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中国联合国教科文组织全国委员会
National Commission of the People's Republic of China for UNESCO
United Nations Educational, Scientific and Cultural Organization
International Research and Training Centre for Rural Education

REFERENCE FOR EDUCATION RESPONSE TO PUBLIC HEALTH CRISIS

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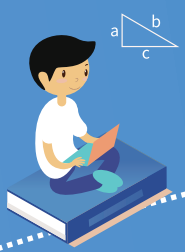
Forward

In 2020, the COVID-19 pandemic has been raging around the world, causing unprecedented educational disruption across the planet. According to statistics published by UNESCO, more than 190 countries have temporarily closed educational institutions, impacting over one billion learners. Most governments are actively exploring distance learning solutions to ensure continuity, inclusion, quality and equity for all students. As one of the first countries affected by the pandemic, China has carried out large-scale distance learning practices to ensure the target:“disrupted class, undisrupted learning”. These innovative approaches meet the needs of 280 million students for remote studies. At present, China has successfully managed the epidemic domestically, and has put in place measures to respond to periodic outbreaks. Consistent and cautious measures for resuming classes in schools have been taken. To date, all schools in China are fully reopened.

Given this global pandemic, prevention and control efforts will be the new normal into the near future. It will be an arduous task to resume work, production and education, and ensure the safety of campuses, the health of teachers and students, and thus, protect the right to education. Facing these challenges, it is necessary to summarize and share experiences and lessons of education’s response to the pandemic in a timely manner. It is also necessary to jointly explore and build a global normalized mechanism in response to the influence of COVID-19 and any similar crises in the future.

Therefore, the Chinese Ministry of Education and the Chinese National Commission for UNESCO, with support from UNESCO Beijing, UNICEF China, and WHO China, have developed this Reference. All the above-mentioned organizations have made positive contributions to the development of the Reference based on their relevant mandates. The Reference is composed of four parts: Preschool Education, Primary and Secondary Education, Higher Education, and Technical and Vocational Education and Training. Each part mainly includes three modules, namely, Distance Teaching and Learning, School Reopening, and Mental Health of Teachers and Students. The Reference is based on existing Chinese government regulations and instructions regarding COVID-19 and education, and is in line with recommendations made by the above international organizations to the pandemic. It aims to provide a focused, effective and practical referential framework for dealing with the current challenging situation, and contribute to coping with similar crises in the future. The content of this Reference draws from Chinese experience and guidance, which can be of interest to other countries as well. It is important to note that with the pandemic developing and response measures improving, the education response solutions will be upgraded in all countries. Meanwhile, the solutions vary with country conditions, cultures, systems and mechanisms. We hope this Reference will contribute to 1) strengthen the solidarity of the international community to fight against the pandemic, 2) assist more students to safely return to school so as to protect people’s right to education and better ensuring the equity and quality of education, and 3) enhance the resilience of the global education system and the educational emergency response capacity.



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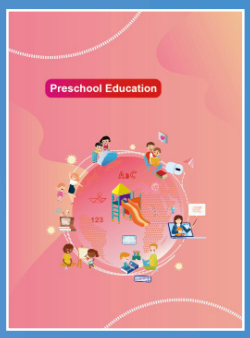

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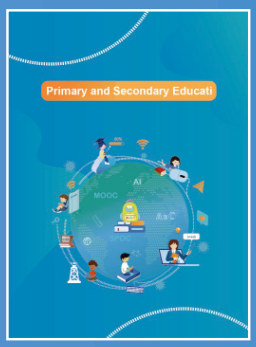

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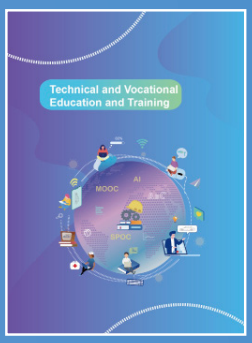

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A Brief Introduction to China's Education System

According to the Education Law of the People's Republic of China (promulgated on December 27, 2015), the State Council and all local People's government at different levels supervise and manage the educational work according to the principle of management by different levels and division of labour with individual responsibility. Secondary and lower education is managed by the local People's government under the leadership of the State Council. Higher education is managed by the State Council and the People's government of each province, autonomous region or municipality directly under the central government.

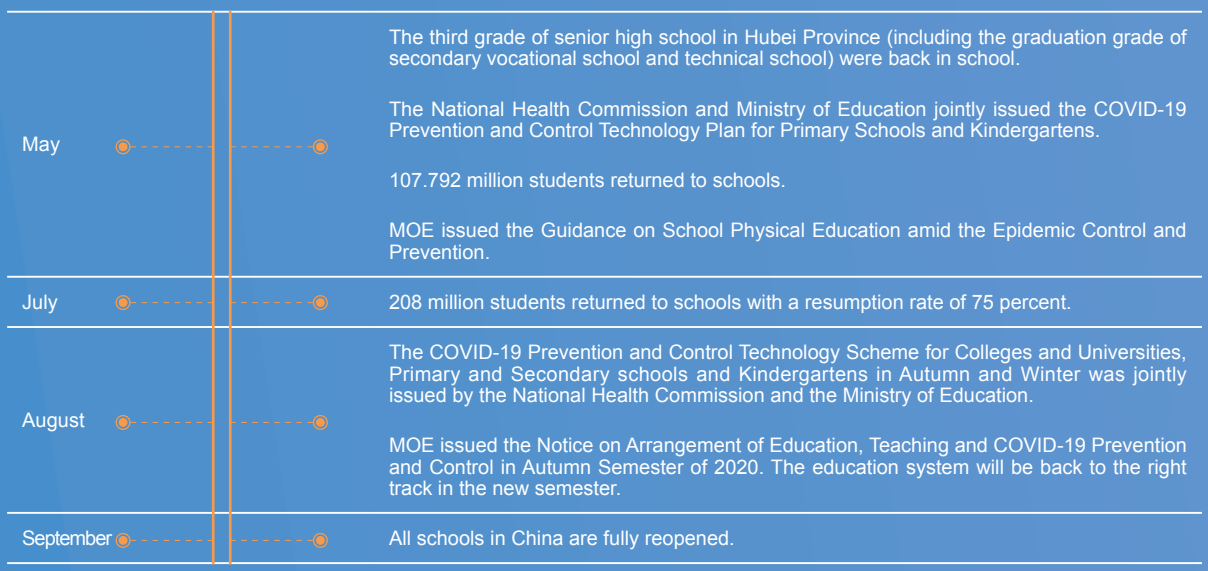
The department of the State Council in charge of educational administration is responsible for the educational works of the whole country, makes overall plans and coordinates the management of all educational undertakings. The departments in charge of educational administration under the local People's government at and above the county level are responsible for the educational works within the jurisdiction of their respective administrative region. Other relevant departments of the People's government at and above the county level are responsible for relevant educational works within their terms of reference. The State Council and the local People's government at and above the county level report to the People's congress at the respective level or its standing committee on educational works, budgets and financial accounts of educational expenditures and submit to their supervision.

The state adopts a school education system including infant school education, primary education, secondary education and higher education. The school is the entity of school management and has the legal autonomy of school management. Each school formulates development plans according to their own scale, conditions and characteristics. The school formulates the school constitutions by law. The president is responsible for the teaching, scientific research and administrative work of the school.

Schools and relevant administrative departments guarantee that females enjoy equal rights with males in enrolment to school, admission to higher education, employment, conferment of academic degrees and being dispatched to study abroad. The state and society provide different forms of financial aid to children, juveniles and youths who are eligible for schooling but in poor families. The state, society, schools and other educational institutions organize education in consideration of the physical and mental characteristics and requirements of disabled people and offer them assistance and convenience.

Timeline: China’s Education Response to COVID-19

January	The Ministry of Education (MOE) issued the Notice requesting educational institutions to take prevention and control measures against COVID-19. The public health emergency plan for education system was triggered immediately. MOE issued the Notice on Emergency Plan for COVID-19 prevention and control. MOE issued the Notice on the Postponing the start of Spring Semester in 2020. MOE issued a notice calling on education authorities across the country to organize expert teams to provide psychosocial support to teachers, students and people affected by the COVID-19 outbreak.
February	MOE issues instructions on the deployment of HEI online teaching. MOE issued the Notice on Supporting Education and Teaching with Information Technologies during the Period of Epidemic Prevention and Control. The Ministry of Education and the Ministry of Finance issued the Notice on Ensuring Funds for Epidemic Prevention and Control in Schools. MOE issued the Guidance for Protection and Support of Teachers during the COVID-19 Outbreak. The Ministry of Education (MOE) and the Ministry of Industry and Information Technology (MIIT) issued the Notice on the Arrangement of "Disrupted Classes, Undisrupted Learning" Initiative during the Suspension of Primary and secondary Schools.
March	MOE issued the Notice on Arrangement in Graduate Degree Awarding in the First Half of 2020. MOE issued the Notice on supporting entry into the job market for university graduates. Supporting measures, such as providing online employment services, more employment channels, and targeted employment assistance, etc., were carried out. Qinghai Province took the lead in the reopening of school and kicked off the beginning of school resumption. MOE issued the Guidance on COVID-19 Prevention and Control for Kindergartens, Primary and Middle schools and Higher education institutions. 8.685 million students returned to schools. MOE issued the Announcement on the Schedule of the National College Entrance Examination in 2020. The college entrance examination was postponed for one month.
April	More than 20 million students returned to schools. The National Health Commission and Ministry of Education jointly issued the COVID-19 Prevention and Control Technology Plan for Colleges.



Briefing on COVID-19 Cases in China

As of September 1, 2020, the total number of confirmed COVID-19 cases on the Chinese mainland reached 85,066, including 198 patients who are still being treated, with three in severe condition. Altogether, 80,234 people have been discharged after recovery, and 4,634 have died of the disease on the mainland. A total of 5356 cases were reported in Hong Kong Special Administrative Region, Macao Special Administrative Region and Taiwan Region. There have been 4,822 confirmed cases including 90 deaths reported in Hong Kong, 46 confirmed cases in Macao and 488 confirmed cases including seven deaths in the Taiwan Region. (Source: Website of National Health Commission of the People's Republic of China)

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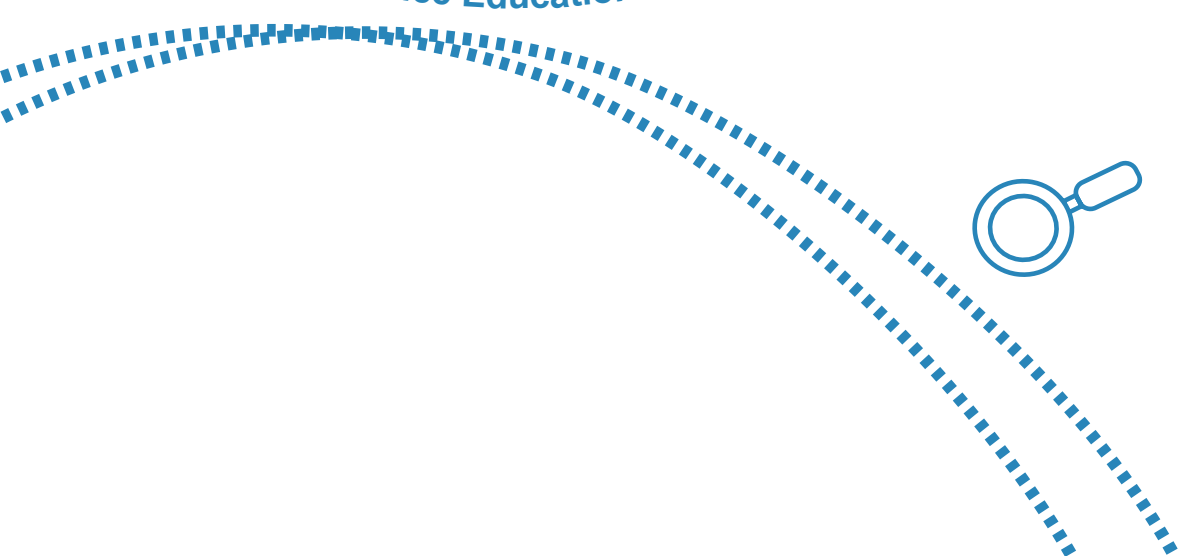

Preschool Education

1. Government

1.1 Basic principles

During the public health crisis outbreak, governments may temporarily close educational institutions to contain the spread of the epidemic. Education authorities should understand the great significance of epidemic prevention and control in kindergartens, safeguard the safety and physical and mental health of children and staff, and recognize the importance of education to the healthy growth of children as well as to home-kindergarten cooperation. National education authority should focus on the actual needs of parents and kindergartens, carry out epidemic prevention, control guidance and technique standards together with the national health authority and the national disease control authority, and provide professional guidance for kindergartens and families.

In terms of goals, we should take the health of children as the priority. This requires us to predict the development of the epidemic and to what extent it will affect children before reopening the kindergartens, and respect scientific facts and manage according to laws. To achieve such goals, we should establish and improve prevention and control mechanisms, and prioritize supportive work. In terms of management, responsibilities of local governments, competent education authorities, and the kindergartens should be clarified to ensure the implementation of epidemic prevention measures. We should strengthen the joint efforts of kindergartens, families and hospitals to ensure the effectiveness of the prevention and control measures, and guarantee no child falls into hunger, malnutrition or any other safety problems because of the absence of care during school closures.

1.2 Guiding measures

1.2.1 Health guidance during the public health crisis outbreak.

Education authorities should, drawing on the professional advice of medical and epidemic prevention institutions, prepare and issue guidelines on health protection as soon as possible, and popularize the key points of prevention to kindergartens and parents. The main points should include personal hygiene habits, coughing etiquette, food and nutrition, daily work and rest, proper use of epidemic prevention articles, sanitation and disinfection, and monitoring one's health condition etc.

1.2.2 Early childhood education guidance during the public health crisis.

The government should make clear that kindergartens are not encouraged to carry out online teaching activities during the period of school suspension. The coordination and relations between the school, teachers and parents is very crucial. The role of parents at the early-childhood level is very important. Parents should be encouraged to accompany their children to learn about epidemic prevention, properly arrange children's daily activities, cultivate their good living and health habits, and enhance emotional bonds with children through high-quality games to promote children's healthy growth.

1.2.3 Myopia prevention among young children.

During the epidemic, children have more opportunities to access mobile phones, televisions, computers and other electronic devices, which may have adverse effects on their health. Education authorities should attach great importance to the eye care of children to ensure their health (Table 1).

Table1 Guidance on using electronic devices

	Key points	Description
□	Choose high- quality contents	• Parents should choose high-quality electronic products suitable for young children based on their development and capabilities; watch programmes together with children to monitor the contents; and avoid using any electronic products detrimental to the physical and psychological development of young children.
□	Set time limits	• No more than one hour per day; • Rest after fifteen minutes of use and; • Agree on non-screen-periods among family members where parents and other adults setting a good example.
□	Define places	• Define areas where electronic devices should not be used. • This is good for creating a home environment where children and parents can interact and play games together.

1.2.4 Mobilizing social resources

Strengthen the cooperation with UNESCO, UNICEF, WHO and other international organizations as well as corporations from the private sector, including business enterprises, philanthropic foundations and financial institutes to improve the professionalism and internationalization of home-based education and guidance for young children.

1.3 Information and best practices sharing

The government should take the opportunity for education during the outbreak and provide advocacy materials, including health protocol guidelines, guidelines for parents, technical and standards guidelines etc., for public good to enhance young children's understanding of themselves, their families, the environment and society. Themes could include:

(1)Life education: use authentic cases during the outbreak of Covid-19 to educate children and guide them to learn about emotions, sense of gratitude and respect for life;

(2)Health education: teach children knowledge on health and guide them to develop healthy habits, which form the basis for their lifelong well-being; and

(3)Parent-child relationship: enhance parent-child relationship through close interactions during the outbreak.

The government should coordinate with all kinds of media platforms, use innovative methods, and take various measures to carry out this advocacy. While relying on the authoritative release of traditional media, governments should also make full use of new technologies such as digitalization, multimedia and networks, and various new media platforms such as network TV, radio, and social network platforms. Publicity should be mainly carried out online, with complementary offline activities, so as to avoid unessential large-scale gathering activities as far as possible.

1.4 Support for vulnerable groups

The government should give close attention, leverage networks and resources from the whole of society and support vulnerable groups. The following should be considered:

1.4.1 Provide targeted and individualized support based on the different characteristics and needs of people from different communities (Table 2).

Table 2 Recommendation on supporting vulnerable groups

	Special groups	Recommended methods
□	Children receiving special education	Provide on-line training for their custodians to ensure sustained rehabilitation training. Help children with special needs to rebuild ties with the society and prepare them to adapt to normal life in society
□	Young children in remote areas	Provide economic support through government, charities, private sector, crowdfunding and private individuals to ensure they can sustain normal life during the outbreak
□	Children of migrant workers in cities	Enhance education on prevention and control of the public health crisis and tell them to never expose themselves to risks of infection without taking protective measures. This requires government and community to engage themselves into tracking covid-19 cases, delivering educational lectures and enhancing awareness.
□	Left-behind children	Enhance education on safety at home, and encourage tele-communication between parents and children to ensure physical and psychological development of left-behind children. Community is more important than ever in terms of instructing and protecting left-behind children, given that their guardians are usually absent.
□	Children in lack of care	Mobilize the community, enhance education on home safety, and encourage effective parent-child communication to ensure physical and mental health of children

1.4.2 Provide long-term and continuous humanistic care. A sustained and visionary support system should be established to promote the development of vulnerable groups.

1.4.3 Mobilize resources from different sectors to provide diversified support. In addition to supporting young children from vulnerable families, the government should also mobilize resources from multiple sectors to enhance the emergency response capacity of families to ensure development of young children.

2. Kindergarten

2.1 Epidemic prevention

2.1.1 Guidance to children's education in daily life at home

During the pandemic, kindergartens should consider parents' needs in child rearing and provide them with professional support and assistance, mainly in the following aspects:

(1) Children's physical health development: the lack of outdoor activities, healthy diet, daily routine activities from the kindergarten will affect children's overall physical development.

(2) Children's social and emotional development: the lack of peer interaction will impact children's development of social and language abilities; if children are mischievous at home, how can parents control their emotions and guide their children properly.

(3) Children's cognitive development: the lack of systematic activities and specially designed courses in the kindergarten will hinder children's cognitive enlightenment in language, art, mathematics and science.

(4) When parents return to work before the reopening of kindergartens, it will bring challenges to children's care.

During this special period, kindergartens should provide families with guidance on how to facilitate children's learning at home based on their physical and psychological development features and local conditions. Teachers should answer questions from parents online and provide tailored guidance to help parents educate young children at home. Such tips mainly include:

(1) Features of physical and mental development of young children at different ages;

(2) Age-appropriate educational methods;

(3) Main contents of learning at home include life, nature and health, daily life and learning habits, etc.;

(4)Methods to find age-appropriate games and activities, as well as methods for selecting appropriate activities;

(5)Education on safety at home; and

(6)Ways to monitor psychological conditions and provide psychosocial support for young children.

2.1.2 Publicity of epidemic prevention and control of knowledge to parents

During the period of epidemic prevention and home-based life, the work of cultivating children's awareness and ability of self-protection, and safeguarding children's health is mainly done by parents. The kindergarten should give guidelines and resources to parents, specifically, pass on the knowledge of epidemic prevention and control to parents through various channels.

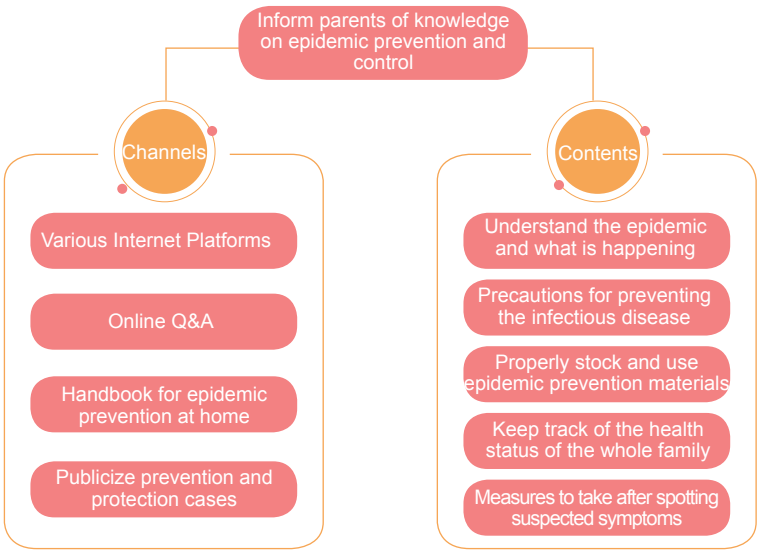

Figure 1 How to inform parents of knowledge concerning epidemic prevention and control

2.1.3 Monitor health conditions of children

When children are at home during the outbreak, guidance should be given to parents to take temperatures of children every day and pay attention to symptoms including fever, cough, fatigue, stuffy nose, running nose, sore throat, diarrhea, etc. For children with such symptoms, the medical results and progress of the diseases should be closely followed. Parents should also observe children's moods, appetites, sleep patterns, urination, defecation, and sweating among others to monitor their health status. If there are any abnormalities, parents should pay close attention and seek medical treatment promptly. Meanwhile, it is necessary to regularly measure the height and weight of children for monitoring and adjusting their diet and exercise patterns to see whether their growth and development are delayed (Table 3).

