asp)

As the first relatively complete regulation in Macao's history, the General Framework for the Establishment of the Education System in Macao, promulgated in 1991, did not formally propose the concept of continuing education, but it clarified the goal of adult education as a supplement to school education and address deficiencies under the premise of continuing education (The Macao Portuguese Government, 1991). The Macao Portuguese government clearly defined adult education, including recurrent education and continuing education in Establishing a Framework for the Organization and Development of Adult Education in the Field of Recurrent Education

and Continuing and Social Education issued in 1995 (The Macao Portuguese Government, 1995).

After it reverted to China, the Macao SAR government issued the Outline of the Non-Tertiary Education System in 2006, which officially clarified the scope of formal education and continuing education (The Macao SAR Government, 2006). Formal education included early childhood education, primary education, and secondary education (junior and senior high school education) while continuing education included various educational activities other than formal education, such as family education, recurrent education, community education, vocational training, and other educational activities. The clear division of continuing education also laid a solid foundation for the government to allocate educational resources and promote the overall education level of society.

The four administrative regulations directly related to continuing education, namely, the CEDIP (The Macao SAR Government, 2011), CEDIP 2014–2016 (The Macao SAR Government, 2014), CEDIP 2017–2019 (The Macao SAR Government, 2017), and CEDIP 2020–2023 (The Macao SAR Government, 2020), provided guarantees for the implementation process. The different expressions of four regulations regarding the aims of the CEDIP not only indicated the increasing understanding of continuing education and the attempt to build a concept of lifelong learning but also consciously linked educational policy with the diversified development of the industrial economy, to cultivate more professional talents with competitive advantages.

### **3.2. Policy implementation**

The essence of educational governance was to “provide education that satisfied people” (Fan, 2021). The CEDIP was in line with the vision of the Macao SAR government, to enhance the comprehensive literacy of residents and cultivate diverse talents through education governance. Based on the resident’s needs, CEDIP optimized the educational structure and system allocated educational resources fairly and equitably, and enabled residents to share the education ecology with fair, equal, and high-quality education as well as development opportunities of modern society. To achieve the reallocation of educational resources and structure systems, diversified participants in educational affairs and clarified the rights and responsibilities of different participants were necessary (Meng, 2023).

Specifically, the EYDB was in charge of formulating and implementing the CEDIP, but different government units allocated different funding and monitored the implementation process at different stages. In Phase 1 (2011–2013), Phase 2 (2014–2016), and Phase 3 (2016–2018), financial appropriations came from the Macao SAR’s financial budget, and the Secretary for Education was in charge of supervising the implementation. In Phase 4 (2020–2023), the financial allocation would be distributed by the EYDB, and the Secretary for the Social and Cultural Sector oversaw the implementation. Whether different sources of appropriations in the financial budget or the adjustment and optimization of supervision and reporting units, it indicated that the Macao SAR government continuously clarified the responsibilities of various departments in the policy implementation process, to avoid overlapping and

omissions caused by unclear powers and responsibilities.

In addition to the EYDB, the Labor Affairs Bureau, the Macao Productivity and Technology Transfer Center, and the Continuing Education Association also contributed to the development of continuing education. The Labor Affairs Bureau was mainly responsible for vocational training. These vocational training courses and activities offered a platform for technical cooperation and advice, exchanged to obtain certification and enhanced professional skills in CEDIP. The Macao Productivity and Technology Transfer Center mainly provided value-added products and services to enterprises in terms of industry and commerce, enhancing their market competitiveness. Many social organizations in Macao actively promoted continuing education, such as the Macao Continuing Education Association, the Macao Association for Adult Education, the Macao Society of Continuing Education, the Macao Association of Private Continuing Education, the Macao Association of Staff and Workers Education and Vocational Training, the Macao Vocational Training and Lifelong Learning Association, the Macao Mature Parenting Livingroom Family Education Association, the Education Association of Love and Growth, the Families' Well Being Association Macau and the Family Association for Children's Growth (Gao, 2020c).

