

**Strategic Public Policy Research Funding Scheme (SPPRFS)
Strategic Themes (2024-25)**

	<u>Code</u>
1. Development Opportunities from the Guangdong-Hong Kong-Macao Greater Bay Area under the National 14th Five-Year Plan	SH01
2. Achieving Carbon Neutrality	SH02
3. Hydrogen Economy	SH03
4. Sustainable Development of Elderly Care Services with an Ageing Population	SH04
5. Healthcare Innovations	SH05
6. Education	SH06

Important Note: Applications for SPPRFS 2024-25 must be made under one of the strategic themes and in line with the specified research area(s). Those falling outside the specified strategic themes and specified research area(s) will NOT be considered generally.

SH01 - Development Opportunities from the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) under the National 14th Five-Year Plan

Background

The GBA includes nine municipalities in Guangdong, as well as the two Special Administrative Regions (SAR) of Hong Kong and Macao. The development of the GBA is a key national development strategy in the country's reform and opening up in the new era. Its objectives are to further deepen cooperation amongst Guangdong, Hong Kong and Macao, and to promote coordinated regional development to achieve "win-win" outcome for all.

An "Outline Development Plan for the Development of the GBA" (ODP) was promulgated in February of 2019 setting out the key guiding principles and policy directions for the all-round development of the GBA up to 2035. Hong Kong is named in the ODP as one of the four "core cities" to drive the coordinated regional development in the GBA. In March 2021, the National People's Congress approved 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" (the 14th Five-Year Plan), which is the blueprint and action agenda for the social and economic development of the country in the next five years. In this blueprint, Hong Kong's competitive strengths as international financial, transportation and trade centres as well as a centre for international legal and dispute resolution services in the Asia-Pacific region have continued to be recognised for advancement, while new impetus has been awarded to, namely, an international innovation and technology hub, an international aviation hub, an East meets West centre for international cultural exchange and a regional intellectual property trading centre. On high-quality GBA development, one of the objectives is to establish a brand of quality exchanges among the young people of Guangdong, Hong Kong and Macao.

Specified Research Area(s)

Researches under this strategic theme should be conducted on the following area(s):

1. 14th Five-Year Plan and the related strategic development plans of the nine Guangdong municipalities within the GBA:
Research should focus on the development plan of several (or all) individual Mainland cities of the GBA, while opportunities in specific economic sectors could be examined especially where the relevant municipality has unique potential for significant development in the 14th Five-Year Plan period and beyond, and in which Hong Kong businesses have expertise to offer, leading to sustainable and economically viable partnerships with win-win results for relevant parties.
2. Hong Kong as a regional intellectual property (IP) trading centre:
This is the first time the Central Government has rendered support for Hong Kong to develop into a regional IP trading centre in the national development blueprint. It would be useful to review Hong Kong's strengths in the IP regime by a quantitative research to support the analysis, identify how we can contribute to the national development and map out the strategies in areas including talent recruitment and capacity building to establish Hong Kong's leading position.
3. Possible areas of Hong Kong's contributions towards the promotion of vibrant cultural development in the GBA, hence also enabling various sectors of the cultural and creative industries of Hong Kong to seize opportunities arising from this development:
Chapter 8.2 of the ODP calls for "Jointly Developing a Cultural Bay Area". Specific hardware (Hong Kong Palace Museum, Xiqu Centre, etc.) and software (HK International

Film & TV Market, HK Book Fair, etc.) items in Hong Kong have been highlighted. The National 14th Five-Year Plan raises the support for Hong Kong to develop into a hub of arts and cultural exchanges between China and the rest of the world. In-depth study on the potential of the Hong Kong cultural and creative industries in the context of the GBA development, identification of the expertise that they can contribute, as well as areas and ways in which they may collaborate with partners in other GBA cities could provide useful reference for the stakeholders in leveraging the enormous opportunities of GBA development.