Table 3 Monitoring health conditions of children

Items	Details	Purposes
General conditions everyday	Do they have fever, cough, runny nose, diarrhea or other conditions?	To spot signals of physical conditions to avoid deterioration and untimely medical treatment caused by negligence
Growth and development	Height and weight	To keep track of physical development of young children when they are at home. If they fail to meet certain standards, parents need to find the reasons and take measures to address the problem
Diet, nutrition and exercises	Types and amounts of food intake, types and amounts of exercises	To judge if children's nutrition intake and exercises meet relevant standards based on their physical development
Mental health	Emotions and mental state	To promote mental health and to assist them deal with the emotions to get through this special period with stable mood
Living habits	Sleeping, urination and defecation	To promote healthy habits

2.2 Teaching staff management

2.2.1 Ensure online communication and maintain a stable team of teachers

At present, the kindergarten should maintain online communication with the teachers and staff, and do a good job in epidemic prevention and control, as well as ensure teachers' positive mood and efficiency. It is suggested to provide a psychological consultation platform for teachers, and to understand and actively solve the difficulties and psychological demands of teachers during the epidemic. Financial resource mobilization for kindergartens is important, especially private ones, to maintain basic operations. It is also necessary to stabilize the teaching staff, and protect the normal rights and interests of teachers.

2.2.2 Building capacity of teachers through online channels

Through online channels, teachers are organized to learn the corresponding management methods and systems issued by the national and local governments, and the knowledge of normalized epidemic prevention and control, so that they can master the daily health monitoring of themselves and their students, the methods of kindergarten sanitation and disinfection, the methods of emergency response and reporting of the epidemic, and the communication skills with parents under regular epidemic prevention and control measures. Such knowledge will help teachers to be prepared for the reopening of kindergarten.

Kindergartens should make full use of the internet, big data and other information technologies to select appropriate online platforms, contents and methods. Convenient and efficient tools will be provided to facilitate teachers' learning and improve their professionalism and teaching abilities (Figure 2).

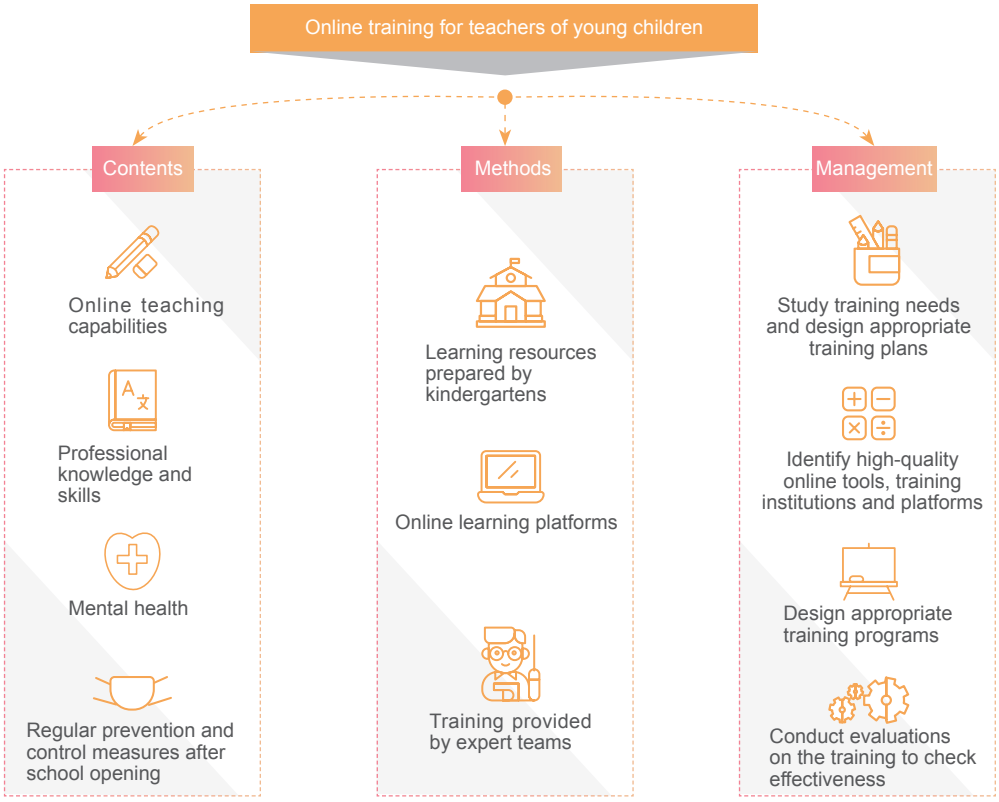

Figure 2 Online training for teachers: contents, methods and management

2.3 Supportive plan for children and teachers in difficulties

Kindergartens should strengthen support for the unattended children to meet the living and learning needs of rural left-behind children, vulnerable children and orphans. Kindergartens should provide teachers with institutional and technical support based on their needs and challenges they are facing under regular epidemic control and prevention measures (Figure 3).

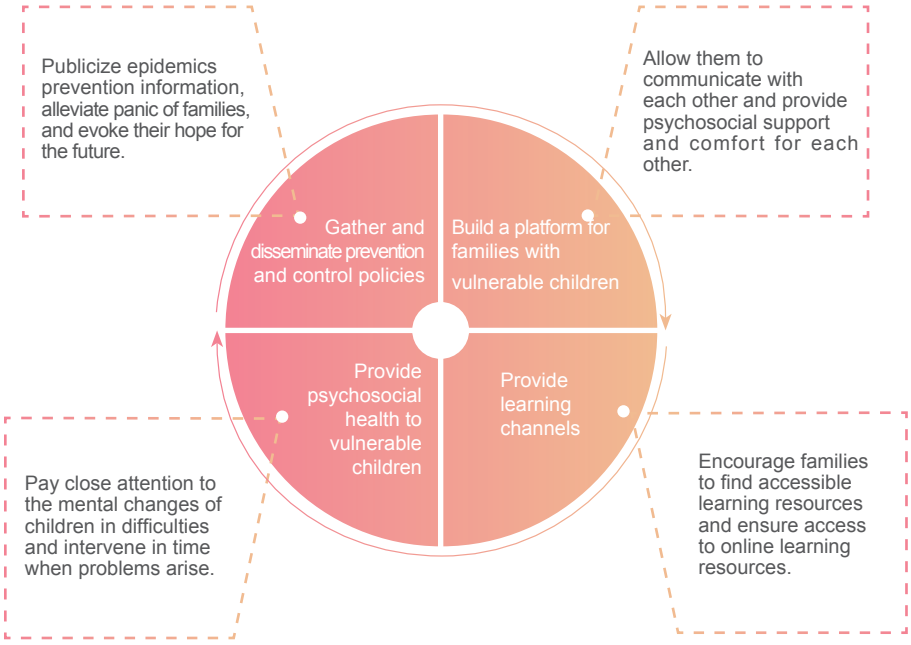

Figure 3 How to help families with vulnerable children

3. Teachers and parents

3.1 Regular communication between teachers and parents

During the suspension, all kindergartens need to establish effective contact with children and their families, and pay attention to children's growth and lives. The contacts with parents should be fully covered to ensure that every family has teachers to connect with and leave no child behind. Teachers should choose appropriate channels to communication with each family, understand their personalized needs through e-questionnaire, telephone interview, video and other ways, and provide them with early childhood education guidance. According to teachers' feedback, the kindergarten should release information on parenting and suggestions for early childhood activities, and keep close contact with the families through online platforms (Figure 4).

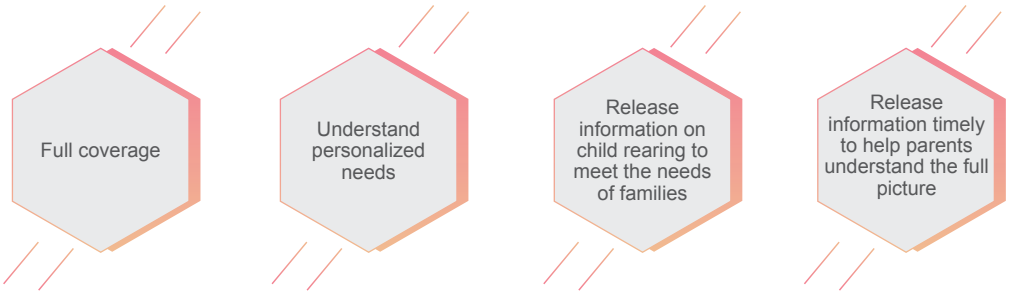

Figure 4 Key points on mechanism for communication with parents

3.2 Select and design appropriate home-based activities

Teachers should help families to understand the situation of the epidemic and requirements for prevention and control, help parents to select and design appropriate home-based activities for children, and ensure that children can still get due development in the five fields of health, language, society, science, and art during the epidemic isolation.

The following principles should be followed when selecting and designing home-based activities (Figure 5):

(1) Focus on the physical and mental health of young children;

(2) Choose contents and methods according to young children's psychological characteristics;

(3) Choose activities that fit in the family context such as caregiver capacity and household resources; and

(4) Kindergartens should provide guidance on home-based activities and relevant educational support. (Figure 5)

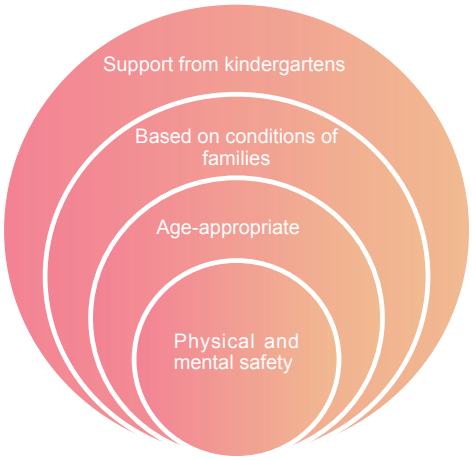

Figure 5 Principles on designing home-based activities for children

Parents should cooperate with the kindergartens to carry out education activities and cultivate children's excellent qualities and sentiments such as loving life, respecting elders and loving the young, maintaining integrity, and trustworthiness. Parents should also carry out parent-child games under the guidance of teachers, create conditions for children to draw, sing, play hide and seek, role play, dance, do physical exercise, build blocks etc. Parents are also encouraged to accompany children to play chess, and to do manual work and housework together, as well as to carry out high-quality parent-child reading. Filling daily life with these activities can cultivate children's practical and thinking abilities.

3.3 Safety education for children at home

Common childhood accidents and injuries include electric shock, falling, drowning, swallowing foreign objects and road traffic accidents. Kindergartens should provide age-appropriate education solutions on these issues, alert parents of the risks and support them in eliminating hazards. Teachers should inform each family of key points via convenient information exchange channels, and families should pass these messages to children by playing games in lessons (Table 4).

When communicating with the family, teachers should notice whether the children's family environment is safe and whether they suffer or are exposed to bad language, emotional or even physical abuse. If these things happen, it should be reported to the relevant authorities for timely interventions.

Table 4 Key points on children's safety education at home

Electric shock	Falling down	Drowning
Don't allow children to touch electrically charged objects, or touch power supply devices of home appliances with wet hands, or insert metals or fingers into the power supply sockets	Don't allow children to play alone on balconies or porches and keep connecting doors and windows locked. Don't pile up items under windows or on balconies where children may climb.	Go to licensed swimming pools. Don't leave children in the water alone. Call for help when someone is drowning. Don't swim when not feeling well.
Swallow foreign object	Road traffic safety issues	
Don't leave dangerous objects within children's reach. Don't leave young children to the care of minors. Enhance family education.	Don't allow young children to sit in front of a motor vehicle. Don't allow them to chase and play on the road. They should wear a helmet when on a bicycle and use appropriately sized safety restraints when riding in a vehicle.	

3.4 Mental health of children

3.4.1 Pay attention to the mental health of young children

Listen and talk to them. Spend more time with them. Parents need to calm children when they are upset and cultivate their sense of security and trust in parents.

3.4.2 Answer children's questions and doubts

Explain the reasons for home quarantine and take preventive measures in appropriate language. Help young children learn about changes around them and learn to respect nature and cherish life.

3.4.3 Maintain a positive mindset

Create a relaxed and cheerful atmosphere in the family. And never make children feel the sense of panic; help them to reduce the anxiety as they cannot go outside; and let them engage in joyful and fulfilling home-based activities.

3.4.4 Be open-minded and listen to children

Be empathetic with children's emotions. Let them speak freely. Give them support in words and actions, and answer their concerns honestly and patiently.

3.4.5 Give positive feedback

Praise and encourage them when they are doing well.

3.4.6 Divert their attention when necessary

When children are noisy, irritable and tired, parents can divert their attention and help them get rid of unhealthy emotions and feel positive, while guiding them to conduct good behaviors.

3.4.7 Cultivate their sense of responsibility and achievement

Assign the children small and easy tasks, such as cleaning, reading and drawing. Accomplishing such tasks helps them learn to take on responsibilities and feel a sense of achievement which is necessary for their development.

3.5 Community: Cooperation among schools, families and communities

It is of great importance that community is well-involved in this battle against the epidemic in terms of promoting children's welfare and education. Families and schools should deepen their ties with their communities, which play an active part in shaping and nurturing children. The community can serve as a platform and place for children to carry out educational activities and extra-curricular training amid the epidemic. In addition, it can also utilize its resources and network to help track suspicious or confirmed cases of covid-19.

1. Prior to reopening

Education authorities, jointly with health authorities, should carry out technical guidance for epidemic prevention and control to prepare for school reopening to ensure the health of the teachers and children.

1.1 When to reopen

The timing of kindergartens reopening should be guided by the best interest of the child and overall public health considerations based on an assessment of the associated benefits and risks. Decision-making should be done together with subnational stakeholders so that actions are based on the specific local context. It is not recommended that kindergartens with large and mobile child populations reopen without meeting minimum standards for epidemic prevention and control. Kindergartens can consider reopening only when meeting the local epidemic prevention and control requirements as well as when the kindergarten itself has formulated a refined prevention and control programme.

1.2 Plan development

Kindergartens should conduct health screening on children and teachers, put in place epidemic prevention and control protocols, prepare sufficient supplies, conduct thorough cleaning and disinfection before reopening the campus. Local education authority and kindergartens should strengthen the cooperation with local health authority, disease control authority, neighbourhood hospitals and community health service centres. Kindergartens that are about to reopen or have already set the reopening date should do the following preparations:

1.2.1 Identifying key responsible parties

The principal of the kindergarten takes full responsibility for organizing and leading the epidemic prevention and control work, dividing roles and responsibilities, and monitoring and supervising implementation. He/she is also responsible for formulating work plans, establishing mechanisms for epidemic prevention and control, ensuring measures are implemented according to government requirements, and for allocating duties to relevant personnel in order to protect the well-being of teachers and children (Figure 6).

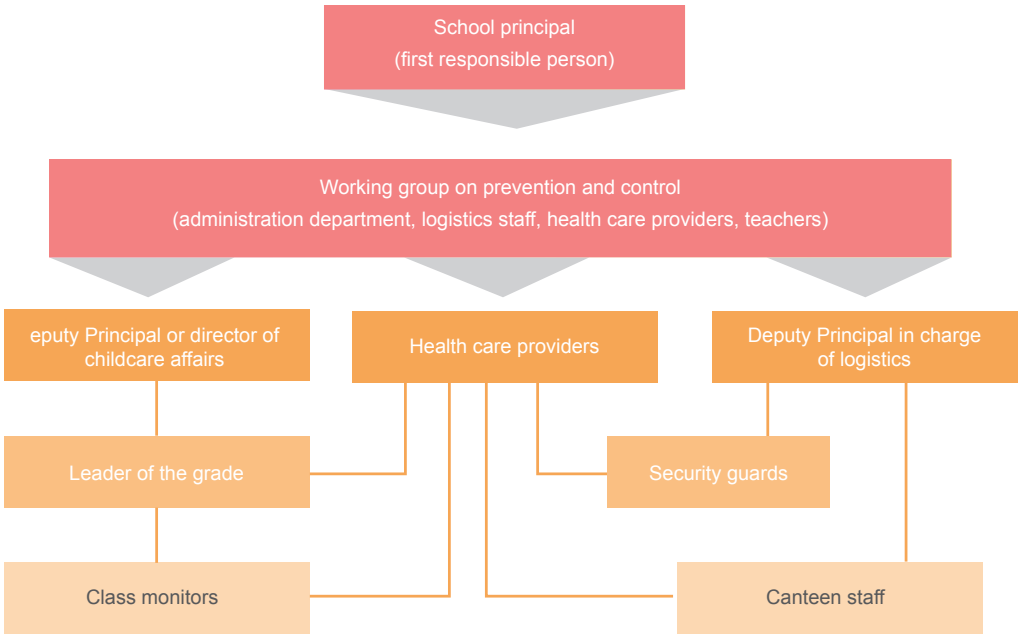

Figure 6 The organization chart of the epidemic prevention working group in a kindergarten

1.2.2 Make clear about the requirements of prevention and control:

When the kindergarten is ready for reopening, it should carefully prepare to protect the safety of teachers and children. All people entering the kindergarten must have their body temperature measured and their identity verified to strengthen campus management, and prevent irrelevant people from entering. After the reopening of the kindergarten, children of different grades or classes should arrive and leave the kindergarten at different time slots. Teachers and children should keep a one-meter physical distancing during their stay at the kindergarten, i.e. sitting separately, dining in the different time slots, and playing games individually or in very small groups.

1.3 Duties of kindergarten administrators, teachers, and staff

1.3.1 Kindergarten principal

As the first person who is responsible for epidemic prevention and control, the kindergarten principal is fully in charge of planning, coordinating, managing, monitoring progress and evaluation, and reporting progress.

(1) Formulate documents such as work plans, procedures, reporting processes, parent-teacher communication mechanisms and emergency response plans. The protocols should be clear with responsibilities assigned to designated persons and training provided.

(2) Monitor the health status of faculty and children every day, implement the "daily report" and "zero report" mechanism, and submit a report to the proper government department according to the prevention and control requirements.

(3) Ensure the availability of a sufficient supply for prevention and control work including hand sanitizers, liquid soap, masks, gloves, disinfectants, thermometers, vomit bags, and ultraviolet disinfection lamps etc.

(4) Set up a temporary quarantine room or place that is relatively isolated where people with fever can temporarily stay.

1.3.2 Health care staff

Provide health care service for children and staff, and provide training for children and faculties on epidemic prevention and control, particularly cough etiquette, before the reopening of kindergartens with support from local centres for disease control and prevention, and educational administrative sectors. Ensure the health of staff before taking up their positions, monitor their health thereafter and establish employee health records.

1.3.3 Teachers

(1) Monitor the health status of children and conduct a "daily report" and a "zero report".

(2) Keep close communication with children and their parents, provide guidance on epidemic prevention at home, pay attention to children's mental health, and remind them to prepare well before kindergarten reopening.

(3) Prepare for resumption of teaching and learning after reopening of kindergarten, as well as for the cleaning and disinfection work inside the classroom.

1.3.4 Security guards

(1) Understand the main protocols for epidemic prevention and self-protection.

(2) Ensure the safety of kindergartens by permitting an identity check of teaching staff and taking body temperatures etc. In principle, outsiders should not be allowed to enter. For the staff from local centres for disease control and prevention and educational administrative sectors who come for inspection, the security guards should finish the five processes of "inquiry, report, hand disinfection, body temperature measurement, and registration" before admission.

1.3.5 Kindergarten logistics staff

(1) Responsible for supply management and garbage disposal, logistics staff should be equipped with masks, gloves, hand sanitizers, disinfectants, thermometers, mobile ultraviolet disinfection lamps, vomiting bags, and sorted trash cans, etc.

(2) Prepare the canteen for meals. Strictly maintain standardized canteen operations, and make sure the canteen staff wash their hands carefully and process food according to national standards. Prepare meal sharing, disinfect food delivery trolleys, and implement closed-off management. Faculty staff should dine separately, at different time slots and from lunchboxes labeled with name tags.

(3) Carry out disinfection training before the kindergarten reopening. Clean and disinfect the public places, strictly classify and dispose garbage and waste masks, and ensure the recycling and utilization of daily waste.

1.4 Campus environment improvement and management

1.4.1 Health care room

The health care room should be equipped with hand washing facilities with running water and instruments for daily health checks including thermometers, observation beds, flashlights etc. Disinfectants, ultraviolet lamps or other air disinfection devices and protective masks, gloves, protective clothing and other protective equipment should also be provided. And, increased air flow and ventilation should be provided where climate allows (open windows, use air conditioning where available etc.).

1.4.2 Temporary quarantine sites

Set up relatively isolated quarantine spaces, away from classrooms, canteens and children's activity areas. Maintain sufficient illumination and ventilation, equip the spaces with children's observation beds, hand-washing facilities with running water, etc. It is preferable to have a separate toilet. Also, post a reminder sign to prevent others from entering the area.

1.4.3 Public areas

Prophylactic disinfection work should be done by the cleaning staff in public areas and facilities such as outdoors, on large toys, corridors, stairs, toilets, elevators and buttons, and doorknobs. Among them, elevator buttons, entrances and doorknobs should be treated with extra attention. On the day prior to reopening, the kindergarten should fully check the deployment of the epidemic prevention work, disinfect the area again, and prepare for kindergarten reopening.

1.4.4 Activity rooms, dormitories, offices and special classrooms

(1) Complete the work of sterilization, disinfection and ventilation in advance.