## **4. Analysis of the effectiveness and influencing factors of the policy implementation**

### **4.1. The effectiveness of the CEDIP**

#### **4.1.1. The Government: Ensuring the quality of continuing education and promoting the building of a learning society in Macao**

The effective implementation of the CEDIP in Macao improved residents' literacy and professional competence. The continuous financial support provided by the government has enabled residents who are over 15 years old to choose sustainable education independently, stimulating their passion for continuous learning. In terms of the participation frequency in the CEDIP (An, 2018), Macao residents have fully utilized the subsidy, and the number of people who receive or use subsidies in the latest program has significantly increased compared to previous years. To ensure the quality of continuing education, the EYDB also conducted strict qualification evaluations, including training objectives, the administrative management level, course hours, specific fees, etc. The EYDB not only had clear requirements for curriculum management but also standardized management, which ensured the quality and output of the CEDIP. In addition, a survey questionnaire conducted by EYDB showed that the implementation of this program has created an atmosphere for continuous learning, and has cultivated more professional and technical talents for the diversified development of Macao's industry.

#### **4.1.2. Educational institutions: Providing residents with multiple learning pathways to meet diversified needs**

The CEDIP was implemented in two ways. One was for residents to directly participate in continuing education courses offered by local institutions in Macao, and the other was to pay in advance and then apply for funding from the EYDB. This latter



one was more suitable for higher education or continuing education courses held outside Macao. With various funding channels, Macao residents had diverse pathways to participate in continuing education programs, and the curriculum was gradually shifting from higher education and continuing education to professional certification exams. In terms of the curriculum, residents were more willing to choose majors such as tourism, gambling, hospitality, social sciences, medicine, education, translation, and finance, which catered to the government's future positioning and strategic development towards "one center, one platform, and one base".

Taking tourism as an example, the interaction between service providers and customers in the tourism service and the emotional factors of customers in the whole service process has occupied a dominant position in service evaluation. How to maintain the long-term relationship between customers and enterprises has become the focus of tourism enterprises, the concept of customer management came into being. Customer management required enterprises to dynamically grasp the changes in customers' real needs through effective customer communication (Shu, 2003). Therefore, how to better classify and manage the existing customers and establish a perfect customer file were the contents that tourism service providers need to be trained in educational institutions.

#### **4.1.3. Residents: Releasing the education pressure and promoting personal development in diverse aspects**

The most prominent feature of the CEDIP was that residents were fully sponsored by the government enrolling in different continuing education courses, including higher education, continuing education, or even driving license tests. The government funding has alleviated the financial pressure of residents' educational needs, which improved the social welfare level in Macao. According to the mid-term evaluation reports on the CEDIP released by the EYDB (E-Research & Solutions, 2019; Policy 21 Limited, 2013, 2016), most Macao residents were supportive of the CEDIP. They believed that the program was well promoted and was suitable for target people. In general, the CEDIP helped residents to continue their study who completed their basic education. For the online registration system launched by the government and the electronic check-in system launched by educational institutions, most residents considered that such administrative procedures were relatively reasonable. Electronic services ensured transparent and efficient information transmission and reduced the cost benefits associated with traditional administration.

## **4.2. Analysis of influencing factors on policy effectiveness**

### **4.2.1. Diversified participants**

Diversified participation of the government, educational institutions, residents, and various social organizations was the most important influencing factor for the successful implementation of the CEDIP. Education, as the public good, should be supplied by the government. Basic education was mandatory, free, and universal while continuing education was flexible and changeable. Therefore, after fully considering the characteristics of continuing education, the Macao SAR government decided to give financial support and cooperate with other social entities in the provision of public goods. Besides, the Macao SAR government also provided other administrative and

legal measures to ensure the implementation process. As the main supplier of public services, educational institutions were mainly taking the role of executors. By setting up various courses to attract residents' attention, the overall education level in Macao has been improved. Meanwhile, to reach the approval requirements of the EYDB, educational institutions also needed to upgrade the administrative management capacities, improve the teaching capabilities of teachers, and create conditions for the development of educational institutions themselves. In addition, the government's financial support has greatly alleviated the economic pressure on educational institutions and residents, which reduced the educational inequality caused by economic reasons. As a result, continuing education not only enhanced residents' awareness and social participation in learning but also provided helpful advice for the formulation of subsequent education policies.