4. Opportunities for Hong Kong young people in the context of the GBA development:
Various policies and support measures have been rolled out by the HKSAR Government as well as the Mainland authorities to help Hong Kong young people understand and seize the opportunities of GBA development. The focus of such policies/measures have also expanded from opportunities for further study and start-ups to employment in private and more recently public institutions in the Mainland cities of the GBA. Research on the medium term effect of such measures, such as through longitudinal studies over a 3- to 5-year period, could provide a comprehensive picture that could help policy makers identify gaps (if any) and corresponding enhancement measures for young people better understand what is available to them.
5. Enhancing understanding of Hong Kong residents in the Mainland cities of the GBA:
At present, many Hong Kong residents are residing in the Mainland cities of the GBA for work, studies, or retirement. It would be useful if systematic and/or longitudinal studies could be carried out to assess the size of Hong Kong residents in different Mainland cities of the GBA, their needs, the considerations surrounding the choice they made, and the policies or measures that are most useful to them, etc. This might assist policy makers to consider what further measures could be taken for the benefit of the Hong Kong residents living therein, and to facilitate others who are considering the option of residing in the Mainland cities of the GBA to make an informed decision.

SH02 - Achieving Carbon Neutrality

Background

Combating climate change is an important issue across the globe. To align with the country's commitment to have carbon peak before 2030 and achieve carbon neutrality before 2060, Hong Kong would strive to achieve carbon neutrality before 2050 and reduce Hong Kong's total carbon emissions from the 2005 level by half before 2035.

The "Hong Kong's Climate Action Plan 2050" published in October 2021 set out four major decarbonisation strategies, namely "net-zero electricity generation", "energy saving and green buildings", "green transport" and "waste reduction". These strategies aim to tackle the three major sources of carbon emissions, namely electricity generation (63%), transport (19%) and waste (8%), and lead Hong Kong towards carbon neutrality.

It is a challenging task to achieve carbon neutrality by 2050. Other than the policy initiatives mentioned above, it also requires participation of all sectors in the community to promote a low-carbon lifestyle.

Specified Research Area(s)

Researches under this strategic theme should be conducted on the following area(s):

1. Strategies for enhancing awareness and participation of young people and minorities in climate actions
2. Strategies for mobilising the business community to develop and implement decarbonisation plans for different sectors

SH03 - Hydrogen Economy

Background

Hydrogen is an important green energy carrier for the global transition to sustainable energy and a vital component of achieving zero-carbon emission economies. Many countries, including China, have released hydrogen economy blueprints in recent years to map out the strategies to broaden and bolster the use of hydrogen to replace fossil fuels. Pursuant to the Chief Executive's 2023 Policy Address, the HKSAR Government will formulate the Strategy for Hydrogen Development in Hong Kong in the first half of 2024.

Hydrogen energy can be used in various applications such as transportation, power generation and energy storage, as well as construction site equipment, etc. In the field of transportation, it is particularly relevant to the green transformation of commercial vehicles and heavy goods vehicles. It has the potential to play an important role in Hong Kong's quest for carbon neutrality. An Inter-departmental Working Group has been set up to oversee the use of hydrogen as fuel in Hong Kong.

Specified Research Area(s)

Researches under this strategic theme should be conducted on the following area(s):

1. Hong Kong's priority areas for using hydrogen to meet local needs, in particular technological advancements and infrastructure requirements for wider application of hydrogen energy that can be explored and investigated.
2. How can policies facilitate the use of hydrogen in Hong Kong?
3. What is the social and economic impact of using hydrogen in Hong Kong in the medium to long term?
4. How can Hong Kong leverage the use of hydrogen to develop new business opportunities as well as strengthen cooperation with neighbouring regions?

SH04 - Sustainable Development of Elderly Care Services with an Ageing Population

Background

The Government adopts “ageing in place as the core, institutional care as back-up” as the policy direction for elderly services. The Social Welfare Department ascertains an elderly person’s need for long-term care services through the Standardised Care and Need Assessment Mechanism for Elderly Services (SCNAMES). Frail elderly persons assessed to be having service needs can receive subsidised community or residential care services. At the moment, about 35 000 elderly persons receive subsidised community care services (the Government bears around 95% of the service costs) and about 33 000 elderly persons receive subsidised residential care services (the Government bears over 90% of the service costs). In addition, there are about 30 000 elderly residing in non-subsidised residential care places, of which about 60% are recipients of Comprehensive Social Security Assistance (CSSA) and their home fees are paid by CSSA. The recurrent government expenditure on elderly services has been continuously on the rise which was estimated to be around \$15 billion in 2023-24, representing an increase of 189% over the actual expenditure ten years ago (i.e. in 2013-14).