(2) Wipe and disinfect the indoor furniture, towel and cup shelves, beds, toy racks, toy storage baskets and any objects which children may touch with 500 mg/L chlorine-containing disinfectants. Follow the procedure of cleaning-disinfecting-cleaning, which means to wipe the above objects with clean water first, and then disinfect with disinfectants, and finally wipe them with clean water again 30 minutes later.

(3) Children’s toys shall be soaked and disinfected with 250mg/L chlorine-containing disinfectants for 30 minutes and be washed with clean water once and dried in a ventilated place. Books in classrooms should be under the blazing sun for four hours for disinfection.

(4)Wipe and disinfect classroom door frames, doorknobs, faucets, and floors with 500 mg/L chlorine-containing disinfectant.

1.4.5 Toilet

(1) Check the number of the taps in the toilets and other public areas to ensure that they meet the requirements and needs. All public toilets should be equipped with adequate hand sanitizers or soap bars. Put up “the illustration of how to wash hands properly” in bold to instruct the children how to wash their hands properly.

(2) Use the disinfectants containing choric disinfectant with 500mg/L effective concentration to wipe taps, doors of the toilets and surfaces of the trash bins.

(3) Disinfect urinals and toilets seats with the chloric disinfectant with 500mg/L effective concentration. Keep the toilets clean, odorless and with clean and dry floor space.

1.4.6 Canteen

(1) Strengthen supervision of food and drinking water safety in the canteen.

(2) Disinfect the cookers, tableware and towels of the children before reopening.

1.5 Supplies support

The kindergarten should keep sufficient stock of materials according to the number of teachers, children and staff to meet the needs of epidemic prevention and control, including personal protective equipment, instruments for the morning and noon health check, disinfection supplies, hand-washing facilities and a temporary quarantine room on site. It should guarantee supplies of protective equipment as below:

- Personal protective equipment: reserve a certain amount of disposable medical masks (or similar products with equivalent performance for children), medical-surgical masks, medical protective clothing, disposable rubber gloves, work shoes or rubber boots, waterproof boot covers, etc.
- Morning and noon health check instruments:
- Forehead (ear) thermometers, mercury thermometers etc.;
- Disinfection supplies and disinfection equipment: chlorine-based disinfectants, hypochlorous acid, 75 percent alcohol solutions, ultraviolet disinfection lamps, packing bags for medical waste etc.;
- Functional hand-washing facilities with liquid soap or bar soap provided and replenished; and A temporary quarantine room: a relatively isolated room or site in the kindergarten is strongly recommended to be set up as a temporary quarantine and observation room.

1.6 Health education and monitoring

Health education should be provided before and after reopening the kindergarten. Teachers should strengthen health education on how to wear masks, how to wash hands properly, avoid touching face with the hands, etc., and cultivate the good personal hygiene habits of young children.

The kindergarten should conduct health monitoring for teachers, staff and children. It is necessary to collect information about their health status, including their traveling and dwelling history, and 14-day contact history before the kindergarten reopening to make sure teachers, staff and children can return to the kindergarten on schedule. Staff screenings should include all security guards, cleaners, chefs and any other staff.

1.7 Pilot measures

When considering kindergarten reopening, effective measures should be taken at critical times, particularly when children arrive at the kindergarten, take classes and have lunch. Kindergartens should resume classes in a staggered manner. Kindergartens are recommended to trial the reopening of campus before the scheduled date, which means some grades or classes can return to kindergarten before others. A process of kindergarten reopening should be tested in a pilot which may reveal and solve problems in advance.

2. After reopening

2.1 Duties of kindergarten administrators, teachers, staffs and parents

Considering that complex situations might be occurred, it is recommended to prepare alternative plans prior to reopening, which means that different conditions should be treated with different measures. Educational authorities should join with health authorities to help kindergartens review their preparations.

2.1.1 Kindergarten principal

Formulate emergency response plans, organize related exercises, and ensure that relevant persons know the processes and duties.

2.1.2 Kindergarten doctors or physicians (health care providers) should

(1) Take responsibility for organizing and guiding daily morning/noon/evening health checks and report on time.

(2) Increase the frequency of daily class visits, visiting at least once in the morning and once in the afternoon.

(3) Register information on suspected/confirmed cases, isolate high-risk children for 14 days, and make sure that they pass the health check before returning to kindergarten.

(4) Manage and register children's absence from kindergarten due to illness, supervise teachers to follow up and summarize the information of each class, and report on time.

(5) Check with teachers and take the children to temporary quarantine when suspected symptoms are identified. Inform parents in time and take the children to a hospital while protecting themselves when doing so.

2.1.3 Teachers

(1) Do the disinfection work according to requirements. Instruct parents to put children's bedding and other items in a designated place.

(2) Conduct health education such as teaching children the seven-step hand washing method and coughing etiquette.

(3) Conduct noon and evening health checks. Take children with suspected symptoms such as fever, cough, and vomiting to temporary quarantine places and keep them away from others.

(4) Ensure smooth transition from home to kindergarten. Focus on children's separation anxiety and help them adapt to new daily routines in kindergartens, as well as hygienic habits such as frequent hand washing, in particular.

(5)Strengthen case management of children absent from kindergarten due to illness. Ask parents for details, causes, and symptoms every day and report to health care providers.

2.1.4 Canteen staff

(1) Obtain a valid health certificate before reporting to duty. Measure the body temperature of all canteen staff in the morning and evening every day and keep records.

(2) Follow the food operation regulations and wear masks throughout the work. Wash hands carefully before meals, after using bathroom and touching garbage and trash.

(3) Tableware disinfection: disinfect tableware according to requirements. Disinfect the tableware separately if children or staff develop fever.

(4) Food delivery: restrict access to food delivery trolleys, and disinfect carefully to prevent contamination.

2.1.5 Security guards

(1) Strengthen control of access to kindergartens. All outsiders who are irrelevant to kindergarten teaching and learning, health care service or epidemic prevention and control should not be allowed to enter.

(2) All persons who enter the kindergarten should measure body temperature and fill in the health card. Only those whose with normal temperature are admissible to the kindergarten.

2.1.6 Parents

(1) Record the children's 14-day body temperature and submit it to the kindergarten before returning to kindergarten.

(2) Parents should decide whether children can return to the kindergarten (Table 5).

Table 5 Checklist for parents of young children to decide whether their children can return to kindergarten

Four conditions	Have visited or contacted with people from high-risk areas or communities with reported case	Children's health condition	Return to the kindergarten
1	No	Healthy	Yes
2	Yes	Healthy	The children can return to the kindergarten after 14-day quarantine and be healthy.
3	No	Unhealthy	The children can return to the kindergarten after treated in the hospital and have fully recovered.
4	Yes	Unhealthy	The children can return to the kindergarten after a test of COVID-19 and 14-day quarantine and be healthy.

2.2 Environment management

2.2.1 At the gate of the kindergarten

Measure the temperature of each person entering the gate and check identifications to prevent the spread of the virus infection.

2.2.2 Public places of the kindergarten

(1) Ventilate and disinfect public places, activity rooms, sleeping rooms, offices, and special classrooms in the kindergarten. Ventilate at least three times a day for at least 30 minutes each time. Keep children warm in the classroom when opening windows for ventilation.

(2) Clean and disinfect rooms and toys every day. Use the disinfectant containing 250 mg/L of available chlorine to soak the toys for 30 minutes, then rinse with water and dry in a ventilated place once a day. Disinfect the class books by exposure to sunlight at noon for 4 hours and disinfect the electronic toys with 75 percent ethanol every day.

2.2.3 Toilet management

(1) Use the disinfectant to wipe and disinfect the faucets, toilet doors and the surface of trash cans, wipe with clear water 30 minutes later.

(2) Use the disinfectant containing 500 mg/L of available chlorine to disinfect urinals. Use the disinfectant to wipe the toilet seats and buttons, and wipe with clear water 30 minutes later. Keep the toilets free of dirt and odor and keep the grounds clean and dry.

2.2.4 Canteen management

(1) Disinfection for tableware

Children's tableware and staff tableware should be disinfected in strict accordance with the requirements. In case of fever of individual children or employees, their tableware should be disinfected separately.

(2) Food delivery requirements

The food delivery trolley should be closed off during meal delivery and carefully disinfected to prevent contact with contaminants.

(3) Disinfection for the floor of the canteen

Disinfect with 500 mg/L chlorine-containing disinfectant and wipe with water 30 minutes later.

(4) Drinking water hygiene requirements

Drinking water should meet the drinking water sanitary standard. If the drinking water is boiled, the water bucket and faucet should be cleaned and disinfected every day. Direct drinking water can only be consumed after passing the quality inspection.

2.3 Teaching activities

2.3.1 Setting up unit management

Unit management means keeping children in fixed groups and managing them as units, e.g. providing relative fixed classrooms, activity rooms, sleeping rooms and dining spaces for each unit in order to reduce the face to face communication between groups and prevent virus outbreak in kindergartens.

2.3.2 Strengthening personal protection

Teachers, staff and children should wash hands frequently, wear masks, keep physical distance, take more exercise etc. Children should leave home to go to kindergarten with fully guaranteed 20 health and safety. Children in the kindergarten should not be required to wear masks. This advice is based on the safety and overall interest of the child and their capacity to appropriately use a mask with minimal assistance. Teachers and staff working for kindergarten should wear masks and keep personal hygiene. The canteen staff should also wear work clothes and keep the work clothes clean. The cleaning and disinfecting personnel should take personal protection when preparing and using chemical disinfectants.

2.4 Arrival and pick-up

In order to keep safe physical distancing, kindergartens are recommended to use different arrival and departure times for different grades or classes. When parents pick up their children at the kindergarten gate, they should also keep physical distancing between each other.

2.5 Parents

Parents or caregivers should protect themselves from virus infection. They should strictly do personal protection, such as trying to avoid crowds, wearing a mask when going out, maintaining a physical distance of more than one meter with others and washing hands frequently. Parents or caregivers should thoroughly clean themselves before any physical contact with the children and should supervise the children to take personal protection.

Psychosocial Support

1. Psychosocial support prior to kindergarten reopening

1.1 Children, teachers and parents

1.1.1 Children

To monitor the physical and mental status of children, guide teachers and parents should learn how to identify children's emotions and behaviors, such as non-directional fear, timidity, irritability, crying etc., and incorporate psychosocial support for children into an epidemic prevention and control programme.

1.1.2 Teachers

It is necessary to evaluate the state of teachers' work, study and lives during the epidemic, providing humanistic care to relieve teachers' tensions and anxieties and effectively improve their mental health.

1.1.3 Parents

Help parents understand the epidemic situation. Help them maintain emotional stability and create a harmonious and healthy family environment. Parents can be trained on mental health related issues and psychosocial support online or through parents' schools. It is also recommended that they spend more time with their children to help children keep a healthy work-life balance, cultivate children's healthy eating habits, achieve an age-appropriate ability of self-care and emotional expression. They should monitor their children's mental and behavior problems and provide them with active guidance during the epidemic.

1.2 Contents

1.2.1 Cognitive adjustment during the epidemic

Help teachers, children, and parents recognize and adapt to the current situation of this public health crisis, learn how to protect themselves, and objectively evaluate their own health status in order to detect and adjust cognitive bias in time, and help them keep a positive attitude. Parents should prevent children from being exposed to excessively negative information, and maintain calm and patience towards questions raised by children. Give simple, clear, and appropriate answers according to children's age and cognitive development without avoidance or criticism, and help children build confidence in defeating the epidemic.

1.2.2 Emotional management during the epidemic

Encourage teachers and parents to maintain emotional stability and understand what positive emotional experiences and expressions are. Learn how to relieve extreme anxiety and stress, obtain relevant epidemic information from official national websites and authoritative media sources, alleviate fears about epidemic, and cope with negative emotions appropriately. Acknowledge and accept the negative emotions of children; share information with children through stories, games, and paintings; understand the normal and abnormal psychological patterns of a child, and provide psychosocial support as well as mental health education as needed; and create a safe and harmonious family environment to ensure children's sense of security.

1.2.3 Behavioral responses during the epidemic

Children, teachers and parents should maintain a healthy work-life balance. They should all reasonably arrange entertainments and sports at home, do not overuse electronic products, engage in healthy recreational activities, acquire and participate in active leisure activities, reasonably schedule time, appropriately divert attention, and do personal and child protection well.

1.3 Approaches

1.3.1 Online mental health education

Actively use kindergarten websites, social network official accounts, and groups to carry out the mental health education among teachers and parents; provide target groups with mental health education including guidelines of cognitive and emotional adjustment, behavior management and stress relief; and guide teachers and parents in need to actively seek psychosocial support to improve their emotional stability and maintain their mental health.

1.3.2 Family education

Parents should adjust their emotions and establish a positive and optimistic attitude. Parents should also spend more quality time with children through family activities like parent-child reading, bedside companion and parent-child games; improve parent-child communication and parent-child relationship, paying attention to children's emotions and behaviors. Parents should be honest with children about the facts; listen to children about what they learn from the news; and inform children that it is okay not to know the answers and being anxious about it. Parents should avoid stigma against people infected; take a pause when negative feeling strikes; and help alleviate children's edginess, anxiety, fear and other negative emotions, as well as establish new daily routines during the special period. Notably, help children get reconnected with their peers.

1.3.3 Parents-kindergarten collaboration

Kindergartens should communicate with parents in a timely manner; use online communication tools to initiate themed advocacy campaigns; update and publish relevant articles, videos, pictures and other materials about epidemic psychology for parents to learn; promote parents to understand and learn children's psychological characteristics; and assist parents to jointly solve the psychological and behavioral problems of children. Kindergartens should also carry out online kindergarten activities for parents on a regular basis and provide lectures on specific problems that concern parents the most.

2. Psychosocial support after kindergarten reopening

2.1 Children, teachers and parents

2.1.1 Children

Dynamically monitor children's physical and mental conditions affected by the epidemic, and conduct psychosocial support when obvious and constant emotional distress or abnormal behavior changes happen to them. Referrals should be implemented in time if necessary.

2.1.2 Teachers

Pay attention to the mental and physiological impact of the epidemic on teachers; build a positive environment to alleviate and eliminate teachers' stress; relieve teachers' pressure by adjusting teaching schedules, and provide mental health education for teachers regarding how to cope with various mental health problems. Emotional and psychosocial support should be provided for the class management.

2.1.3 Parents

Help parents raise awareness of disease prevention and control; pay attention to their children's adaptation to kindergarten reopening; enhance communication with teachers; provide guidance on coping with mental problems that occur to children after kindergarten reopening; and create a positive and harmonious family environment.

2.2 Contents

2.2.1 Cognitive adjustment:

Help teachers and parents build and maintain good mental health and help children adapt to the study and life in kindergarten.

2.2.2 Emotional management

Promote positive emotional responses during the epidemic; learn how to relieve the separation anxiety and stress caused by kindergarten reopening; and cultivate positive and optimistic emotions.

2.2.3 Behaviors

Cultivate healthy lifestyles and good habits;

exercise properly, stick to a healthy diet; and maximally reduce and eliminate factors that might be harmful to health.

2.3 Approaches

2.3.1 In order to carry out psychosocial support activities which are suitable for children's cognitive development

a kindergarten should provide diversified play materials and create safe and free play environments. And, based on children's interest and cognitive level, activities should be initiated in local context themed on mental health topics such as personal hygiene, public health, negative emotions, and environmental adaptation in order for children to deepen their understanding of healthy behaviors and habits, and deal with negative emotions such as separation anxiety and tension.

2.3.2 Family-kindergarten collaboration

Use online teacher-parent communication tools in a timely manner; help parents understand and master the psychological characteristics of children, and assist parents to jointly solve the psychological disorder and behavioral problems of their children after the epidemic.

2.3.3 Full-time (part-time) mental health personnel

Kindergartens are suggested to hire full-time (or part-time) mental health support staff to provide psychosocial support for teachers and parents; provide parents with family education guidance; pay attention to the mental health status of teachers and carry out targeted psychosocial support according to assessment results; and timely identify children's emotional and behavioral problems. Referrals to professional psychological agencies should be implemented when necessary. Reduce teachers and children's feelings of insecurity about returning to the kindergarten, and avoid the interpersonal barriers caused by epidemic prevention and control.

3. Psychosocial support for children and teachers in difficulties

3.1 Children from poor families, those affected by migration and vulnerable children

Reinforce the psychosocial support for vulnerable children; enhance caregivers' awareness of the mental status of children and provide timely support.

3.2 Teachers and staff affected by the epidemic

Timely assess psychological and behavioral risks of confirmed cases of faculty staff who have had close contacts with confirmed cases, and encourage them to accept the fact of being quarantined at home or designated centres. Explain the treatment plan to the affected teachers and staff, and help them stabilize their emotions by providing psychosocial health support and build up their confidence during treatment.

3.3 Teachers and children who suffer severe psychological problems due to the epidemic

Continuously pay attention to and follow up on teachers and children who have serious or long-lasting psychological problems which affect their normal lives; protect their privacy, and give timely feedback to their relatives or parents; and refer them to professional medical and psychological institutions or clinics for long-term psychosocial health services.

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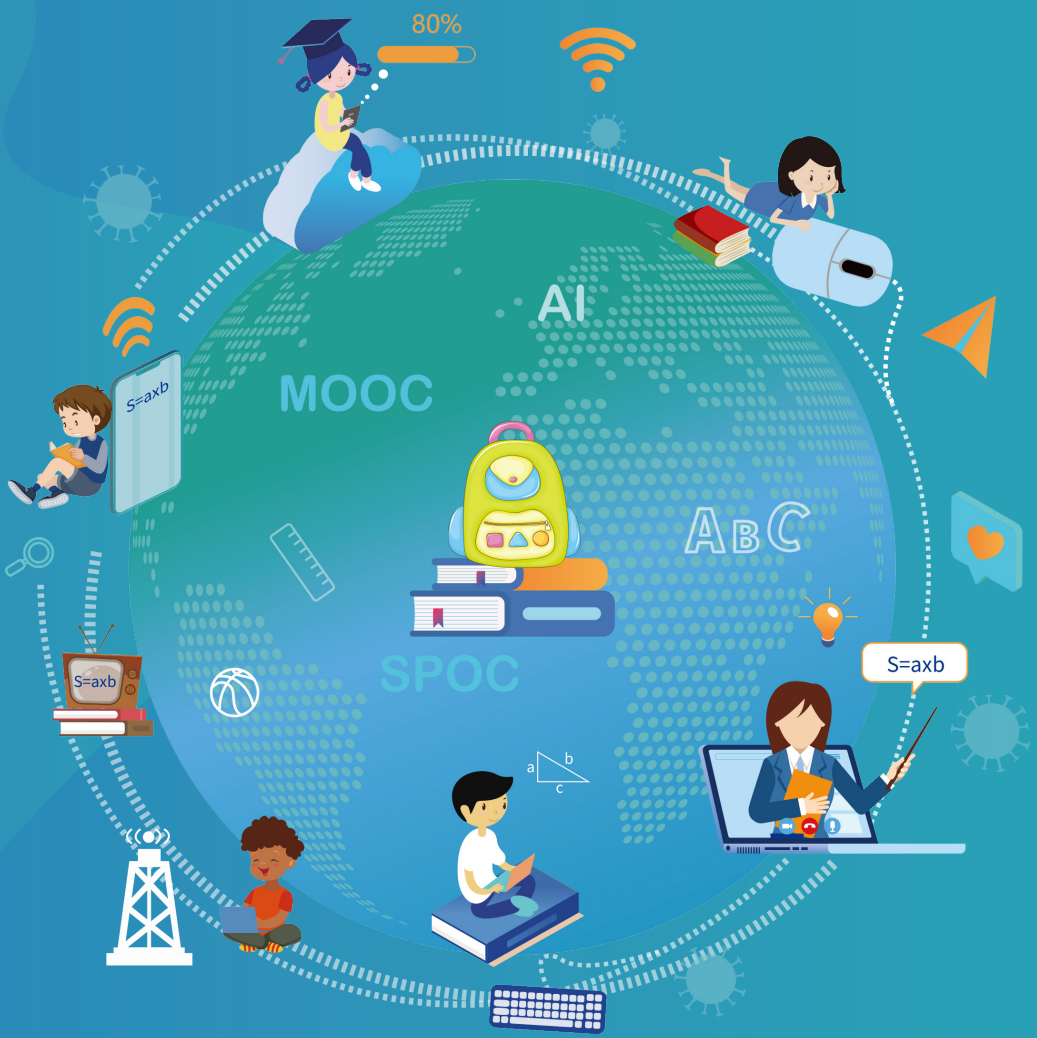
Primary and Secondary Educati



1. Government

During the public health crisis, governments may temporarily close educational institutions to contain the spread of the epidemic. Local governments should define policy objectives with diverse demands to classify differing scenarios, identify vulnerable groups, prioritize policies, develop support systems and evaluate policy influence. Vulnerable and disadvantaged communities require special attention to ensure the continuity and equity of education for all through alternative channels.