#### **4.2.2. Establishing the legal basis for continuing education**

Before the return, although the Macao Portuguese government issued two laws proposing the concept of continuing education, a complete set of supporting policies and measures was not formed. After the return, the Macao SAR government successively issued five laws clarifying the concept of continuing education, which incorporated the program into administrative regulations to ensure implementation. Education had a priority position and played a fundamental role in the construction of social undertakings, which required institutional safeguards provided by relevant law.

#### **4.2.3. Adequate financial support**

After the return, with the rapid development of the gambling industry, the fiscal revenue of the Macao SAR government has greatly increased, which laid the economic foundation for conducting education policies. Adequate fiscal revenue maximized the implementation of the CEDIP and ensured the stability and coherence of education policies. Compared to continuing education programs conducted in other countries, direct financial support avoided government barriers in the implementation process and increased the participation rate of residents in continuing education.

#### **4.2.4. Residents' demand for continuing education**

The residents' demand for continuing education was also a crucial factor. With the increasing demand for global talent in the international market, Macao had no significant advantage in terms of human resources, compared to mainland China, Southeast Asia, and other areas. To enhance the competitiveness in the international human resources market, it was necessary to develop competitive advantages in local industries such as the Chinese-Portuguese translation industry, the traditional Chinese medicine industry, etc.

### **5. Comparative analysis**

The concept of "continuing education" advocated by UNESCO has been gaining popularity. Many governments were implementing various continuing education programs to ensure the development of continuing education or lifelong learning. The University Continuing Education System established by US, the Lifelong Learning System conducted by France, the Skills Future Program launched by Singapore and the Lifelong Learning Program advocated by Japan were relatively successful.

Compared to these countries, continuing education system in mainland China still needs to be improved.

Continuing education in the United States plays a crucial role in national education and social development. Almost all universities or colleges have departments dedicated to continuing education, which hold equal or even higher status than formal education. Taking university continuing education as an example, the formal development of continuing education in American universities can be traced back to the period of the university extension movement when universities shifted from providing education primarily for the elite to educating the general public. The focus of instruction was on agriculture and mechanical skills, aimed at cultivating specialized talent needed for the development of industry and agriculture. Subsequently, universities gradually established specialized continuing education institutions that primarily offered education in life skills. With the advancement of social and economic development, technological progress, and the emergence of the concept of lifelong education, the target audience, teaching methods, and educational philosophy of continuing education in American universities have continuously improved. In the context of changing international environments and the development of global economic integration, the global education landscape is characterized by significant democratization, informatization, personalization, and sustainability (Sun & Li, 2022). In response to the international education landscape, the United States federal government successively enacted and implemented a series of educational strategic plans, promoting the diversified development of university continuing education. The development of the American continuing education system is relatively sophisticated.

Specifically, the American university continuing education system has placed significant emphasis on institutional development at the initial stage. The federal government directly intervened in the development of university continuing education by enacting education acts, laying the institutional foundation for the governance of continuing education (Keppel, 1987). The main sources of funding for American university continuing education include government appropriations, corporate investments, foundation support, and etc. In terms of government funding, federal legislation stimulates the development of university continuing education, requiring that the government provide financial assistance. Regarding corporate investments, the American government expands the entities investing in education to include corporations, mandating employers to cover the educational expenses of their employees. In terms of foundation support, foundations typically provide grants for continuing education through specific funds, such as the Ford Foundation, Carnegie Foundation, Kellogg Foundation, and others.