The peak of ageing population in Hong Kong has yet to arrive. Number of people aged 85 or above (i.e. those who are most in need of long-term care services demographically) is 160 000 in 2014, 240 000 in 2024, 340 000 in 2034 and 670 000 in 2044. The Elderly Service Programme Plan published in 2017 forecasted that the demand for subsidised community care service and residential care service places will reach their peak of 65 000 and 69 000 respectively in 2051 based on population projection and SCNAMES result by age group, number of existing service users, number of elderly persons on the waiting list and other relevant factors. While the above demand forecast may need to be updated using the latest figures (especially those since the resumption of normalcy from COVID-19), there is no doubt that elderly services are facing challenges in terms of –

- (a) **Financial sustainability:** SCNAMES focuses on the long-term care needs of individuals. Elderly persons who are assessed to be having service needs can apply for subsidised elderly services regardless of their financial situation. Most of the subsidised services are provided at a flat rate, with fees charged on users unrelated to the costs of services and not adjusted over the years to reflect inflation or improvements in service quality.
- (b) **Manpower sustainability:** declining birth rate and rising educational level have caused a significant reduction in low-skilled workforce locally. Not enough young people to take care of the older generations results in a structural manpower problem in elderly services. For ageing in place, inexpensive foreign domestic helpers are already playing an important role by acting as the primary carers for over 20% of elderly persons requiring long-term care at home. For institutional care services, there have been thousands of job vacancies for years, and yet, only residential care homes are allowed to import limited number of care workers (which is subject to a ceiling ratio to local staff as well as a sector specific quota), with salary level pegged to that of local care workers. As there will be more and more elderly people require various community or residential care services, the problem of supply and cost of manpower are becoming increasingly acute.

Specified Research Area(s)

Researches under this strategic theme should be conducted on the following area(s):

1. **Improving the financial sustainability of subsidised elderly services:**

To study the impact of maintaining existing practice in providing subsidised elderly services on recurrent government expenditure in the next 20 years, to make recommendations on funding and/or fee-charging model of various elderly services, and to suggest implementation details (e.g., phased introduction of the recommendations in different service units, fee arrangements for existing service users and those waitlisted). Employing quantitative and other research methods, the study should analyse short-, medium- and long-term impacts of its recommendations on demand for subsidised services and the Government's finances, response of key stakeholders, challenges faced and the corresponding mitigation measures. The study can also explore how to change the current balance of subsidised to non-subsidised services by attracting more financially capable elderly to use non-subsidised services, and the feasibility and effectiveness (in quantifiable terms) of developing a silver economy so that the market may share part of the demand for elderly services.

2. **Improving the manpower sustainability of elderly service sector:**

To project the number of each type of staff required by the sector, its overall impact on Hong Kong's labour market and the corresponding manpower expenditure in the next 20 years, on the presumption that the existing policies (such as funding and fee-charging models, professional qualification and/or entry requirement of concerned staff, labour policy, etc.) remain unchanged. The study can make recommendations on how to improve sustainability of manpower for the sector (e.g., increasing the supply or reducing the demand for particular types of staff, replacing staff types with insufficient labour supply with the ones that are more abundant, importing labour from neighbouring areas, etc.) and set out implementation options. Employing quantitative and other research methods, the study should analyse the impact of its recommendations on Hong Kong's overall manpower resources and economy, examine the responses of key stakeholders, as well as the challenges faced and the corresponding mitigation measures.

3. **Encouraging elderly persons to retire in the Mainland municipalities of the Guangdong-Hong Kong-Macao Greater Bay Area (GBA):**

Employing quantitative and other research methods, the study may analyse key factors affecting Hong Kong elderly's choice of place to retire, investigate the situation of elderly persons of different age groups and service needs currently living in GBA cities, examine HKSAR Government's policies and measures on cross-border retirement, and Mainland municipal governments' policies and measures targeted or applicable to Hong Kong elderly, etc. The study may also analyse the real and the perceived difficulties faced by elderly persons who retire across the border, and using this as a starting point to make recommendations on how to encourage more elderly persons to retire in GBA cities. The study should include projection on number and demographic characteristics of Hong Kong elderly choosing to retire in GBA in future, the impact of its recommendations on the projection, the impact of cross-border retirement on government expenditure, the development of the elderly service industry in Hong Kong and the overall economy of Hong Kong, etc.

SH05 - Healthcare Innovations

Background

Hong Kong's healthcare system, similar to those in many other developed countries, is facing major challenges brought about by a rapidly ageing population and the associated increasing prevalence of chronic diseases. The Government is determined to step up efforts to promote individual and community involvement, enhance co-ordination among various medical and social sectors, and strengthen district-level primary healthcare services. Pending a major shift to primary healthcare, healthcare has also been identified as a target area by the Government in driving innovation and technology in Hong Kong. The convergence of biotechnology, information technology, engineering and nanotechnology offers more effective means for preventing, diagnosing, treating and monitoring diseases. Successful R&D in biomedical technology would not only raise the healthcare standard in Hong Kong, but also develop related industries and contribute to the wider world.