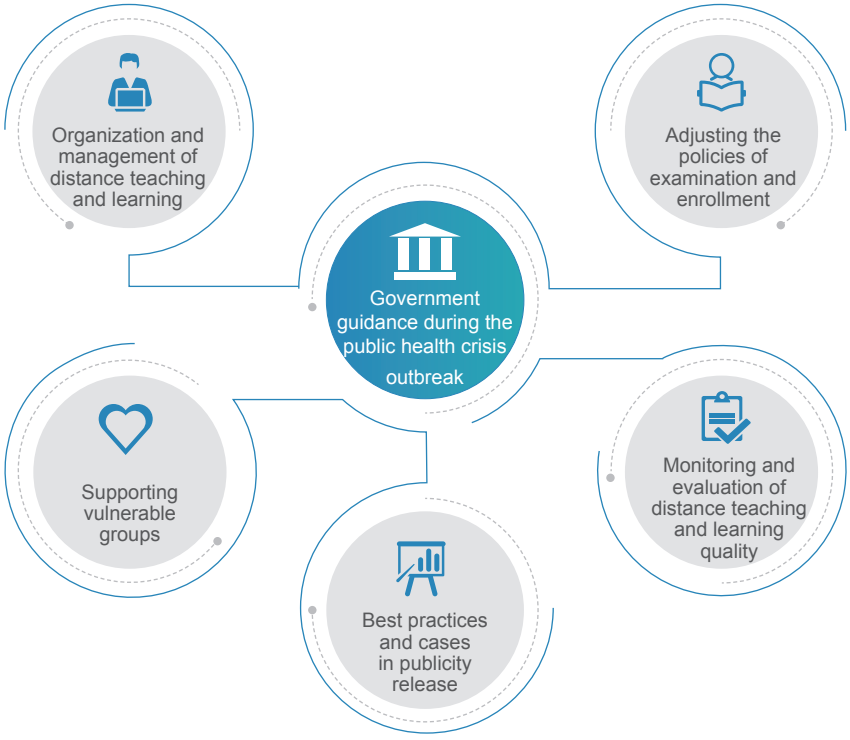


Figure 1 Government guidance during the public health crisis outbreak

1.1 Organization of distance teaching and learning

1.1.1 Launching guidance on distance teaching and learning

At the early stage of the public health crisis, the government and national educational authorities should set up a special work panel to formulate plans to ensure the idea of “disrupted class, undisrupted learning”, respond to critical issues and deploy scheduled tasks. In principle, curriculum should be

combined with knowledge on epidemic prevention and control and teachers' distance guidance should be combined with students' home study. The national and local high-quality instructional resources should be integrated to establish national online platforms and TV channels, with free learning resources available to education institutions across the country.

To ensure the continuity and consistency of education when schools resume, local schools should prioritize epidemic prevention and control with detailed instructional plans. Schools at all levels should also properly deal with the relationship between epidemic prevention and control and school education, between learning at home and teaching in classroom, between in-class teaching and after-class support, and between teaching in the final year and that of the others, so as to ensure the health and safety of teachers and students, as well as the quality of learning and teaching.

1.1.2 Organizing and coordinating content and resources

Select and recommend digital learning resources that schools, teachers and parents can use for students unable to attend to school. National educational authorities should coordinate the compilation and publication of learning materials of primary and secondary schools to provide free electronic materials during school closures, closely following up on the epidemic situation to meet the needs of teachers and students. The download links and instructions of electronic materials need to be collected and tested to avoid potential risks. Meanwhile, consideration should be taken in opening up digital teaching resources to the public free of charge, so as to facilitate teachers' distance teaching and students' self-regulated learning at home.

1.1.3 Supporting platforms and tools

Integrate national, provincial and school-level high-quality solutions in distance teaching and learning. With the integration of relevant platforms and resources, national education authorities could open national online platforms and special TV channels. This could also enrich learning resources and help organize local educational departments to provide the public with free online learning platforms or online schools. Different regions should select suitable platforms and tools according to local conditions and avoid increasing teachers' workloads unnecessarily.

Case

With the support of the Ministry of Industry and Information Technology and the State Administration of Radio and Television, the Ministry of Education of China opened a national cloud platform for K12 students on 17 February 2020, providing support and services for students to learn at home. At the same time, relevant courses and resources were successively offered through Channel 4 of China Education Television (CETV4), to reach all regions, including the remote rural areas across the country where cable TV is not accessible.

As of 11 May, the number of visits to the cloud platform has reached 20.73 billion. The viewing rate of CETV4 soared to the top 10 of national satellite TVs.

1.1.4 Ensuring network infrastructure

A coordination mechanism should be established to guide major telecommunication and network operations, and maintenance service providers to provide strong network support, while continuing to

increase the construction of broadband network and base stations. Especially, the remote rural and poverty-stricken areas should be focused on, such as those lacking internet access or suffering from slow internet connection. The telecommunication management department should coordinate with enterprises to simplify the approval process, so as to facilitate rapid deployment of server and bandwidth. The local education authorities should guarantee the learning terminals for students with financial difficulties.

Before opening national online platforms, all regions should conduct analysis and prediction in advance according to local network conditions, server capability, student distribution etc., to make full preparations. After opening the platforms, all regions should analyse and test the network with feedback channels to ensure that problems can be identified and solved in time. Local educational authorities should guide the schools in different regions to enter into online platforms at different periods of time.

1.1.5 Guaranteeing school funds for epidemic prevention and control

National departments of finance and education should guide local departments to formulate policies for school funds. Local financial departments at all levels should pay close attention to the epidemic influences on education and living costs, and timely formulate policies and measures to support school funds for epidemic prevention and control with overall arrangements for educational budgets to promote the allocation and use of financial funds on education, especially for online education. These departments should also guide schools to make plans to guarantee the funds of epidemic prevention and control, follow up the implementation of policies and make timely analyses, so as to ensure “disrupted class, undisrupted learning” in a safe and stable campus environment.

1.1.6 Safeguarding online safety

We should ensure online platforms have enhanced safety and safeguarding measures, especially virtual learning tools, and that they are clearly accessible to educators, parents and children; promote and facilitate child safety referral services and helplines; develop standard moderation policies that are aligned with children’s rights; and employ built-in protection measures while innovating as appropriate.

1.2 Graduation Examinations and enrolment

According to the epidemic situation, local governments may consider postponing entrance examinations and student recruitment based on the principle of health and fairness. Local governments should lead local schools to ensure the continuity of learning at home. The schools should optimize the teaching arrangement for final year students, arrange for them return to school first, provide them with psychosocial support, and provide guidance for students’ graduation examinations.

Local governments should coordinate with local health departments to make in-depth study and assessment of the epidemic situation, formulate detailed standards for epidemic prevention and control in examination halls, and take necessary measures to create a safe examination environment for students.

1.3 Support for vulnerable groups to ensure inclusive education

To avoid any dropout caused by public health crisis, local governments should take into full consideration the needs of special student groups, including those whose parents are on the front line against the epidemic, children of migrant workers, left-behind children in rural areas, students with disabilities, students with poor academic performance and students in quarantine.

Besides, local government should establish clear plans and allocate specific budgets for facilitating the return to school for children with disabilities, children from poor families and those whose parents work

on the frontline of epidemic control. Strengthen cooperation with social protection systems to advocate for and address barriers that limit the participation of children with disabilities in school.

Different methods of distance education should be taken for students' home study. In distant rural areas without access to the internet or cable television, courses and educational resources should be delivered through specialty TV channels or radio. Thorough investigation should be conducted for those students with poor academic performance, and additional assistance is recommended to improve their grades. Dropouts should be encouraged to return to school and integrate into the campus in a better way, encouraging schools and communities to follow up on children who are regularly absent from school, and learners who do not come back once schools open to support them to enroll in school or attend other alternative non-formal learning pathways.

1.4 Monitoring and evaluation of distance teaching and learning quality

Global evidence suggests that girls with disabilities face increased risks of physical, sexual and emotional violence, abuse and exploitation compared to their peers without disabilities. It is an important area that we need to ensure that communications to the community (for all types of schools) are gender and disability inclusive and encourages the participation of all girls with and without disabilities.

During the school closure, local governments should develop feasible evaluation indicators to assess and monitor quality in distance teaching and learning, track teaching and learning outcomes and analyze relevant factors for distance teaching and learning quality.

Meanwhile, the continuity of teaching after school resumption should be emphasized. As home study cannot completely replace classroom learning, local education authorities should guide the schools to make accurate and comprehensive assessments on students' learning pace and quality at home, and develop targeted teaching plans after school resumption.

1.5 Information and best practices sharing

Whether during the public health crisis or after the school resumption, local governments should publicize best practices and stories themed on distance teaching and learning among teachers and students. Before the restrictions are lifted, publicity should be mainly carried out online in various innovative and convergent manners and via multiple means of media.

2. Schools

2.1 Launching the emergency response plan

Based on the actual situation, school administrators should formulate a public health emergency response plan, with detailed prevention and control measures and school arrangement during the epidemic, including privately funded schools, semi-publicly funded schools, international schools, et al. Once the public health crisis outbreak occurs, administrators should timely launch the emergency response plan according to early judgement or government notice.

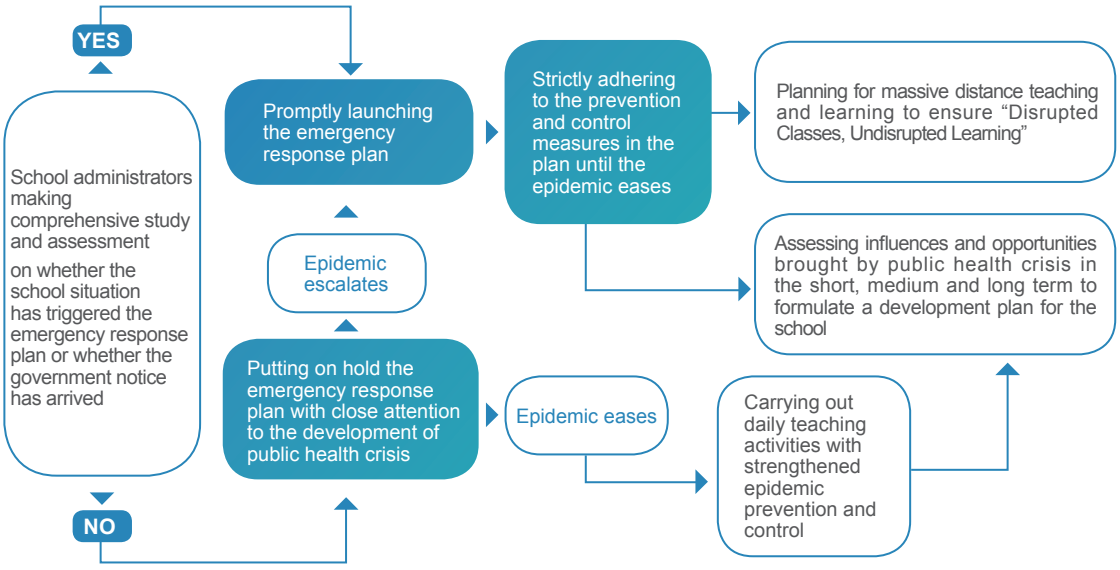


Figure 2 Launching the emergency response plan

2.2 Organizing the distance teaching and learning

Distance teaching and learning that suits the actual conditions should be carried out with necessary equipment, skills training of teachers etc., so as to provide high-quality learning outcomes, thus ensuring the continuity and consistency of education.

Besides, schools can mitigate the risks of online harms and promote positive online experiences for children when learning online:

· Schools should create or update their current safeguarding policies to reflect the new realities for children learning from home;

· Schools should promote and monitor good online etiquette;

· Schools should ensure that children have continued access to school-based counseling services; and

· Schools should clearly communicate online safety policies and provide resources and information on digital safety to support parents and caregivers in creating a positive distance learning experience.

2.2.1 Health education

Health education for teachers and students should be prioritized in distance education, and the actual circumstances should be considered in designing approaches for this education. It includes but is not limited to the following aspects.

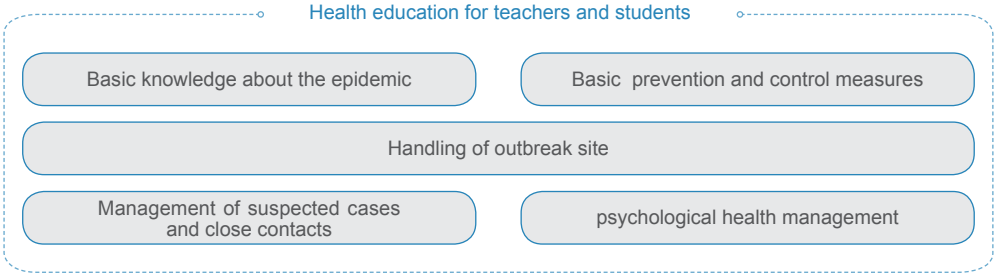


Figure 3 Health education for teachers and students

2.2.2 Formulating distance teaching and learning management plans

By considering actual circumstances, faculty members and online educational resources etc., administrators should make a comprehensive assessment of distance education demands and formulate management plans.

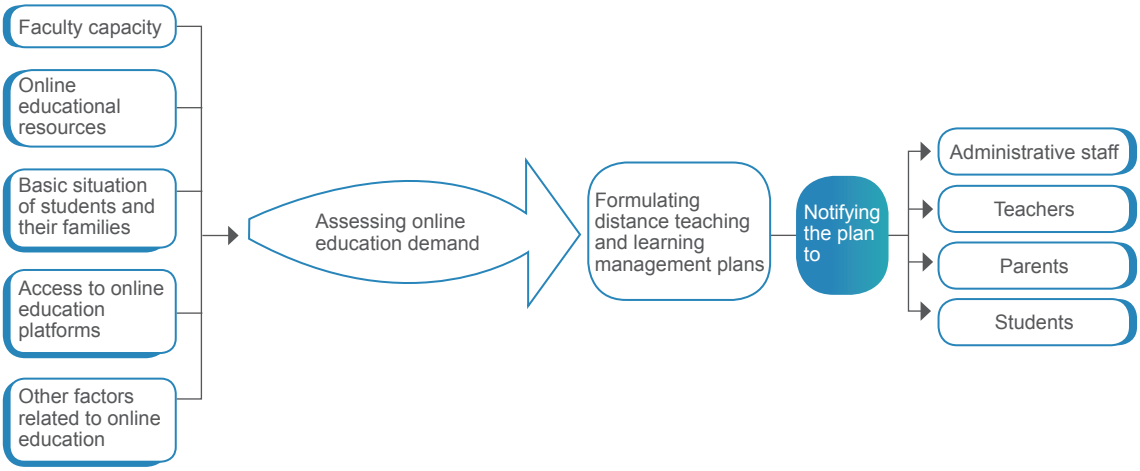


Figure 4 Formulating distance teaching and learning management plans

2.2.3 Ensuring distance teaching and learning environment and conditions

According to the teaching needs of each school and the condition of software and hardware, administrators can make the assessment of the distance teaching and learning environment and conditions, and conclude what is required to facilitate distance teaching and learning.

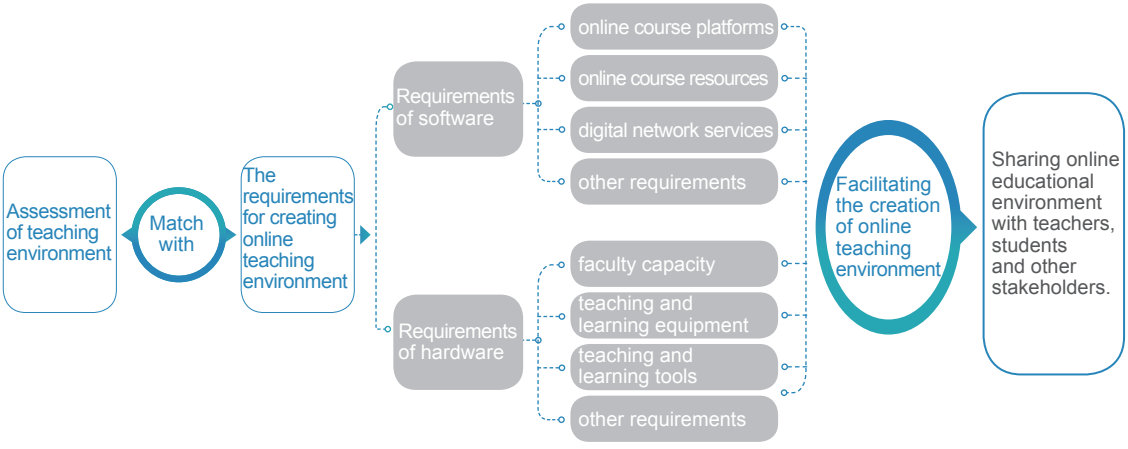


Figure 5 Creating online teaching environment and conditions

2.2.4 Optimizing distance teaching and learning quality assurance systems

Administrators should establish the distance teaching and learning quality assurance system accordingly and optimize it in a real-time manner. The system includes but is not limited to the following aspects:

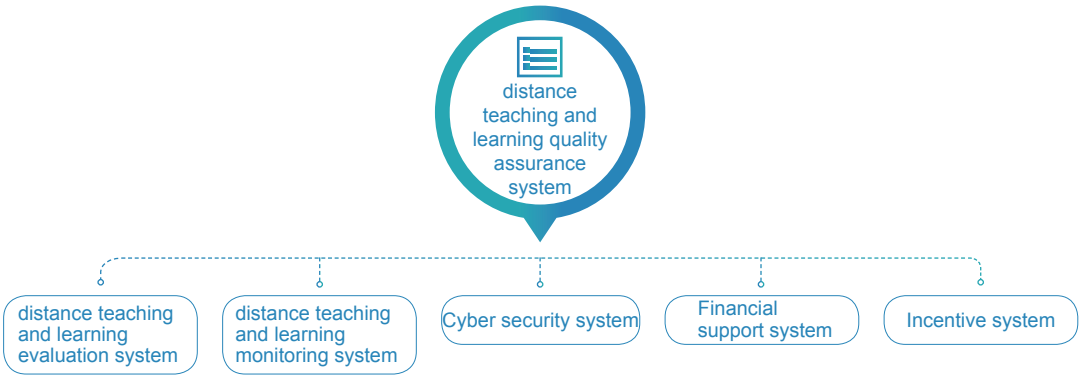


Figure 6 Optimizing distance teaching and learning system

Ensuring quality in distance teaching and learning should be prioritized. Administrators should refer to the educational arrangement each semester and organize online examinations, evaluations and satisfaction surveys to assess learning and teaching quality and make proper adjustments accordingly.

2.3 Faculty management and supports

2.3.1 Teachers' competence building

School administrators should set evaluation criteria and develop training programmes for teachers' distance teaching capacity and skills as soon as possible. Teachers should be evaluated in terms of their ICT teaching competence and organization ability of online teaching. A qualified teacher needs to be assigned to a post to carry out distance teaching, while an unqualified teacher should be trained before carrying out the work in order to avoid slowing down the educational progress. In terms of management, schools should find suitable tools and platforms to standardize procedures and stimulate teachers' creativity and dedication to improving their teaching quality. They should identify gaps and design and deliver capacity development programmes accordingly.

For example, National Public Service Platform for Educational Resources (http://www.eduyun.cn) provides access to excellent courses, teaching and training resources, and expert teams for teachers. Besides, it also provides an online community for teachers to share and exchange their experiences.

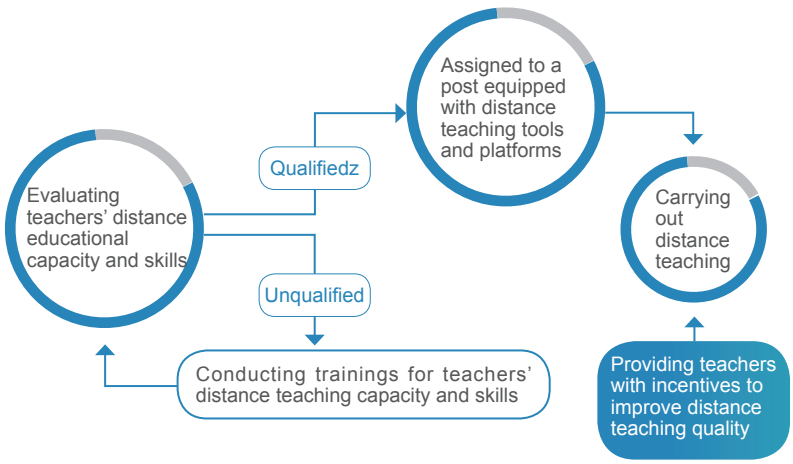


Figure 7 Evaluation of teachers' distance teaching capacity and skills

2.3.2 Ensuring welfare of the teachers

School administrators should assess influences of the epidemic on its financial situation in the short, medium and long term. Emergency plans for teachers' welfare should be established as soon as possible, integrating a communication and exchange mechanism with relevant educational departments, government authorities, private enterprises etc., so as to protect basic rights and interests for the teachers.

2.4 Monitoring on-campus health data

School administrators should establish a health data monitoring system in close collaboration with local educational administrative authorities and health departments. Health data should be thoroughly collected from different groups and regions. The school administrators should coordinate overall management to ensure no one and no place is left out.

2.5 Supporting students and teachers in need

During the public health crisis, based on investigation of the students and teachers in need, administrators should map out a support mechanism along with specific measures to sustain assistance for them and minimize negative influences brought on by the difficulties.

3. Teachers

3.1 Strengthening support for students

3.1.1 Daily management for students

Classroom teachers and other teachers should have a good daily schedule for students, including three stages, namely before, during and after class.