Different from the large financial support from foundations, most continuing education programs conducted in the European Union are supported by the public sectors. Taking France as an example, among the various elements of the lifelong education promotion mechanism, legal protection, funding procurement, technical support, social participation, and learning incentives are the most crucial elements leading to the successful experiences of continuing education programs (Wu and Li, 2021). These multiple elements interact with each other, collectively advancing lifelong education in France.

France is one of the countries that pioneered legislation on lifelong education. Some laws and regulations, such as the “Law on the Organization of Continuing Vocational Training within the Framework of Lifelong Education (Loi portant organisation de la formation professionnelle continue dans le cadre de l’éducation permanente)”, the “Law on Social Modernization (Loi de modernisation sociale),” and the “Law on Vocational Training, Employment, and Social Democracy (Loi relative à la formation professionnelle, à l’emploi et à la démocratie sociale)”, all reflect the historical development of continuing education in France. Due to the wide coverage of France’s lifelong education system and the continuous improvement in educational levels, the cost for citizens engaging in continuing education has been steadily increasing. Apart from corporate expenditures, various public administrative bodies like regional authorities, the central government, national employment centers, and the vocational committee of the National Bank of Commerce share the burden of continuing education expenses that exceed what companies can cover, ensuring the stable development of continuing education. Furthermore, the advancement of information and communication technologies has overcome the constraints of time and space in learning, facilitating tailored teaching and providing technical support for continuing education. As continuing education programs involve multiple stakeholders, participation from various sectors of society is necessary. Government departments, businesses, and various educational institutions are key drivers of advancing continuing education (Green, 2000). Particularly, France stimulates citizen participation in lifelong learning by establishing learning incentive mechanisms, such as providing financial support for vocational continuing education through individual training account systems, which are open to all French citizens aged 16 and above.

Compared to the United States and France, Chinese continuing education started relatively late, dating back to the end of the 19th century and the beginning of the 20th century with the establishment of the Chinese Educational Association (Ran and Cui, 2022). After drawing on the experiences of developed countries, such as Europe and America, Chinese continuing education was developed rapidly. However, the overall situation of continuing education is still at a stage of development. In terms of policy, the “Decision on the Reform and Development of Adult Education” enacted in 1987 specified the main tasks of adult education. The “Outline of the National Program for Educational Reform and Development” clearly defined adult education as a new type of educational system, focusing on vocational training and continuing education in 1993. The “Action Plan for Education Rejuvenation for the 21st Century” issued by the Ministry of Education firstly proposed the integration of radio, television, and online education to provide technical support for continuing education in 1998. Until now, the government has clearly defined the scope and content of continuing education in the “Outline of the National Program for Educational Reform and Development (2010–2020)”, providing large support for the establishment of a lifelong education strategy (Li and Xue, 2022). In terms of financial support, most special funds are supported directly by public sector, including the Ministry of Education, the Ministry of Finance, and the Ministry of Human Resources and Social Security.

To ensure the implementation of the Skills Future Program, the Singapore government has established a committee consisting of representatives from various sectors such as the government, industries, trade unions, training institutions, etc.

Diversified participants were the key factor for the success of the implementation process. From the government perspective, the Singapore Workforce Development Agency, Standards, Productivity, and Innovation Board Singapore, and the Information Communication Development Authority were all involved in program management and course provision. Skills Future Singapore, as a statutory committee, was responsible for overall control, while The Singapore Workforce Development Agency was in charge of the allocation of human resources (Gao, 2020a). In terms of universities, more than ten universities including the National University of Singapore, Nanyang Technological University, and Singapore Institute of Technology, served as course providers and trainers to evaluate learners' learning outcomes. Enterprises, especially small and medium-sized enterprises, also provided internships and training platforms for learners, ensuring the transformation and output of learning outcomes.