In view of the high human and economic costs that a pandemic can bring, healthcare innovations require an accelerated and larger-scale development. For example, the benefits of telehealth are more widely recognised when healthcare institutions cannot maintain normal operations owing to disease control concerns. Mobile-enabled technologies have been deployed to monitor quarantined individuals and to trace close contacts. The ability to rapidly expand the capacity to care for patients of infectious diseases can only be made possible with innovations in services, processes, and business and delivery models.

Leveraging the high-quality medical care services and efficient healthcare system, the Government is determined to develop Hong Kong into a health and medical innovation hub, and establish an authority that registers drugs and medical devices under the "primary evaluation" approach, i.e. to directly approve applications for registration of drugs and medical devices based on clinical data. By setting up Hong Kong Centre for Medical Products Regulation and accessioning to the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use, the Government will step by step build up Hong Kong's capacity in the eventual approval mechanism of drugs and medical devices, and recognition and status internationally and by the Mainland.

Specified Research Area(s)

Researches under this strategic theme should be conducted on the following area(s):

1. Innovative healthcare services delivery models, including enhanced medical-social collaboration and sustainable healthcare financing
2. Enhancing development of primary healthcare in Hong Kong
3. How to make use of health technology/informatics/innovations to improve Hong Kong's preparedness and capacity to respond to infectious disease outbreak, including anti-epidemic measures such as monitoring, contact tracing and quarantine, the ability to meet the surge capacity in laboratory testing, the ability to meet the capacity challenges and provide continuity of care by public hospitals, etc
4. Health and medical innovation hub

SH06 - Education

Note: There are three topics under this strategic theme. Applicants may choose to cover one, two or all three topic(s) in the proposal.

A. Enhancement of Well-being, Contentment (獲得感) and Happiness (幸福感) of Students and Teachers

Background

COVID-19 pandemic in the past few years has caused an unprecedented impact on the Hong Kong citizens' mental health, with no exception to teachers and students. Intermittent suspension of face-to-face schooling, implementation of online or blended learning, wearing of face masks and so on have impact on not only learning and teaching (particularly language learning), but also on the physical, mental and social well-being of teachers and students, particularly the cross-boundary students. The education community has demonstrated resilience, agility and creativity in responding to the changes. As Hong Kong resumes normalcy, the education sector must reflect and capitalise on the lessons learned whilst seeking to bridge gaps and continue to move forward.

Among the greatest concerns are the enhancement of mental and social well-being of our students and teachers, who are still adjusting themselves after the prolonged COVID pandemic. There have been reports of instances of inter-personal conflicts and tension, mental health issues and even lingering suicidal attempts. As Hong Kong aspires to become "Happy Hong Kong", we would also like to promote healthy and happy school with enhanced physical, mental and social well-being, as well as a deeper sense of contentment and happiness, preferably driven by intrinsic rather than extrinsic factors.

The Education Bureau has been implementing various measures in and outside classrooms towards these ends, such as promoting values education (e.g. having a grateful heart and treasuring what we have), launching the "Active Students, Active People" Campaign, developing the Mental Health Literacy" Resource Packages, and launching the "Spread the Love, Care and Shine" Campaign. It is timely to examine some local and international good practices on how best to promote healthy and happy schools in Hong Kong.

Specified Research Area(s)

Researches under this topic should be conducted on the following area(s):

A1. Healthy and happy schooling/Building better schools and teachers

- The well-being and level of contentment/happiness of our students and teachers towards their school life, and any room for enhancement;
- Factors that affect students' physical, mental, emotional and social fitness (e.g. physical activities, sleep, nutrition and stress management); and
- Room for enhancement in promoting the well-being and contentment of students and teachers in terms of values, skill-sets and capabilities, etc. (e.g. gratitude, resilience, risk-taking, perseverance) to respond to, and get prepared for, changes, adversities, crisis and contingencies.

A2. Community engagement and uniformed group

- Impact of community engagement/volunteering service and uniformed group on students' values, sense of responsibilities, citizenship, sense of belonging towards Hong Kong.