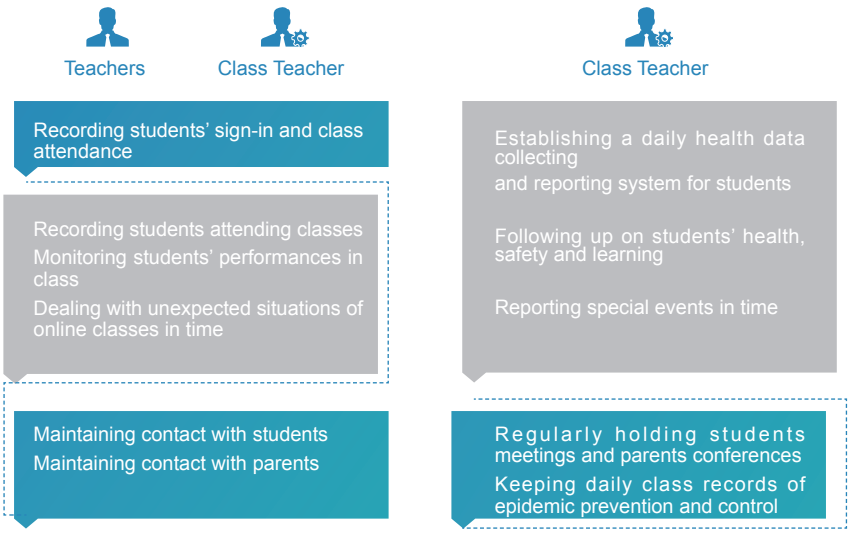


Figure 8 Daily management for students

3.1.2 Conducting life education and health education

During the public health crisis, while carrying out distance educational activities, teachers should promote life education, social responsibility, rules, love and care, and gratitude for students, so as to enhance their awareness of life and health and develop a sense of social responsibility.

3.1.3 Paying attention to students in difficulties

Teachers should pay close attention to the learning and living conditions of students with disabilities, those affected by migration, those from poverty-stricken families and others affected by the epidemic, in order to comprehensively investigate and timely follow up on the left-behind students during the epidemic. They should take effective measures to ensure their learning opportunities and psychosocial well-being.

3.2 Enhancing teaching competency

3.2.1 Adapting to the new role of distance teaching

During the school closure, teachers have to shift classrooms from offline to online by the way of live streaming, recorded broadcasting etc. Teachers will have to switch from being a leader of classroom teaching to being the tutor for students' distance learning. This requires teachers to change their ideas and attitudes and actively adapt to their new role.

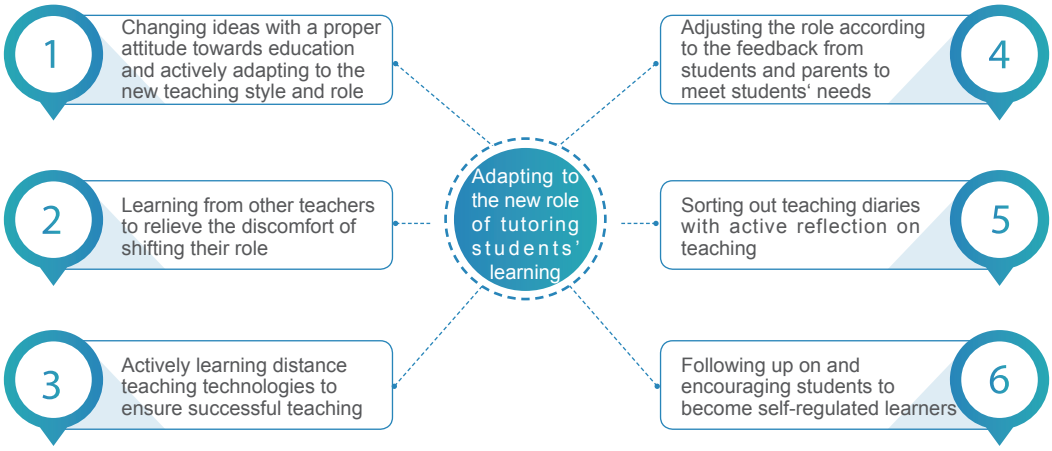


Figure 9 Adapting to the new role of distance teaching and learning

3.2.2 Receiving teaching training

During distance teaching and learning, due to the change of teachers' role, teaching methods, and teaching environment, teachers should receive teacher training to meet the needs arising in this special period.

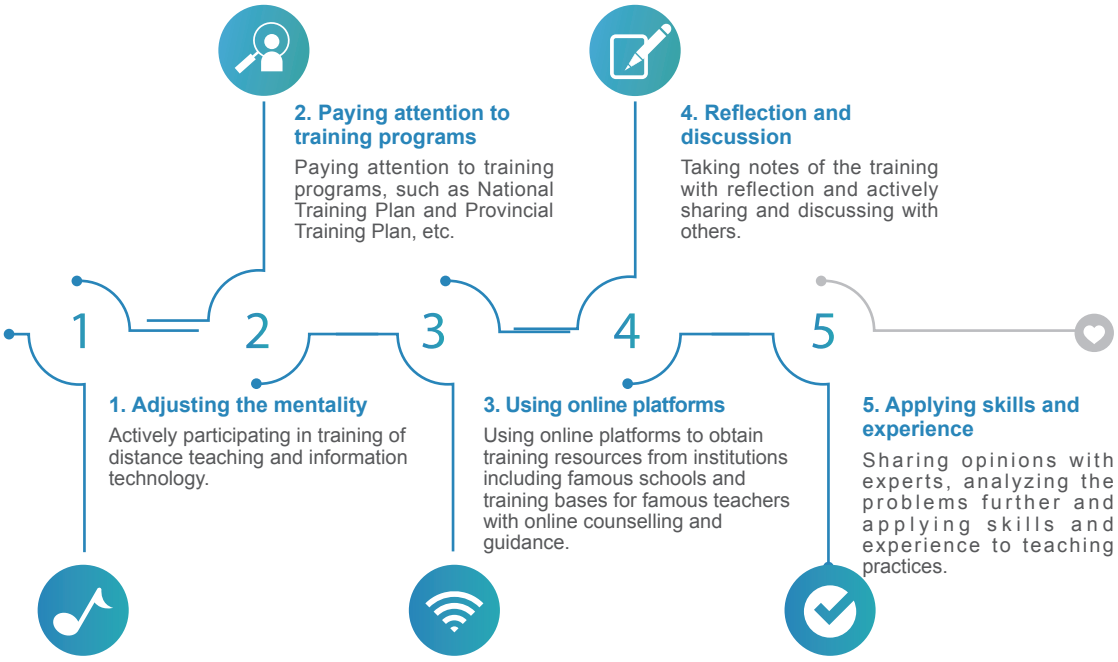


Figure 10 Accepting teaching training

3.2.3 Conducting teaching research online

Teachers should carefully prepare teaching and research materials, follow relevant procedures, communicate with each other, share resources and learn together to improve their distance teaching and research capabilities.

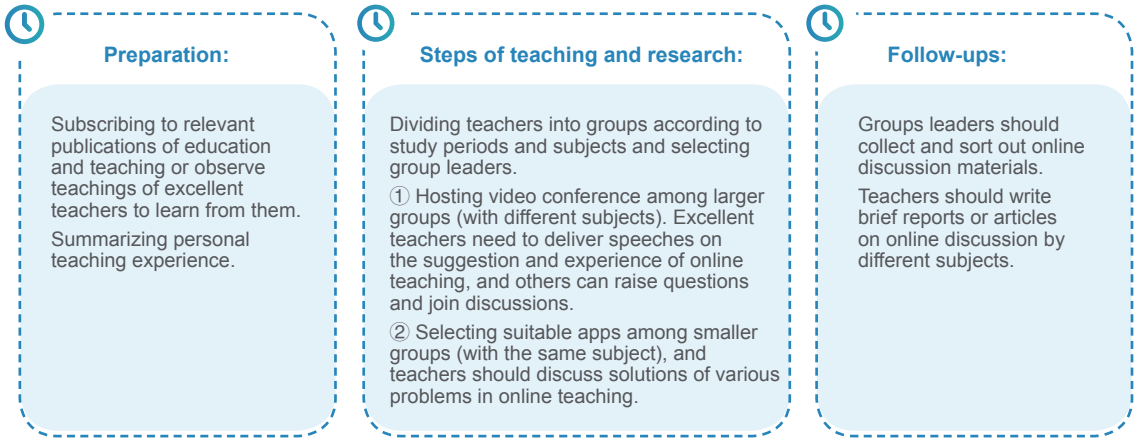


Figure 11 Conducting distance teaching and learning and research

3.3 Implementing distance teaching

The key to the flexibility in distance teaching and learning is to provide learners with diverse possibilities of their learning choices. While carrying out flexible teaching, under the school guidance teachers should consider a number of factors including a student's age, technical conditions and characteristics of different subjects to choose flexible teaching methods, such as online teaching, radio or TV broadcasting.

3.3.1 Preparing teaching conditions

Distance teaching, especially online teaching, requires teachers to fully prepare the teaching conditions to ensure efficiency and order. If the teaching methods of radio and TV broadcasting are considered, teachers should inform students of the curriculum in advance and distribute textbooks as well as e-learning resources.

	Devices	Conditions
☐	Computer	Desktop computers, laptops or tablets are all acceptable. Two computers would be better, with one for teaching and the other for checking the students' status.
☐	Internet	The bandwidth shall be at least 50M with a stable internet connection.
☐	Headset	Headphones, earpieces and Bluetooth headsets are all acceptable.
☐	Microphone	Microphone on the computer is acceptable. A directional microphone with noise reduction is recommended.
☐	Camera	Both internal or external cameras are acceptable. Pay attention to the light in the surroundings to ensure the clarity of images.

Figure 12-1 Technical devices of distance teaching and learning

	Environment	Conditions
☐	Temperature	Keeping an appropriate temperature. Room temperature at 20 ℃ ~25 ℃ is recommended to avoid negative impact on teachers' body or emotion.
☐	Brightness	Choosing a place with appropriate brightness. The average illuminance should be 500lx or above, avoiding direct lighting on the computer screen.
☐	Background	Maintaining a simple and clean background not only protects your privacy but also avoids distracting students.
☐	Seat	The surface of the chair should be 270-290mm lower than the work surface to provide a comfortable sitting posture, which is beneficial for physical health and helps teachers focus on distance teaching and learning
☐	Noise	Closing the doors and windows to ensure that the environment is quiet. The background noise should be within 56dBA to avoid distraction.

Figure 12-2 Environmental conditions of distance teaching and learning

3.3.2 Reorganizing instructional contents

Based on actual conditions and resources of distance teaching, teachers could appropriately select and organize instructional contents to ensure the effectiveness of the teaching process.

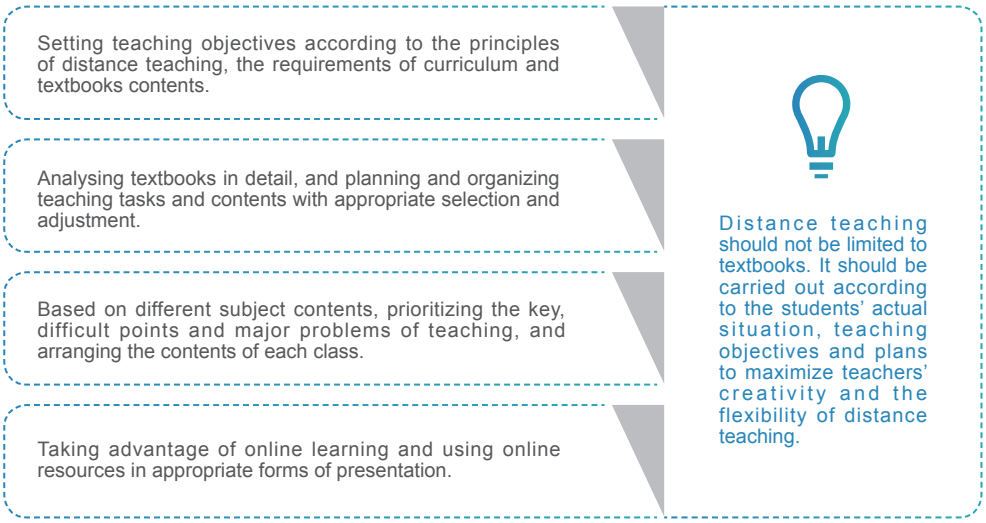


Figure 13 Reorganizing instructional contents

3.3.3 Choosing appropriate instructional methods

Teachers should combine the network conditions and their capabilities to consider appropriate instructional modes and approaches. Instructional modes include synchronous online learning, asynchronous online learning and open learning. Each instructional mode has its corresponding instructional methods. When choosing the methods, teachers need to take into consideration the instructional modes as well as other curricular elements.

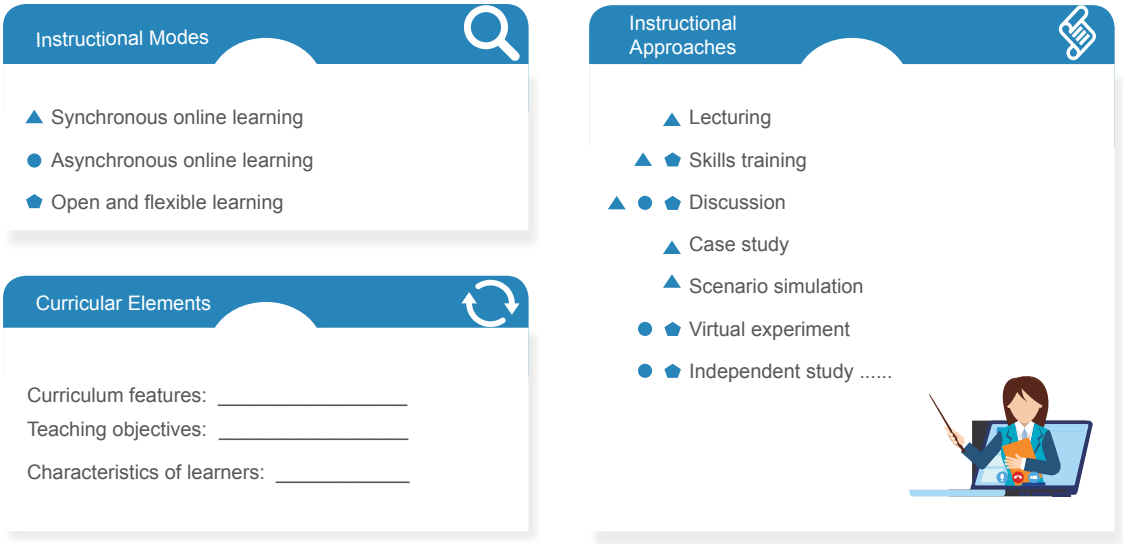


Figure 14 Choosing appropriate instructional modes with appropriate approaches

3.3.4 Preparing teaching resources and tools

Teachers should prepare teaching resources, tools and platforms for students in advance according to the instructional contents.

Figure 15 Preparing instructional materials

Teachers could 1) adopt educational resources with an open source and open license and distribute them to students after redesign and adaption in order to save the time creating instructional resources and focus more on online courses and learners; 2) make full use of free books provided by libraries and publishing houses to recommend students to read some curricular and extracurricular books; 3) adopt free online resources to fully prepare textbooks; and 4) use digital resources and reference materials to enrich in-class activities.

Teachers can prepare instructional tools based on the actual scenarios of distance teaching.

Table 1 Teaching tools in different scenarios

Categories of Tools		Suitable Teaching Scenarios
Resources producing tools	PowerPoint recording software	Suitable for PowerPoint-assisted video recording
	Screen capture software	Video editing; especially suitable for producing software operation courses
	The software of video production	Producing micro course video quickly
	The software of multimedia learning	Suitable for the courses rich in teaching resources
Tools for synchronous live teaching	All types of live streaming software, including software for interactive teaching, remote office, and online courses	Suitable for live teaching courses; different kinds of software can be chosen to satisfy various demands for interaction, network quality or convenience
Online courses platforms for asynchronous teaching	All kinds of distance teaching and learning platforms at national, regional and community levels, as well as those launched by universities and enterprises	Suitable for the courses in need of asynchronous teaching; suitable distance teaching and learning platforms can be chosen according to the requirements of the schools and the courses
Subject teaching tools for self-regulated	Learning apps for all subjects learning	Suitable for the courses leading students' online self-regulated learning; orientated by problems or tasks and based on all kinds of online interactive learning; inspiring students to utilize learning tools to preview, review or explore on a specific topic
Tools for the construction of knowledge	Cognitive tools, collaborative editing tools, virtual simulation tools, etc.	Suitable for the courses that need collaborative learning for the construction of knowledge; from various aspects of the construction of knowledge, tools selection and learning activities design can be conducted by combining course contents
Tools for learning analysis	Apps, websites, and interactive class software that support data analysis	Suitable for the development of data-based accurate teaching, such as the self-learning part before the flipped class, and the collaborative learning in computer-supported cooperative learning (CSCL)
Tools for practice and evaluation	All kinds of tools suitable for higher education and basic education	Suitable for conducting plenty of practices that facilitate learning and mastering contents, as well as conducting evaluation of learning results
Tools for resource and class management	Apps for learning and class management, social software etc.	Suitable for the effective organization of online learning with abundant learning resources, and a large number of students and learning tasks.

3.3.5 Conducting various teaching activities

Teachers could enrich the forms of distance teaching activities with a full consideration of the actual situation to enrich students' learning. They can apply self-regulated learning, explorative learning, collaborative learning and other learning activities in online scenarios when designing learning activities.

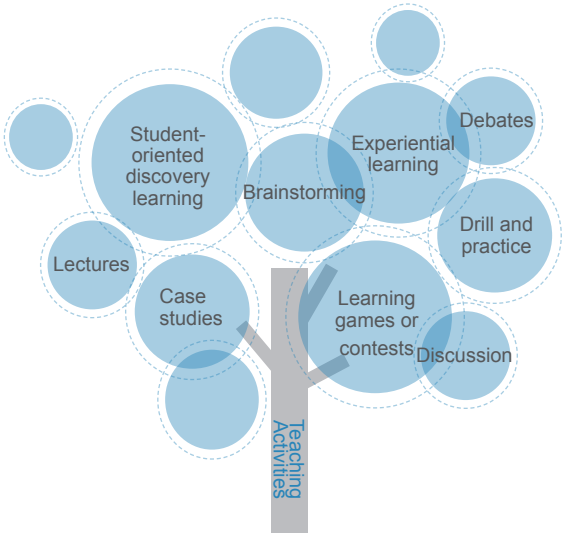


Figure 16 Available teaching activities

3.3.6 Evaluating learning and teaching outcomes

Teachers should combine diagnostic, process and summative evaluation methods together to evaluate learning outcomes, with process evaluation as the key point. The evaluation of students should not only include their studies, such as their homework, but also an effective evaluation of their development in different aspects.

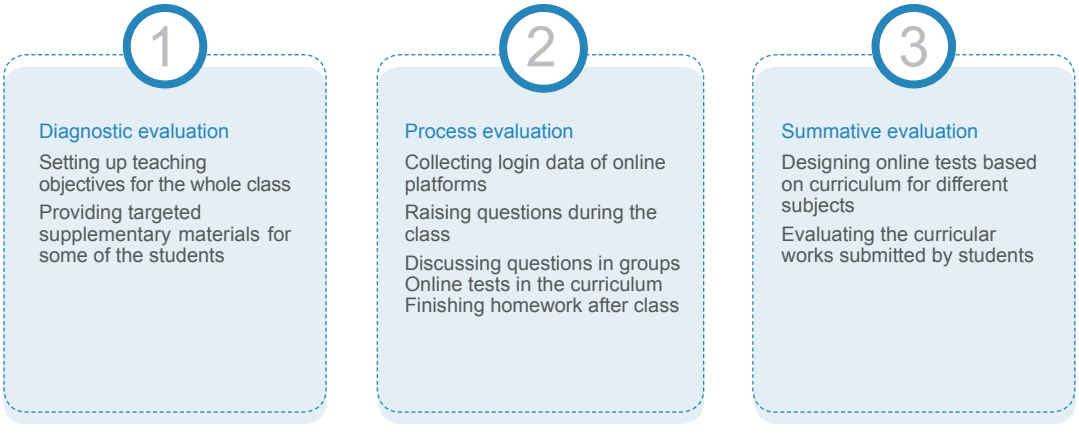


Figure 17 Evaluating learning outcomes of flexible teaching

4. Parents

Parents should pay attention to their own physical and mental health, while arranging family life and work at home. They should take the initiative to seek all kinds of resources to assume the role of a “temporary class teacher” during students’ home study. Students need the supervision and company of parents.

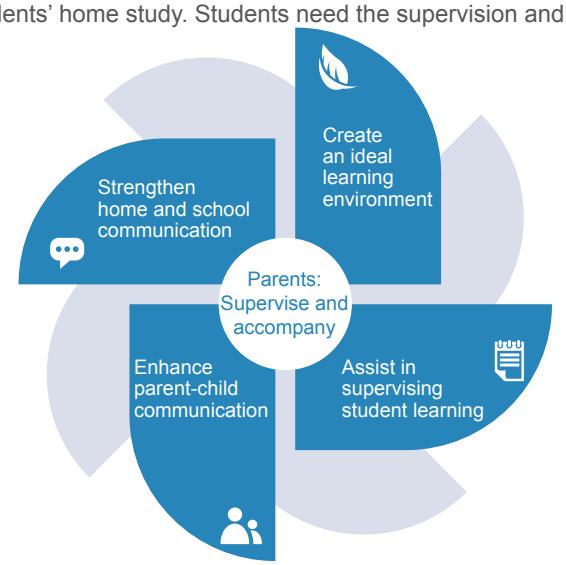


Figure 18 Parents’ supervision and accompany

4.1 Strengthening family-school communication

Parents should stay in touch and communicate with schools for jointly guaranteeing the distance learning during school closures.