Different from Singapore, where various programs were implemented to promote continuing education, Japan as one of the few countries in the world with relatively complete legal systems, issued a series of policies and regulations to ensure the establishment of a lifelong education system. As early as the 1970s, the Central Council for Education issued a Fundamental Policy for The Comprehensive Expansion of The Education System, stressing the need for the current education system to consider the concept of lifelong education. Subsequently, a series of reports, such as The Education Level in Japan published by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Life-long Education Report issued by the Central Council for Education, and the white paper Cultural and Educational Policies in Japan - New Development of Lifelong Learning, promoted the prelude to education reform and laid the foundation of the Law on Revitalizing Lifelong Learning and Improving the System for its Implementation and Promotion (or Lifelong Learning Promotion Law) (Liang, 2012). In March 2004, the National Advisory Committee for Lifelong Learning reviewed the Promotion Policies for Future Lifelong Learning and proposed suggestions for future educational development according to the concept of promoting lifelong learning. In terms of administrative institutions, Japan took the lead in setting up a national lifelong learning administrative management agency, the Lifelong Learning Policy Bureau, and establishing a corresponding regional Advisory Committee for Lifelong Learning at the prefecture level. In addition, the proportion of social education funds in Japan was also increasing year by year, and ministries other than MEXT and other economic and industrial sectors also invested a large number of funds to improve the facilities for lifelong learning.

Compared to continuing education in Japan and Singapore, the CEDIP in Macao was characterized by stable financial support from the Macao SAR government. The financial support from the Japanese government was mostly used in various welfare centers or infrastructure without direct support to individuals. According to Singapore's Skills Future, Singaporeans aged 25 and above could receive a subsidy of 500 Singapore dollars at the beginning, the subsequent subsidy would be regularly increased by the government. However, the subsidy was insufficient compared to Macao. The amount of MOP 6000 per phase has greatly alleviated the economic pressure to afford continuing education, which directly facilitates people's incentives to continuous learning. Unlike the close connection between the Skills Future Program and enterprises, the CEDIP in Macao placed more emphasis on individuals' diverse

needs and the options for continuing education were wider and more flexible.

As mentioned in section 4.1.2, the model of continuing education operated in Macao could be categorized into two types: 1) programs established by local institutions themselves; and 2) programs operated in Macao by overseas universities (both in overseas and in the mainland). Continuing education programs created by local institutions were represented by the School of Continuing Education of the Macao University of Science and Technology (MUST), which was established in 2003 and took the lead in launching a series of programs related to Macao's leading economic industries, with specific majors in international tourism management, business administration, logistics management, hospitality, information and technology, gambling, conventions and exhibitions, Chinese and Western cultures, language translation, etc. Currently, the institute has utilized the university's network and information technology to break the limitations of time, space and geography, and has tried to adopt e-learning and virtual classrooms in the future (Liu, 2015). Courses offered by non-local education institutions include: master of hospitality and master of hotel and tourism management by the University of Birmingham at the MUST; master of financial management by the University of London at the University of Macao; and bachelor of librarianship (with consulting management) by Peking University at the Macao Amateur Center for Continuing Studies, etc.

## **6. Challenges and suggestions**

### **6.1. Challenges**

Continuing education was an important factor that affected the sustainable development of society. The implementation of the CEDIP could not only improve the professional literacy and competence of residents, and enhance the competitiveness of talents, but also help to solve the problem of unitary relation in Macao's industry. Although the CEDIP has achieved significant progress in promoting diverse participation in social governance, there were still some problems in the implementation process.

#### **6.1.1. Unclear positioning**

Before the implementation of the CEDIP, some comments on social media were concerned that the goal and the positioning of continuing education set by the program were unclear, leading to the wasteful use of funds. Although the program was issued in the form of administrative regulations, the specific provisions only listed the budget allocation and supervision reporting units and did not set specific governance goals. In addition, the beneficiaries of this program were Macao residents aged 15 and above, and a large proportion of young people used the funds for higher education towards university, which blurs the boundaries between basic education and continuing education.