A3. Role of parents/family on students' well-being and sense of contentment/happiness

- Good practices on parent education and parent-school co-operation to promote the well-being and happiness of students and teachers.

B. Mode of Learning and Teaching under the New Technological Age

Background

The rapid development in education technology (EdTech) and digitalisation of education (數字教育) (e.g. the third generation Internet (Web3), Artificial Intelligence (AI) and Internet of Things (IoT)) has been enriching the learning and teaching experiences. On the other hand, there are risks and concerns that excessive or improper use of technology may harm the core value of education (e.g. some universities forbid students from using ChatGPT, a natural language processing tool driven by AI technology, for assignments, considering that would be an act of plagiarism and hinder students' learning).

Specified Research Area(s)

Researches under this topic should be conducted on the following area(s):

B1. Knowledge generation/Boundaries of learning & teaching and schooling

- Role and positioning of schools and teachers in education (e.g. knowledge transfer, facilitator or life coach of students), against the backdrop of the wider utilisations of EdTech in schools and classrooms; and
- Strategies and measures on the use and promotion of AI in education so as to leverage its potential in education while ensuring its ethical and equitable use.

B2. Qualities and competencies students require in future

- Core skills, competencies, values and attitudes necessary for students being the agents of change and keeping up with the pace and wide application of EdTech.

B3. Pedagogical goals schools and educators should require

- How schools and educators collaborate to ensure the education system/ curriculum/pedagogies are responsive and relevant to the future needs of youths.

C. Sustainable and balanced ladder of talent development & training

Background

Lifelong learning is not only associated with individuals' employability but also the long-term economic development of a city. Lifelong learning is on a top agenda of OECD, UNESCO, the European Union and countries with high-performing education system (e.g. Finland, Australia and Singapore). Since OECD made its commitment to lifelong learning in 1996, there has been growing interest in lifelong learning.

Besides, a successful economy should possess a pool of skilled talents of various expertise. Apart from attracting talents from overseas, Hong Kong could boost the supply of local talents of different expertise fronts.

Specified Research Area(s)

Researches under this topic should be conducted on the following area(s):

C1. Overseas practice and experience of other regions/countries on lifelong learning

- Draw reference to regions/countries (e.g. Finland, Australia and Singapore) which have versatile opportunities for lifelong learning.

C2. Development of micro-credentials and a holistic ladder of sustainable development & training of talents

- Micro-credentials certify the learning outcomes of short-term learning experiences (e.g. a short online course). The implementation could offer a flexible, targeted while structured way to promote lifelong learning through acquisition and updating of skills throughout life, regardless of people's starting points and education levels (even students still in school age could be applicable).

C3. Strategies and measures on the use and promotion of AI in education to leverage its potential in education at all levels while ensuring its ethical and equitable use

- AI has the potential to address some of the biggest challenges in education today, and accelerate innovation in teaching and learning practices. However, rapid technological developments inevitably bring multiple risks and challenges, which have so far outpaced policy debates and regulatory frameworks. It is pivotal to harness the potential of AI technologies while ensuring that its application in educational contexts from kindergarten to university levels is guided by the core principles founded on ethics, inclusion and equity. There should also be good practices on enhancing AI literacy in the education sector. Research on the core principles and good practices, having regard to international and local contexts, would be useful.

C4. Benchmarking of our youths' skills relevant to local and national policies and against the international standard

- Research on the existing level of Hong Kong youths' skills in literacy, numeracy, digital and global competency (e.g. bachelor degree graduates) and benchmark with the required skill sets necessary for local, national and international development as well as future skill sets for projection.

C5. Technical/Application-focussed post-secondary colleges/universities

- The existing programmes offered in the UGC-sponsored institutes are a blend of applied courses and academic courses. To develop a balanced pool of local talents with various expertise fields, it is worth exploring the development of post-secondary institutes focusing on technical and professional programme and relevant research and development to support the rapid development of the Innovation and Technology (I&T) industry, thereby supporting Hong Kong to upkeep its role as an international I&T hub.

C6. Factors affecting decisions on lifelong education and a holistic ladder of balanced development & training of talents

- Research on whether gender, family, ethnicities and socio-economic background are factors affecting decisions on lifelong education in Hong Kong and implications (if any) on the talent pool as a whole.
- Examine any differences in the skill levels of people by gender, family and socio-economic background, and the challenges they face, and recommend a holistic plan to facilitate people (including students, youths, middle-aged, retirees, etc.) to engage in lifelong education.