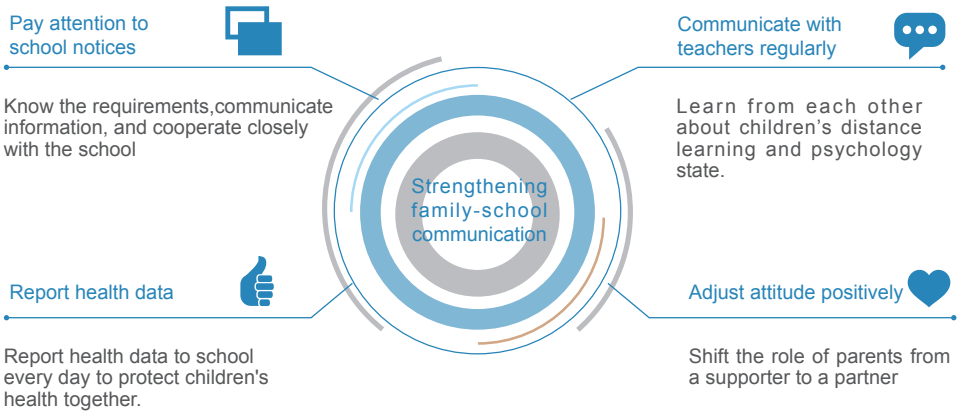


Figure 19 Strengthening family-school communication

4.2 Creating a favorable learning environment

Parents should do their utmost to create a favorable learning environment equipped with necessary hardware and software that enable students to concentrate on their study.

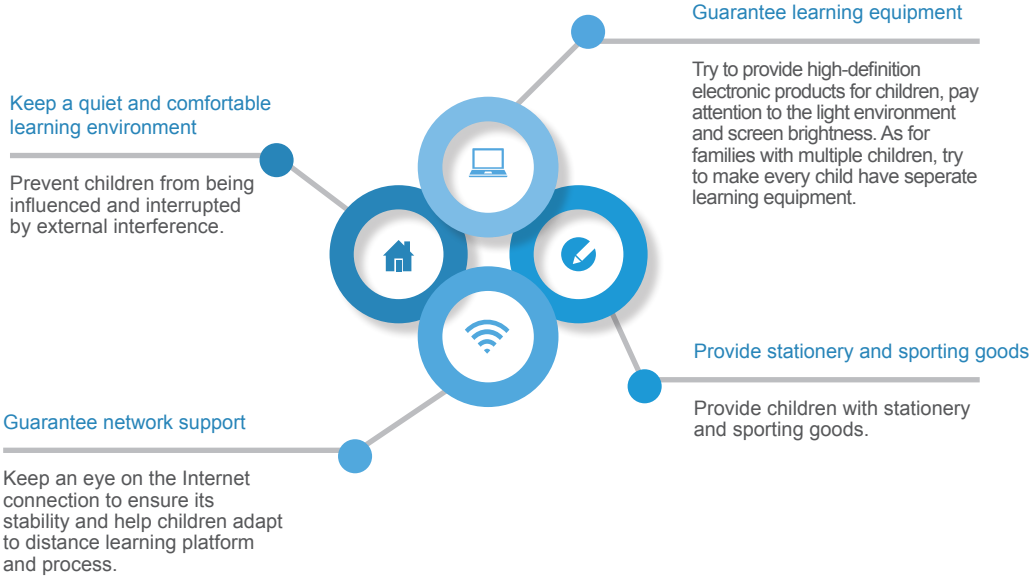


Figure 20 Creating a favorable learning environment

4.3 Assisting teachers in supervising children's study

During the school closures, parents should actively play the role of guardians, assisting teachers in supervising children's home study.

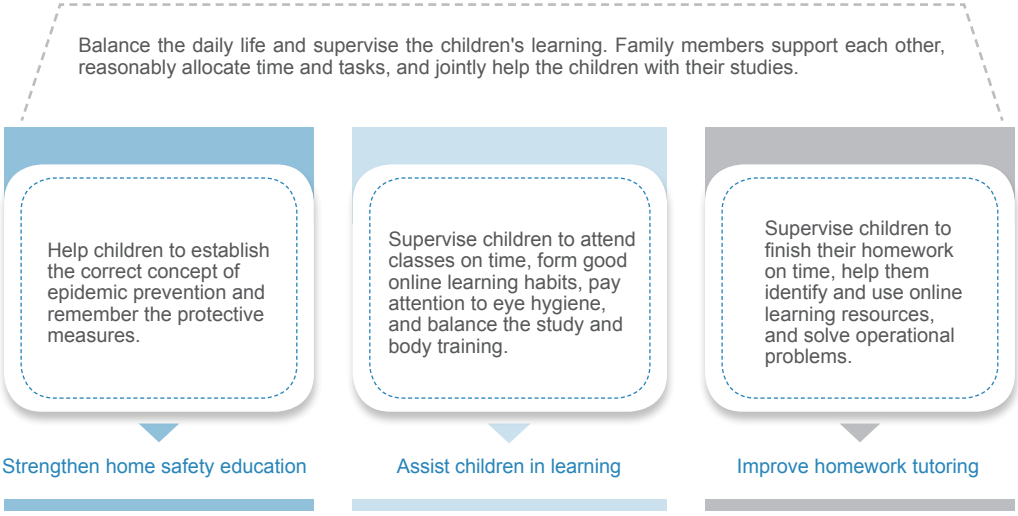


Figure 21 Assisting teachers in supervising children's study

4.4 Enhancing parent-child communication

The COVID-19 epidemic has brought more time for parents to communicate with their children. Effective communication can help build a parent-child relationship of mutual trust and respect, through which parents can set an example for children.

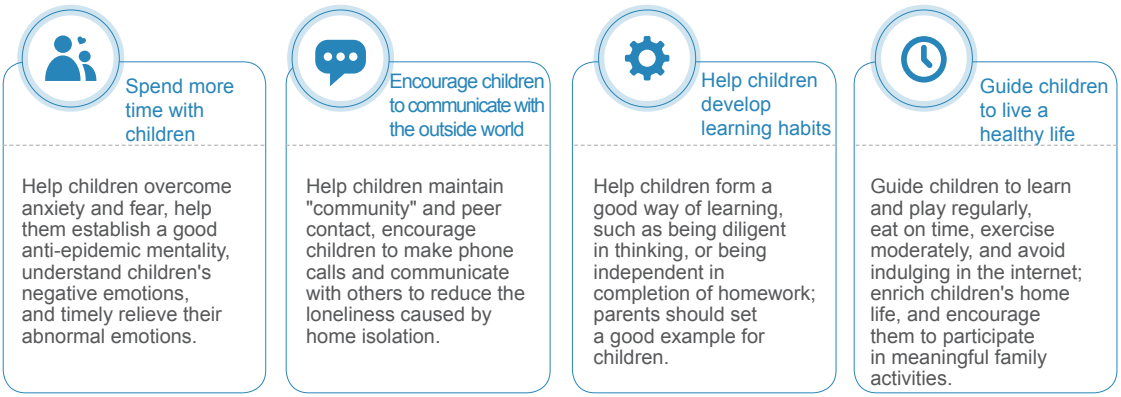


Figure 22 Enhancing parent-child communication

5. Students

During school closures, primary and secondary school students are undergoing transformation from offline learning at schools to online learning at home. Thus, students can make an appropriate schedule, a daily learning plan and a form of daily self-evaluation to appropriately plan learning activities, as well as evaluate and reflect on the outcomes.

During their home study, students can improve their self-regulating skills from the following six aspects.

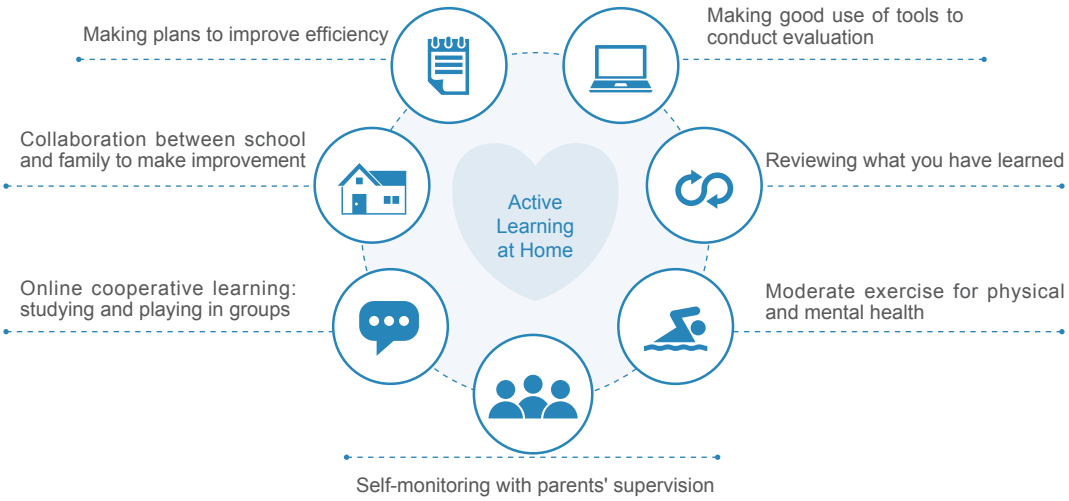


Figure 23 Seven key elements for active learning at home

5.1 Improving efficiency

Seniors should make an appropriate schedule and plan their study with a balance between learning and playing. Juniors can also participate in schedule making and accomplish it under parents' supervision.

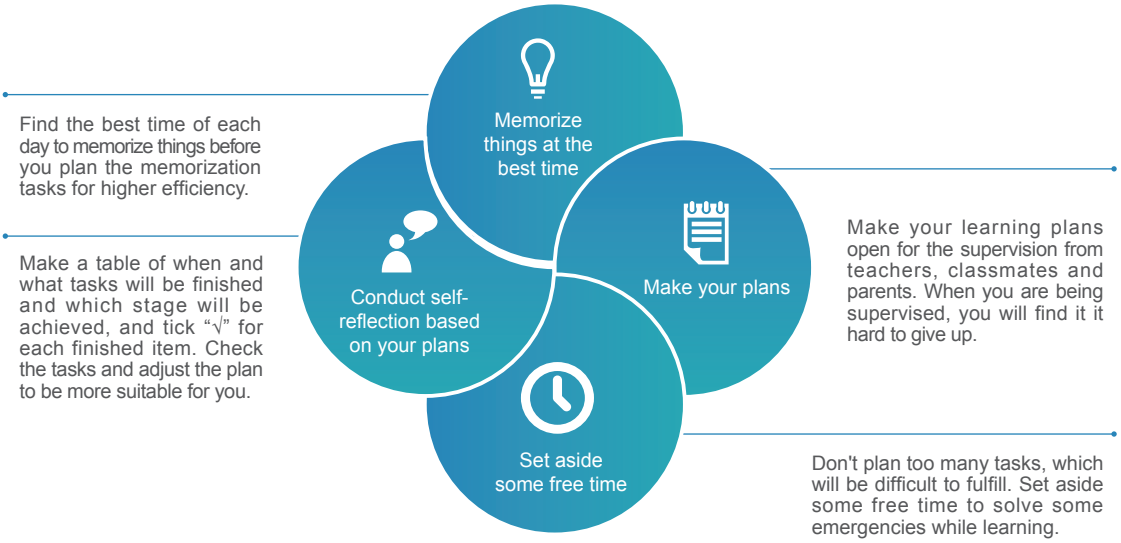


Figure 24 Scheduling your learning and playing in balance

5.2 Getting support from school and family

During home study, students should stay in touch with their teachers for school requirements and actively participate in group activities to keep up with the learning pace. Apart from the courses stipulated by schools, students can also expand extracurricular knowledge and skills based on their interests and needs while consolidating what they have learned in class simultaneously.

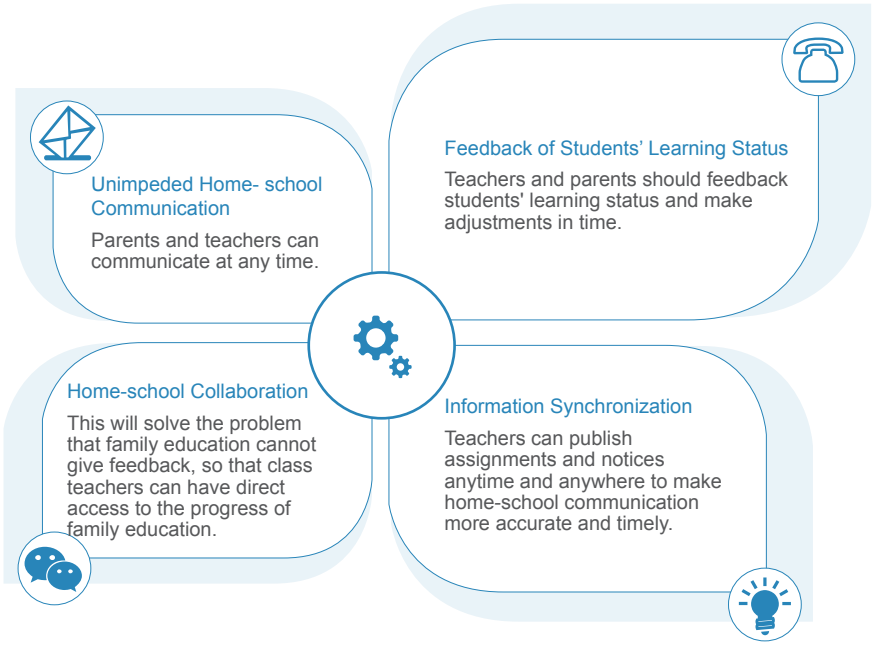


Figure 25 Selecting learning resources on demand

5.3 Distance learning

Social software can help students communicate with peers and teachers. Students can use communication tools or software to build a learning group or community for cooperative learning. Online groups can carry out cooperative learning in the following four ways: 1) thinking-writing-communicating-sharing; 2) online round tables; 3) online puzzle “games” and 4) collaborative editing.

5.4 Self-monitoring with parents' supervision

Parents’ companionship and support are needed to ensure students’ effective learning and self-discipline. For juniors with weak self-management abilities, parents and teachers should rely on strategies to motivate them. For seniors with good self-management abilities, parents’ supervision or team collaboration would be a good supplement to their learning process.

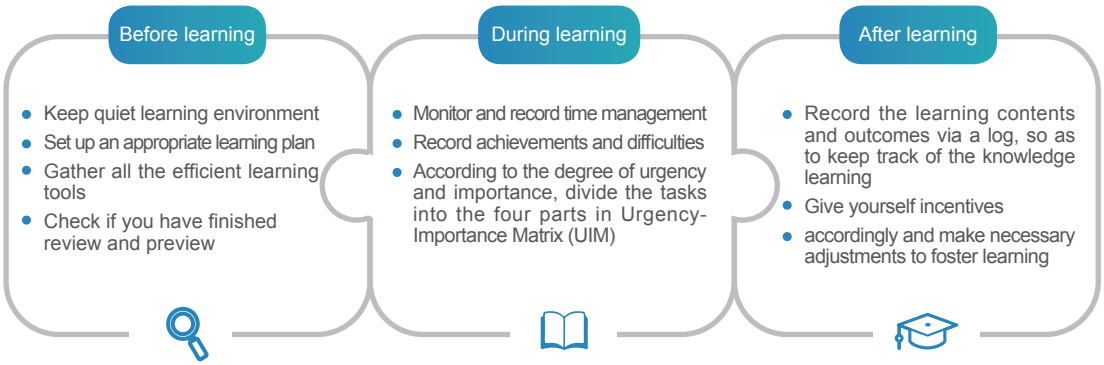


Figure 26 Engaged learning: making learning process effective

5.5 Self-evaluation

Students can conduct self-evaluation based on learning objectives, personal learning status and peers' learning status. They can also conduct self-analysis of their homework, self-evaluation of various school work and self-examination of their daily behavior while recording and reflecting on their progress and changes. These can help students better understand their learning process and improve their plans to maximize the initiative of self-evaluation. Students could also assess their learning outcomes by listing the points of “what I already know,” “what I want to know” and “what I have learned” by way of rubrics, test and concept map etc.

Table 2 Self-evaluation

What I already know?	What I want to know?	What I have learned?
Review the knowledge you have already mastered and list it in the table.	Write down what problems you want to solve.	After you finished learning, you can summarize what you have gained and what needs to be improved

5.6 Reviewing what have learned

By making regular self-reflection and adjustment and collecting feedback from teachers, parents and classmates, students can summarize their self-study, such as how they get along with their parents at home, about how their cooperative learning with their classmates or families is going, and how they communicate with teachers. They should make effective self-reflection from different angles via five steps: description, reflection, identifying influencing factors, evaluation, and learning.

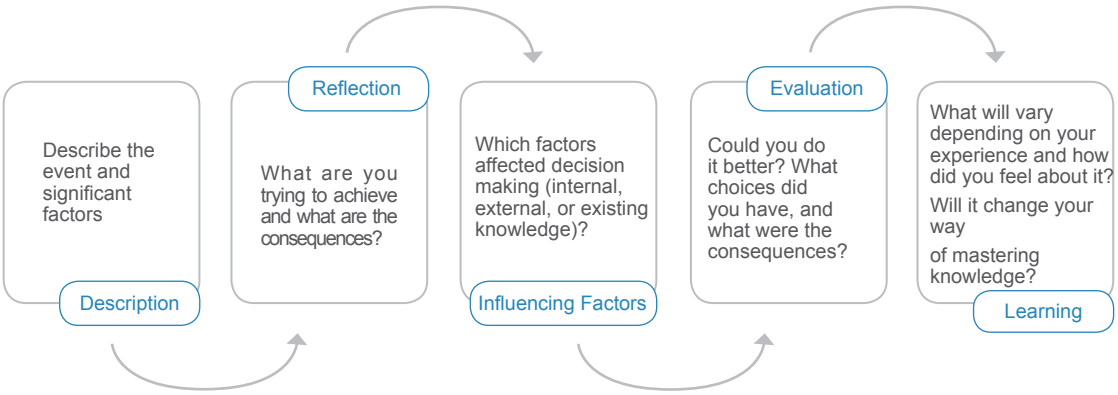


Figure 27 Five steps to conduct self-reflection

5.7 Moderate exercise for physical and mental health

Students should follow the guidance to keep eyes healthy, balance their learning and playing, so as to prevent myopia during their home study. Meanwhile, the time spent on digital devices should be limited to avoid anxiety brought by addiction to video games or social media. Also, they can relieve stress and anxiety by taking modest exercise and sharing feelings with families or friends.

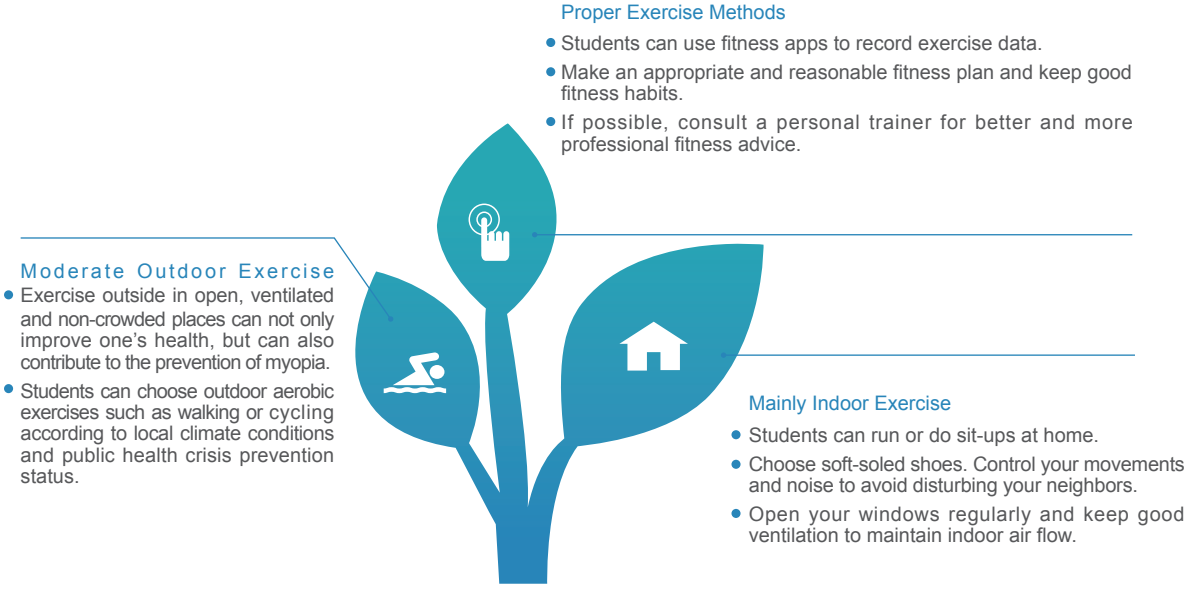


Figure 28 Choose proper exercise during the public health crisis outbreak

Furthermore, students should engage in housework such as cleaning, cooking and furnishing to reduce their parents' burden, raise their consciousness of gratitude and acquire basic skills for taking care of themselves.