#### **6.1.2. Imperfect administrative supervision mechanism**

During the process of implementation, due to the flexibility and numerous amounts of courses, many educational institutions were unqualified. Even though the EYDB hired some consulting companies to conduct mid-term evaluations on the implementation process, those evaluation reports were not indicative because the

interviewees were mainly the residents and beneficiary groups. The Audit Commission expressed criticisms regarding the use of funds, including inadequate approval and supervision in the implementation process. Also, the EYDB did not implement measures such as proactive and comprehensive inspections and did not commission specialized research institutions to evaluate the overall implementation process.

### **6.1.3. Unguaranteed arrangement and quality of the courses**

In terms of curriculum, as many residents have to work during the day, they still have to attend courses according to the timetable established by educational institutions. It was possible to design a more flexible curriculum to meet the actual needs of office workers. In terms of curriculum quality, although many educational institutions have responded positively, the qualifications and the quality of courses could not be guaranteed, resulting in residents were not able to learn what they wanted. A few educational institutions and residents even made false claims to defraud the government, which also affected the quality and reputation of the program.

## **6.2. Suggestions**

According to the above problems, the program needs to be improved in future development.

### **6.2.1. Developing a concept in line with international standards**

The concept of lifelong education has been advocated by UNESCO. Many developed countries have already introduced this concept and made efforts to build a learning society, such as the US (University Continuing Education System), France (Lifelong Learning System), Japan (Lifelong Learning System), and Singapore (SkillsFuture). The Macao SAR government can draw lessons from the successful experiences of other countries, integrate its own industrial development needs, and establish a comprehensive and flexible lifelong education system to align with international standards. This system should encompass formal and informal education, covering various aspects from basic education to higher education and vocational skills training. Additionally, concepts integrated with continuing education, such as sustainable development and the green economy, interdisciplinary development, should also be included in the curriculum and training of continuing education. Furthermore, the Macao SAR government can cooperate with international educational institutions and organizations to ensure that the CEDIP meets international standards. By introducing advanced international educational concepts and teaching methods, Macao can enhance educational quality and strengthen its international competitiveness.

### **6.2.2. Matching the policy reality and government vision**

Due to the continued impact of the epidemic, Macao experienced an economic downturn and depressed external demand. In order to address this challenge and promote moderate diversification of the Macao economy, the SAR government plans to align the industrial development, such as conventions and exhibitions, cultural creativity, traditional Chinese medicine, with the curriculum offerings of CEDIP. Based on the industrial development needs of Macao, the SAR government focuses

on designing education and training programs that match these needs to strengthen vocational training in relevant fields, ensuring a balance between labor market demand and supply. Such targeted education and training programs can not only mitigate the economic impact of the epidemic, but also lay a solid foundation for the continuous development of Macao's future economy. By strengthening education and training, the SAR government can help Macao adapt to the needs of economic structural adjustments and industrial transformation, promoting sustained economic growth and stable development.

### **6.2.3. Establishing a collaborative mechanism for participant**

Although diverse participants were involved in the program, different participants should take on different responsibilities. The EYDB took charge of the implementation process, including policy-making and implementation. However, the scope of responsibilities and roles of other participants were not clearly defined by administrative regulation. A collaborative mechanism needed to be established to encourage effective participation and cooperation from other relevant departments. Establishing a collaborative mechanism among all participating entities can effectively integrate resources and enhance policy implementation efficiency. Through regular communication, negotiation, and collaboration, a balance of interests can be fostered, ensuring the comprehensiveness and feasibility of policies. Additionally, this collaborative mechanism can facilitate information sharing and experience exchange, driving development and innovation in the field of education and training. Therefore, the CEDIP needs to establish a clear division of responsibilities among participating entities and a collaborative mechanism to achieve effective policy implementation, thereby promoting the healthy development of Macao's education and training system. Such measures will help enhance the quality and effectiveness of education and training, advance the diversified development of the Macao economy, and elevate the reserve of talents.