School reopening

1. Prior to reopening

The National education authority jointly with the national health authority should carry out technical guidance for epidemic prevention and control to ensure the safety and health of teachers and students in preparing for school reopening.

1.1 When to reopen

The timing of school reopening should be guided by the best interest of the students and overall public health considerations, based on an assessment of the associated benefits and risks. Decision-making should be done together with sub-national stakeholders so that actions are based on the specific local context. In accordance with the general requirements of, "Resuming schools as soon as possible, Prevent and Control Standards as strict as possible", and on the premise of meeting the requirements of local epidemic prevention and control, each school should formulate refined plans. The reopening application should be approved one by one cautiously. However, if a school is running on multiple campuses, reopening is not recommended in the case of a dense school population, high mobility of students, and poor epidemic prevention conditions that do not meet the requirements. Other than the preparation of school environment, the school also needs to deliver progress information on the preparations to the students and their parents.

1.2 Plan development

Schools should develop efficient plans that include overall organization, necessary regulations, and relevant arrangements that focus on safe operations during epidemic prevention and control.

1.Organization and regulations construction: The school principal takes the highest responsibility for epidemic prevention and control. The epidemic prevention and control working group is composed of the primary school leaders: heads of various departments, school doctors or physicians (health care providers), classroom teachers, all staff members of the educational administration and logistics office, and volunteers of student associations with reasonable responsibilities.

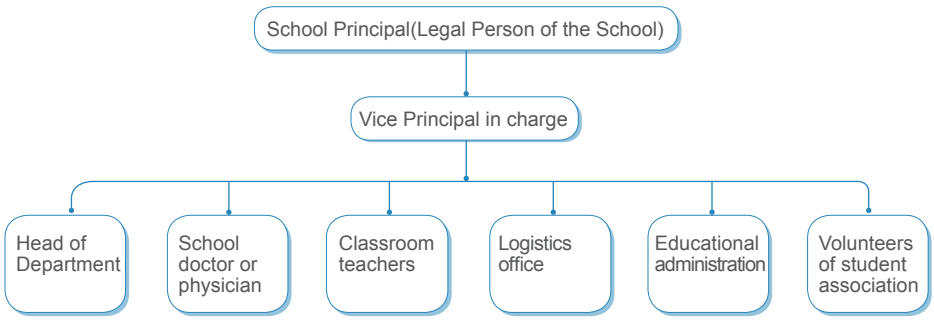


Figure 29 Members of the working group

2.On-campus health management working plans: Schools should develop emergency response plans for public health events, and improve the infectious disease reporting system, the morning/noon health check system and seven other systems, which are collectively referred to as "Two Plans and Nine Systems" (Figure 31).

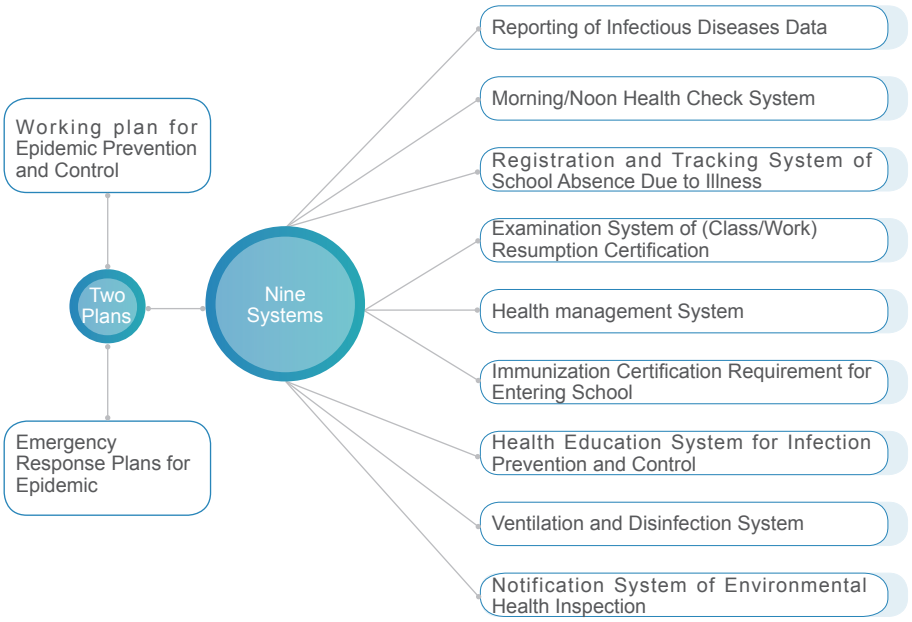


Figure 30 Outlines of “Two Plans and Nine Systems” for epidemic control and prevention

After school reopening, students of different years or classes should arrive at school, have school lunch and leave school all at different time slots. Schools should take such measures as “group management” to keep a one-meter physical distance at school. In addition, during the epidemic, it is recommended to avoid gathering activities while emphasizing health education. Those students living in areas with low epidemic risk are not recommended to wear masks at school unless they are staying in places with dense crowds or where ventilation is not guaranteed.

1.3 Duties of school administrators, teachers and staff

1. School Principal: Taking the highest responsibility for epidemic prevention and control, the school principal is fully in charge of organizing and leading the work, formulating working plans, systems, and emergency plans. He/she should also strengthen communication and collaboration with relevant departments from the local network (Figure 32).

Figure 31 The school network for epidemic control and prevention

2. School doctors or physicians (health education teachers): As the major member of the epidemic prevention and control working group in charge of notification or reporting on the epidemic situation, they are responsible for organizing morning, noon and evening health checks, teaching health knowledge, hand-washing tips, coughing etiquette, providing health monitoring and information registration for teachers, staff and students, as well as tracking and registering sick leave.

3. Teachers (classroom teachers): Keep informed of the students' health status and trace their travels, exposure and history of diseases, and timely share up-to-date information with students and parents through social network, SMS, campus network etc.

4. Logistics staff: Security guards should raise their self-protection behavior, strengthen the management around school gates and dormitory areas, and prohibit irrelevant personnel from entering the campus and dormitory areas. Canteen staff should hold valid health certificates, take up their posts after receiving training, strictly follow the food operation standards, wear masks throughout the work process, guarantee food safety, standardize the storage, processing and cooking of raw materials, and carry out the disinfection of tableware. Cleaners should be provided with sufficient materials (such as masks, gloves, disinfectants, garbage bins, and relevant supplies), clean and disinfect the public places, and strictly classify and dispose of garbage to ensure daily treatment of waste.

1.4 Campus environment improvement and management

1. Campus: Classrooms, toilets, dormitories, dining halls, and other important public spaces should be thoroughly disinfected. Keep the room ventilated and clean neglected corners. If available, schools could provide hand-washing facilities or alcohol-based hand sanitizers in places such as classrooms, canteens, toilets, entrances to teaching buildings, and other places that are most visited with many shared surfaces, along with posters that show how to wash hands or use hand sanitizers correctly. Schools should also carry out other measures to help students and staff form the habit of washing hands with correct steps before entering or after leaving such public places.

2. Healthcare room/clinic management: Equip running water hand-washing facilities, and instruments for morning and day health inspections, including forehead (ear) thermometers, mercury thermometers, tongue depressors, flashlights, etc.; provide disinfectants, disinfection lamps or other air disinfection devices; and reserve masks, medical gloves, protective clothing and other protective equipment.

3. Temporary quarantine site management: Set up a relatively independent quarantine space based on the actual site of the school, away from classrooms and canteens, keep enough lighting and ventilation, and equip running water hand-washing facilities etc. It is preferable to have a separate toilet, and set a reminder sign to prevent others from using it.

4. Lavatory management: Students and teachers should be provided with an adequate number of toilets which should be cleaned frequently (at least daily) with floor and door handles being disinfected. Toilets should have a poster of the "Seven-step Hand-washing Method". Cleaning staff should be equipped with basic personal protective equipment (boots, gloves, and masks) and should have received training on safe toilet disinfection practices and safety protocols for desludging toilets pits (where applicable).

1.5 Health education and monitoring

After school reopening, health education should be emphasized, focusing on how to wear masks and wash hands properly, how to maintain respiratory etiquette (covering the nose and mouth with a flexed elbow or paper tissue when coughing or sneezing), avoiding touching face or spitting in public etc., so as to foster students' good personal hygiene practices. Schools should collect information about the health

status of the teachers, staff and students, including their history of travelling and dwelling, and their 14-day contact history before the school reopens to make sure that teachers, staff and students can return to school on schedule. Staff screening should cover all security guards, cleaners, chefs and dispatch staff, et al (Figure 33).

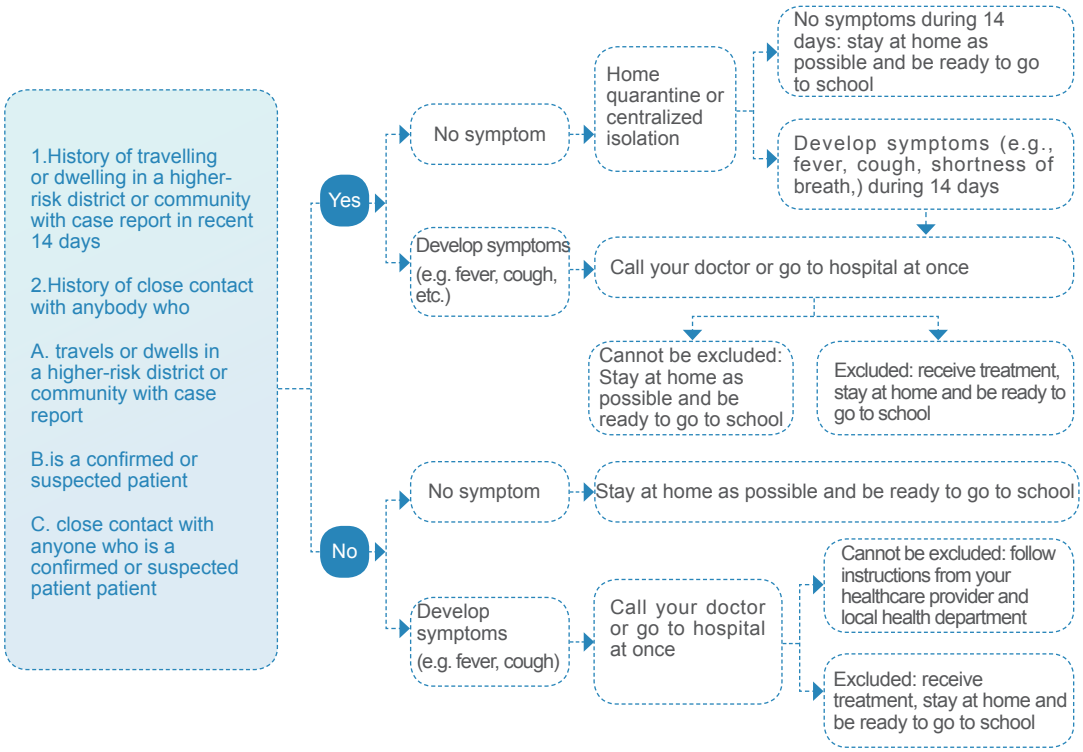


Figure 32 The checklist of health screening

1.6 Supplies support

Schools should keep sufficient stock of supplies according to the number of teachers, students, and staff to meet the needs of epidemic prevention and control, including personal protective equipment, equipment for morning and noon examinations, disinfection supplies, disinfection equipment, and a temporary quarantine room (site).

Guarantee supplies of protective equipment as follows:

√ Personal protective equipment: including a certain amount of disposable medical masks (children choose products with equivalent performance), medical protective clothing, disposable rubber gloves, work shoes or rubber boots, waterproof boot covers etc.

√ Morning and noon inspection instruments: forehead (ear) thermometers, mercury thermometers etc.

√ Disinfection supplies and equipment: chlorine-based disinfectants, hypochlorous acid, 75 percent alcohol solutions, ultraviolet disinfection lamps, packaging bags for medical waste, and others.

√ Hand-washing facilities are sufficient, and hand-washing liquid or soap could be provided and replenished in time in the hand-washing areas. If possible, they should be equipped with alcohol-based hand sanitizers.

√ Temporary quarantine room: A temporary quarantine room (site) that is relatively independent is strongly recommended to be set up in the campus to temporarily quarantine fever patients.

1.7 Trail Stage

When considering school reopening, effective measures should be taken at critical times, particularly at the times of school arrival, class attendance, and lunchtime. Schools should pick different time slots for reopening. Pilot work for school reopening is recommended, which means some grades or classes are allowed to return to school in advance. A process of school reopening should be tested in the pilot period (Figure 34) and it might provide an opportunity for finding and solving problems.

Figure 33 The key points for school reopening

2. After reopening

2.1 Duties of school administrators, teachers, staff and students

2.1.1 School Principal: He/she should take the highest responsibility for epidemic prevention and control and closely keep in touch with relative departments to make preparations for various emergencies.

2.1.2 School doctors or physicians (health education teachers): They should take the principle of “early detection, early treatment, and early disposal,” conduct standardized morning and noon health examinations, guide school disinfection and carry out health education. School doctors or physicians (health education teachers) should report to the local organizations responsible for disease prevention and control and administrative department of education in time if there is any person with epidemiologically related cases.

2.1.3 Classroom Teachers and staff: They should cooperate with the leadership and school doctors or physicians (health education teachers), and keep an eye on students’ health conditions.

2.1.4 Students: They should consciously carry out health monitoring in accordance with the school regulations, keep a moderate amount of exercise every day and choose a relatively sparse open space for outdoor exercise. If they have to go out of school, with the permission of their parents, they should strictly follow the leave procedure and plan the travel route and method. When going out, they should pay attention to personal protection and hand hygiene. When going to a densely populated public place, such as an elevator, or taking public transportation, please wear a mask correctly. Students should monitor themselves for fever and respiratory symptoms every day. If they develop any symptom, notify their guardian or teacher in time.

2.2 Campus environment management

2.2.1 Access control: Measure body temperatures, verify identity, transfer symptomatic personnel in time, and prevent transmission of epidemic outside the school.

2.2.2 School public places management: Ensure adequate ventilation in classrooms, offices and public spaces, and ventilate them at least three times a day for at least 30 minutes each time. If you cannot open the windows or the ventilation does not work well, schools and kindergartens can use mechanical ventilation like electric fans and exhaust fans as alternatives. The rooms cannot be used again before finishing the disinfection and 60 minutes of ventilation.

2.2.3 Canteen management: Strengthen hygiene management, standardize dining processes, divide and send meals to the classrooms or extend meal time, effectively arrange different meal times for students in different grades or classes and avoid gathering during peak dining hours (Figure 35). Schools should set up a reasonable dining order. For meal-delivery schools, students should eat separately and avoid gathering. For canteen-dining schools, students should keep physical distancing, sit on one side only, and avoid chatting during meal. Keep food samples: the amount of sample to be kept in the refrigerator for each meal should be no less than 125g, and the storage time should be no less than 48 hours.

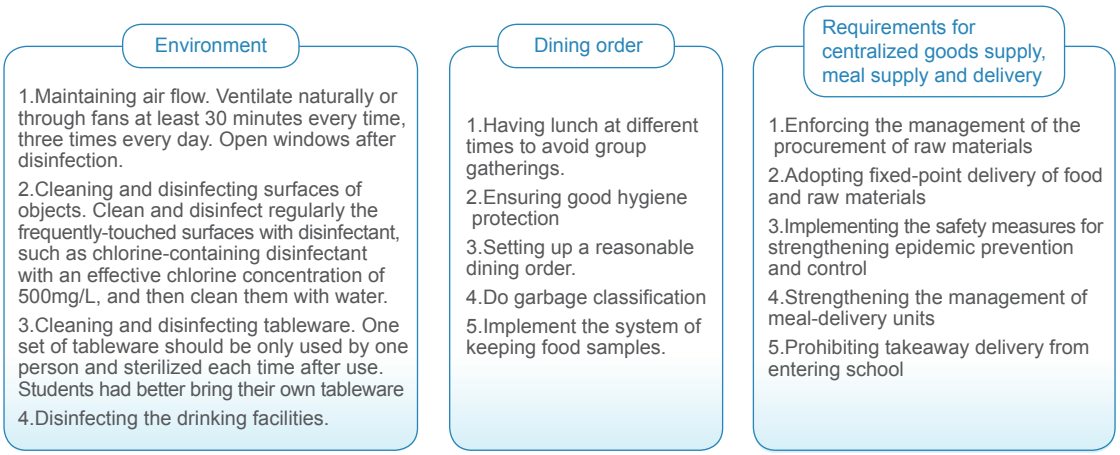


Figure 34 Prevention and Control of public health crisis: Management of canteens and drinking water facilities

2.2.4 Health care room/clinic management: Carry out daily management according to the anti-infection measures of hospitals. Disinfect the air in clinics and the surface of all objects every day, and assign special persons to clean and record every day. Dispose of medical waste in a special bag, and the container of the waste should be cleaned. If there are isolated people in the temporary quarantine site on that day, disinfect and ventilate the site immediately after the isolated person(s) leave.

2.2.5 Lavatory management: Make sure that the toilets are clean, dry, fully equipped and air-ventilated. The specific measures are shown in Figure 36.

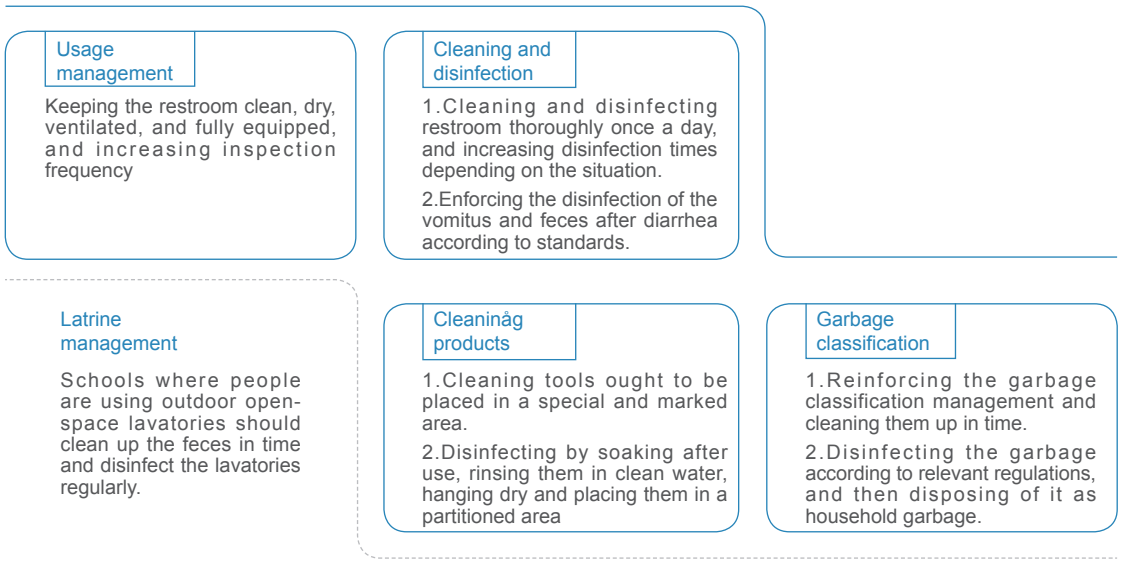


Figure 35 Prevention and Control of public health crisis: Lavatory management

2.2.6Dormitory management: Strictly control people-to-people connection in dormitories, and keep up regular disinfection and cleaning to prevent internal cross-infection. The specific measures are in Figure 37.

Ventilation and making air flowing	Opening widows of classrooms, restrooms, libraries, etc., making air flow and ventilating naturally or through fans at least 30 minutes three times every day. If using air conditioners, put them in a non-recirculation mode.
Cleaning and disinfection	1.Conducting preventive disinfection of surfaces with disinfectant, including grounds, walls, doorknobs, handrails, beds, desks and chairs twice a day. 2.Keeping the inside and outside clean, making sure that someone is in charge of cleaning and disinfection of dormitories and then makes a record. 3.Dispose of garbage in time and disinfect the waste containers regularly with disinfectant.
Screening body temperature	Screening body temperature of people in dormitories and installing several checkpoints for screening in dormitory buildings. Only those students without fever or other symptoms can get access to the teaching areas.
Providing a separate room	1.Providing a separate room for the person who is sick. It should be a separate room and far from other people. 2.Putting garbage generated in the isolation sites into double-layer medical garbage bags, and disinfecting the indoor articles before moving them out of the isolation area.
Avoiding gatherings	Leaving and returning school in different time on holidays and vacations to avoid gatherings.

Figure 36 Prevention and Control of public health crisis: Dormitory Management

2.3 Teaching activity organization

2.3.1 Setting up unit group management: Keep students in relative fixed groups and manage them as units, e.g. providing relative fixed classrooms, dormitory rooms, dining spaces and physical activity spaces for each fixed unit in order to reduce the face-to-face communication between groups. Cancel assemblies, sports games and other events that create crowded conditions, thus preventing mass cross-infection in school.

2.3.2 Strengthen personal protection: Teachers, staff and students should wash hands frequently, wear masks correctly, maintain respiratory etiquette (covering the nose and mouth with a flexed elbow or paper tissue when coughing or sneezing), avoid touching the face by the hands, avoid spitting in public, avoid gatherings, take more exercise etc. When students live in the areas with low risk, they are not recommended to wear masks at school, but they could bring masks with them and wear when needed. If they can keep enough physical distancing, e.g. a certain distance indoors or conducting physical activities outdoors, they are not recommended to wear masks. However, it is encouraged to wear masks in densely populated areas or where ventilation cannot be guaranteed.