### **6.2.4. Establishing a multi-channel funding mechanism**

Affected by COVID-19 and the surrounding economic environment, the revenue of Macao's gambling industry has declined sharply, and the Macao SAR government has also been facing the pressure of industrial restructuring in recent years. To ensure the stability and sustainability of continuing education policies, a multi-channel mechanism for raising education funds should be established so that the government, enterprises, individuals, and social organizations could share continuing education funds respectively.

The Macao SAR government needs to take a series of measures to ensure the smooth implementation of continuing education policies. Firstly, the government can adjust the fiscal budget to ensure the basic funding for continuing education is guaranteed. Additionally, by formulating relevant policies, the government can encourage businesses and individuals to increase their investment in continuing education, promoting the sharing and optimal use of educational resources. Furthermore, to establish a multi-channel mechanism for funding continuing education development, the government can consider setting up a special fund to support the implementation of continuing education projects. This fund can be sourced from government allocations, corporate donations, individual contributions, and



support from social organizations, aiming to achieve the goal of multiple participation and cost-sharing. This approach can not only effectively alleviate government financial pressures, but also foster societal attention and support for continuing education. Moreover, the government can introduce tax incentives to encourage businesses and individuals to increase their investment in continuing education. By reducing relevant taxes or providing tax exemptions, more businesses and individuals can be motivated to participate in raising funds for continuing education, thus driving the development and enhancement of continuing education initiatives.

#### **6.2.5. Strengthening approval and supervision**

Due to the lack of corresponding professional certification systems, it is necessary to use administrative, economic, legal, and other measures to improve the implementation and guarantee the quality of courses. Therefore, improving the approval and supervision system and enhancing the quality management system and administrative supervision mechanism are essential. The specific measures are as follows:

- 1) Creating a specialized organization responsible for certifying the qualifications of educational institutions to ensure that they have a certain level of teaching and service quality.
- 2) Implementing regular supervision and evaluation mechanisms to comprehensively review the course content, teaching quality, and faculty qualifications of educational institutions to ensure the quality and legitimacy of continuing education.
- 3) Establishing a dedicated education fund to support educational institutions in improving their curriculum design, enhancing teaching facilities, etc., to drive the high-quality development of continuing education.
- 4) Establishing a mechanism to penalize violations, imposing penalties on educational institutions engaging in misconduct to uphold the legal rights and quality standards of continuing education.

### **7. Summary**

The CEDIP was managed by EYDB and was aimed to create lifelong learning conditions for Macao residents, encouraging them to pursue continuing education or acquire certificates to enhance their personal qualities and skills. The implementation process has ignited residents' passion for active learning, created a good educational atmosphere, and laid a good foundation for the building of a learning society and the cultivation of diversified talents. This paper analyzed the practice of the CEDIP by reviewing academic literature, news reports, and policies and regulations.

Continuing education, as a supplement to school education, also helped the government to allocate educational resources at the overall levels of society. From the government's perspective, the successful implementation ensured the quality of continuing education and promoted the building of a learning society in Macao. For educational institutions, this program provided residents with multiple learning pathways to meet diversified needs. For residents, it alleviated the cost pressure caused by education and promoted individual development in different aspects. In addition to the legal foundation, sufficient financial support, and residents' demand for continuing

education, the diversified participation of government, educational institutions, residents, and other social organizations played an important role in the implementation process.

However, there were also problems found in the implementation process, such as unclear positioning, inadequate administrative supervision mechanism, and weak guarantee of the curriculum and quality. Accordingly, the EYDB should actively establish a collaborative mechanism for diverse participants, build multiple funding channels, and conform with international concepts to reach the government's vision.

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