2.4 Arrival and pick-up

To keep physical distancing, the schools are recommended to adopt different school arrival times for different school years or classes. It is the same with the school leave times. When parents pick up their children in front of the school gate, they should also keep a social distance of one meter or above between each other.

2.5 Key points for parents

Parents or caregivers should protect themselves from infection, ensure a strict personal protection, for example, try to avoid going out, wear a mask when going out, keep physical distancing of one meter or above with others, wash hands frequently, etc. Before having physical contact with children, parents or caregivers should thoroughly clean themselves and supervise children to take personal protection.

3. Teaching transitional period after school reopening

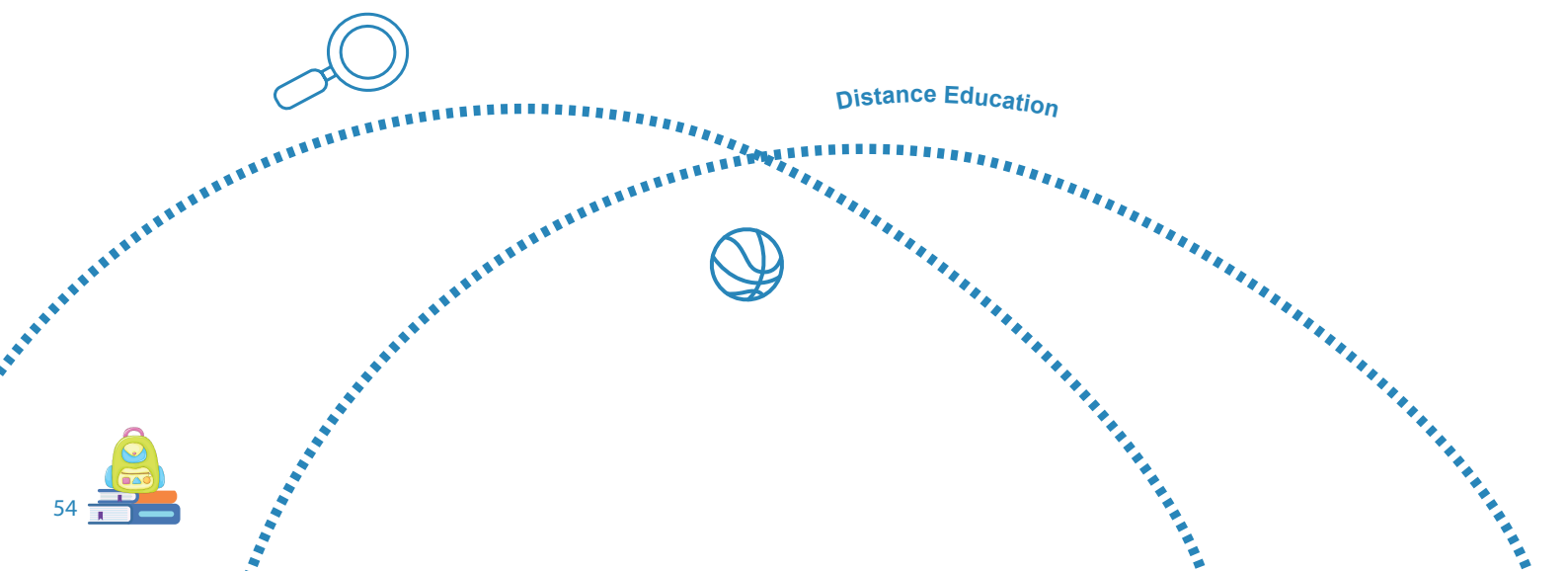
Students from rural areas, poverty-stricken counties and of migrant workers must have suffered the most since they have faced several challenges concerning remote learning, including the challenge of connectivity, the availability of personal devices and not having trained teachers to facilitate the e-learning platforms effectively. For some students that have been behind their peers before the pandemic, the gap must have further widened as students have missed months of school. School administrators and teachers are encouraged to work out how to make up the classrooms and help learners fix the damage the pandemic has caused to the students learning. The following strategies can be included:

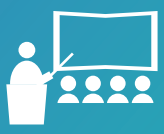
(1) Take students learning outcome evaluation after school reopening. Know the students' exact level in every course.

(2) Adopt a flexible teaching and learning approach. Schools can tweak timetables and can encourage sheer flexibility to allow time for students' interaction and playful activities. No rushing to or pressuring students to complete courses. No extra teaching contents should be added. Avoid putting extra mental and study pressure on the students. Hybrid learning can be continued with much more flexibility and through better facilitation of the online learning platforms.

(3) Curriculum implementation and assessment adjustments will be necessary. Modify and improve course content and evaluation/assessment standards based on learning outcomes and performance.

(4) Introduce innovative instructional methodologies and practices for better teaching quality. Support students in remote or poor areas by giving after-school class or introducing university students volunteer to be tutors.





Psychosocial support

1. Key points of psychosocial support prior to school reopening

1.1 Students, teachers and parents

1.1.1 Students

Monitor the physical and mental status of students, especially pay close attention to the mental status of junior and senior high school graduates, and provide psychosocial support and social-emotional learning to those students when necessary. Help students maintain a positive attitude during quarantine, incorporate the intervention with students' psychological crisis into the overall deployment of epidemic prevention and control. Students at high risk should be identified in time, and referrals should be implemented. Observe whether the student's family environment is safe and whether the students are exposed to strong language, emotional or physical abuse in the family. If so, the school needs to communicate with students in a timely manner or ask a professional institution to intervene.

1.1.2 Teachers

It is necessary to evaluate the state of teachers' work, study and life during the epidemic, provide humanistic care, relieve teachers' tension and anxiety, and effectively improve their mental health by using different measures, such as social organizations, school and even other teachers. Teachers at high risk should be identified in time, and referrals to professional psychosocial support should be made.

1.1.3 Parents

National and local government should encourage parents to understand the state of the epidemic situation, shift their mindsets and create a harmonious and healthy family environment; enhance an effective parent-child communication; and identify and actively respond to their child's mental and behavioral problems during the epidemic. Parents should be honest with children about the facts; listen to children about what they learn from the news; and inform children that it is okay not to know the answers and be anxious about it. Parents should avoid stigma against people who are or have been infected; take a pause when negative feelings strike; help alleviate children's edginess, anxiety, fear and other negative emotions; and establish new daily routines during the special period. Notably, help children get reconnected with peers.

1.2 Contents

1.2.1 Cognitive adjustment during the epidemic

Teachers, students, and parents need to actively recognize and adapt to the current epidemic situation, learn how to protect themselves, objectively evaluate the health status of themselves, detect and adjust cognitive bias in time, and keep a positive mindset.

1.2.2 Emotional management during the epidemic

Teachers, students and parents should carry out a positive emotional experience and expression, learn how to relieve extreme anxiety and tension, obtain relevant epidemic information from national official websites and authoritative media, alleviate fears for the public health crisis outbreak and eliminate negative emotions appropriately, such as sharing their experiences and support each other.

1.2.3 Behavioral responses during the epidemic

Maintain a normal and healthy lifestyle, culture good behavioral habits, engage in active recreation, maintain appropriate sports activities, reasonably schedule personal time, appropriately divert attention, and ensure personal protection.

1.3 Approaches

1.3.1 Online mental health publicity and education

Actively use the national and local educational resources and school website, E-learning space and social network platforms to carry out the mental health education among teachers and students, integrate related psychosocial support resources, and guide teachers, students and parents in need to actively seek mental assistance, improve emotional stability, and maintain mental health.

1.3.2 Psychosocial support hotline or online psychosocial support

Under the school management, registered counselors could set up hotlines or online live chat rooms for psychosocial support, clarify the target groups and scope of counseling services, and adopt standardized and appropriate methods to follow. Moreover, they should follow the codes of ethics in counseling, and the staff should receive mental supervision regularly.

2. Key points of psychosocial support after school reopening

2.1 Students, teachers and parents

2.1.1 Students

Parents whose children are at lower grades and students at higher grades should dynamically monitor their students' physical and mental conditions affected by the epidemic, conduct counseling and mental health education based on actual needs, and help them adapt to the current situation as soon as possible. Schools should follow up the students' mental states as well. Special care should be taken for students who have been treated or isolated for medical observation. The professional with mental health counseling certification from social organizations and schools could provide individual psychosocial support to students with mental problems. Those at high risk of mental health problems should be identified in time, and referrals to professional psychosocial support should be made.

2.1.2 Teachers

Social organizations and schools need to pay attention to the physiological impact of the epidemic on teachers, build a positive psychological environment to alleviate and eliminate their stress responses, relieve their pressure through appropriate teaching schedules, and carry out mental health education to cope with various mental problems. Psychosocial support should be provided by the school for class management. Teachers at high risk of mental health problems should be identified in time, and referrals to professional psychological health support should be made.

2.1.3 Parents

Parents should raise awareness of disease prevention and control, pay attention to their children's adaptation to school reopening, enhance communication with teachers, actively guide them to address the mental problems that occur after reopening jointly with school's help, and create a positive and harmonious family environment.

2.2 Contents

2.2.1 Cognitive adjustment

Teachers and students need to adapt to school life as soon as possible, objectively understanding the benefits and drawbacks brought on by the epidemic, and be optimistic about the future.

2.2.2 Emotional management

Teachers and students should keep positive emotional responses during the epidemic, learn how to relieve the anxiety and stress caused by school reopening, and cultivate positive and optimistic emotions. Parents also need to manage their emotions and deal with the stress and pressure rationally.

2.2.3 Behaviors

Adhere to healthy lifestyles and good habits, exercise appropriately, stick to a healthy diet, reduce and eliminate factors that might be harmful to health.

2.3 Approaches

2.3.1 Optimizing the mental health course

Through the mental health course, students should be actively guided in a planned manner and trained to form good mentality, so that they can adapt to the environment faster and constantly improve their mental health.

2.3.2 Conducting special lectures on mental health

Special lectures can rely on various thematic activities and be executed in various forms to promote a positive and healthy development of teachers and students' mentality and personality, and minimize the mental problems arising from the worst epidemic situation.

2.3.3 Implementing individual counseling programmes

The professional with a mental health counseling certification from social organizations and schools can help teachers and students solve problems in their studies and personal life during the epidemic through individual psychosocial support. They can also identify problems and refer individuals to hospitals and professional institutions in time.

2.3.4 Cooperative education at home and school

Communicate with parents in a timely manner to help them learn about the psychological characteristics of their children, and assist them to jointly solve any psychological disorders and behavioral problems their children experience during the epidemic.

Teachers and social workers in the communities should communicate with parents to help them learn about the psychological characteristics of their children, and further assist them to jointly solve any psychological disorders and behavioral problems arising during the epidemic.

2.3.5 Strengthening referral system

Review and strengthen referral systems, particularly for severe cases of those who need urgent professional care. Ensure that students, teachers and parents are aware of available counseling services, including national hotlines.

3. Key points of psychosocial support for vulnerable groups

3.1 Confirmed cases

Teachers and students can use counseling hotlines which can be found on the national and local governments' websites to prevent potential mental crises. They can obtain information for the treatment plan from qualified professionals which might help them stabilize their emotions and strengthen their confidence in healing.

3.2 People in quarantine

National and local CDC should provide authoritative epidemic information, guide people to actively express their own feelings, seek social support and encouragement, and motivate cooperation for treatment.

3.3 Close contacts

Counseling agencies should provide feasible information on the epidemic, relieve stress and anxiety, encourage their clients to cooperate under quarantined medical observation, and help them balance their studies and personal life.

3.4 People living in high-risk areas of the epidemic

Counseling agencies should provide relevant information to maintain the mental health of people in high-risk areas, cultivate a positive attitude towards the epidemic and master the basic methods of mental adjustment.

3.5 Ordinary teachers and students

Guidance for zero discrimination and exclusion on the basis of COVID-19 status should be provided for ordinary teachers and students to avoid discrimination and exclusion against vulnerable groups directly affected by the epidemic. Addressing stigmatization can support children and their families to cope with the continued uncertainties of the pandemic. Normalizing messages about fear and anxiety, and promoting self-care strategies could work not only for students and their families but also teachers and other school staff.

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Higher Education

Working Systems for Colleges and Universities to Cope with the Public Health Crisis

In order to effectively prevent and control the COVID-19 epidemic in colleges and universities on a regular basis, education authorities and colleges and universities should take immediate measures such as establishing work teams for coping with the epidemic at the college and university level; formulating and improving work plans, systems and procedures; establishing a routinized joint prevention and control mechanism and strengthening the publicity and education work; and promptly releasing all information relating to the public health emergency and crisis. The aim of these measures at the higher education level is to ensure the health and safety of teachers and students, safeguarding the normal order of education, teaching, and life at colleges and universities, and ultimately maintaining the stability of campus and society.

1. Basic principles

A working system for epidemic prevention and control should be established on the basis of unified leadership and stratified responsibilities. Measures should be taken to prevent COVID-19 cases from being imported from abroad and spread within the country. Staff and students should be categorized and managed precisely according to the scientific guidance of epidemic control. University and departments (colleges) ought to be well-coordinated in playing their respective parts. Prevention and control measures should be people-centred, prevention first and precise. Information should be shared, psychosocial support should be made available, and fake information should be debunked in accordance with the law.

2. Setting up task force for epidemic response

In order to strengthen the organization and leadership of epidemic prevention and control in the education system, leading committees for the public health crisis should be set up by education authorities at national and provincial levels or below and administered by governments at corresponding levels to form an effective, smooth and responsive education system to deal with epidemic situation, and guide colleges and universities in epidemic prevention and control as a whole. The leading committees of education departments at all levels should set up special working teams according to the needs of epidemic prevention and control. The teams should consist of members from relevant functional departments and should carry out joint office work in combination with their respective responsibilities. Colleges and universities should likewise set up leading committees at both university and department (college) levels, with the presidents or deans as the heads of the teams and the primary officer in charge of public health crisis. For universities with multiple campuses, the dean of each campus should be respectively designated as the head to oversee the coping of the public health crisis. According to the needs of epidemic prevention and control, the leading committee for epidemic prevention and control in colleges and universities should set up a special working group with members from relevant functional departments of the university to complete specific epidemic prevention and control work.

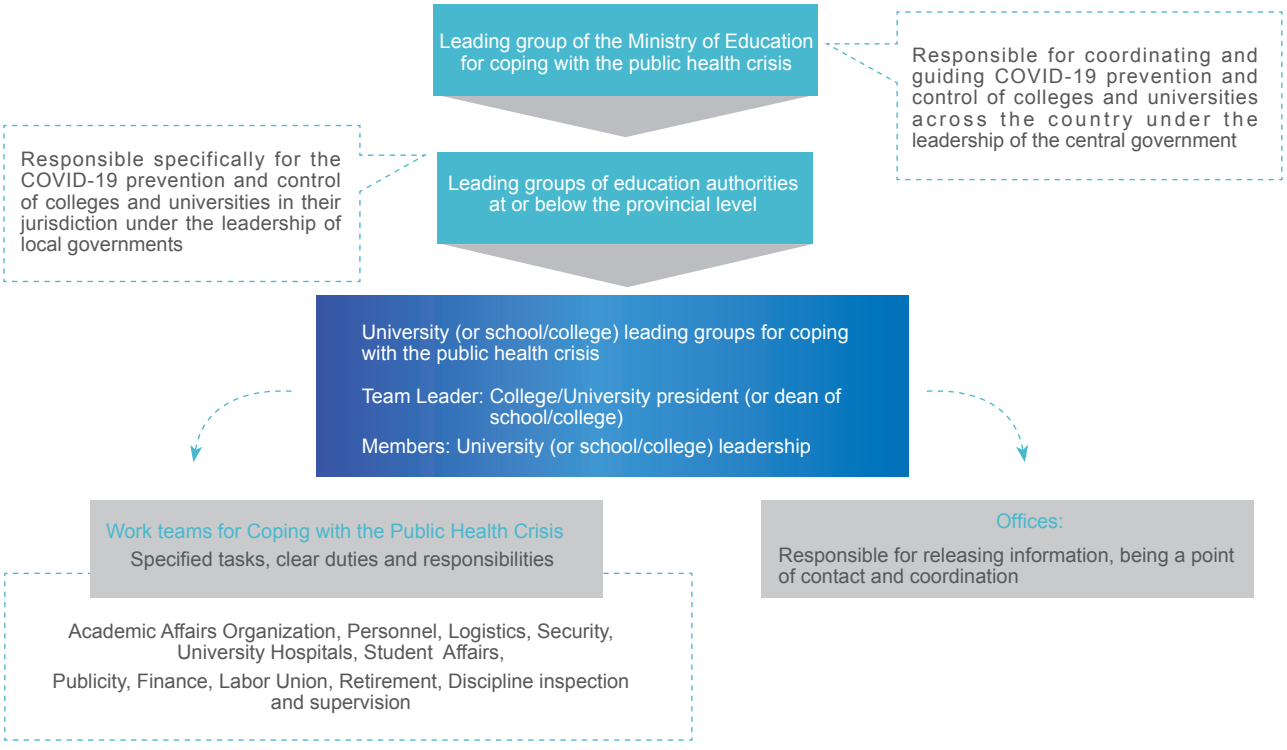


Figure 1 Work teams for coping with the public health crisis in colleges and universities

3. Formulating and improving work plans, systems and procedures

National education authorities should formulate the overall guidelines and plan for epidemic prevention and control in the education field, as well as the guidelines and overall plan for distance teaching and learning, school reopening etc.

Colleges and universities should coordinate with local epidemic prevention and control departments and in recognition of specific circumstances, formulate their own sensible and feasible plans, management frameworks, and procedures targeting prevention and control, work procedures, supply guarantees, information reporting, management measures, and the emergencies reporting and handling etc. Each task should be assigned to a person-in-charge, and the staff should be provided with necessary training.

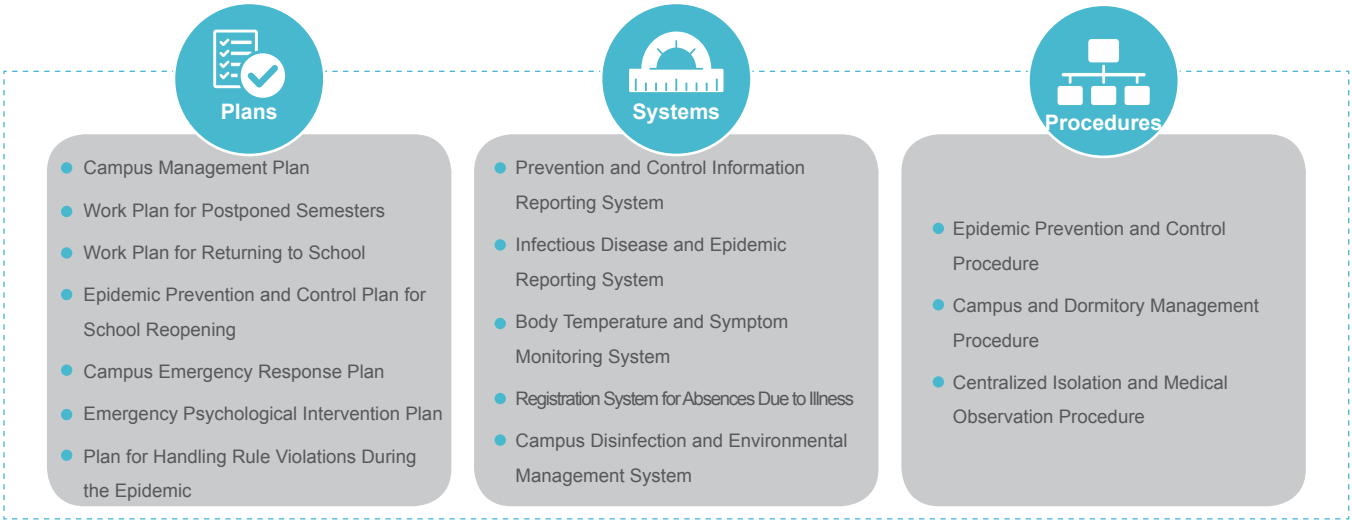


Figure 2 Plans, systems, and procedures for epidemic prevention and control

4. Establishing a regular joint prevention and control mechanism

Education authorities should engage with relevant authorities, such as public security, civil affairs, and medical departments in implementing a joint prevention and control mechanism in order to solicit their support and guidance in epidemic prevention and control in campus, and to ensure that the production and supply of materials for epidemic prevention and control are properly met.

Colleges and universities should also establish close contact with local authorities responsible for epidemic prevention and control, maintain a joint regular prevention and control mechanism by designating contact persons with clear contact information. A prevention and control network should also be established which engages the universities, colleges, departments, grades, and classes to timely collect and report the health information of teachers and students. A “daily reporting” and “zero reporting” system for epidemic related information should be established.

5. Publicity and information dissemination

National education authority should promptly collect and analyse the epidemic-related information that might affect the education system nationwide, and timely share information with education authorities and universities across the country. Warnings should be released as early as possible to remind colleges and universities in their jurisdictions to further strengthen their epidemic prevention and control measures and strictly enforce every measure to prevent outbreaks on campus.

Colleges and universities should adopt appropriate methods to regularly provide categorized knowledge and guidance on epidemic prevention and control to the faculty and students, to make them fully aware of the school’s procedure and systems for epidemic prevention and control, and to nurture an atmosphere of epidemic prevention and control in campus.

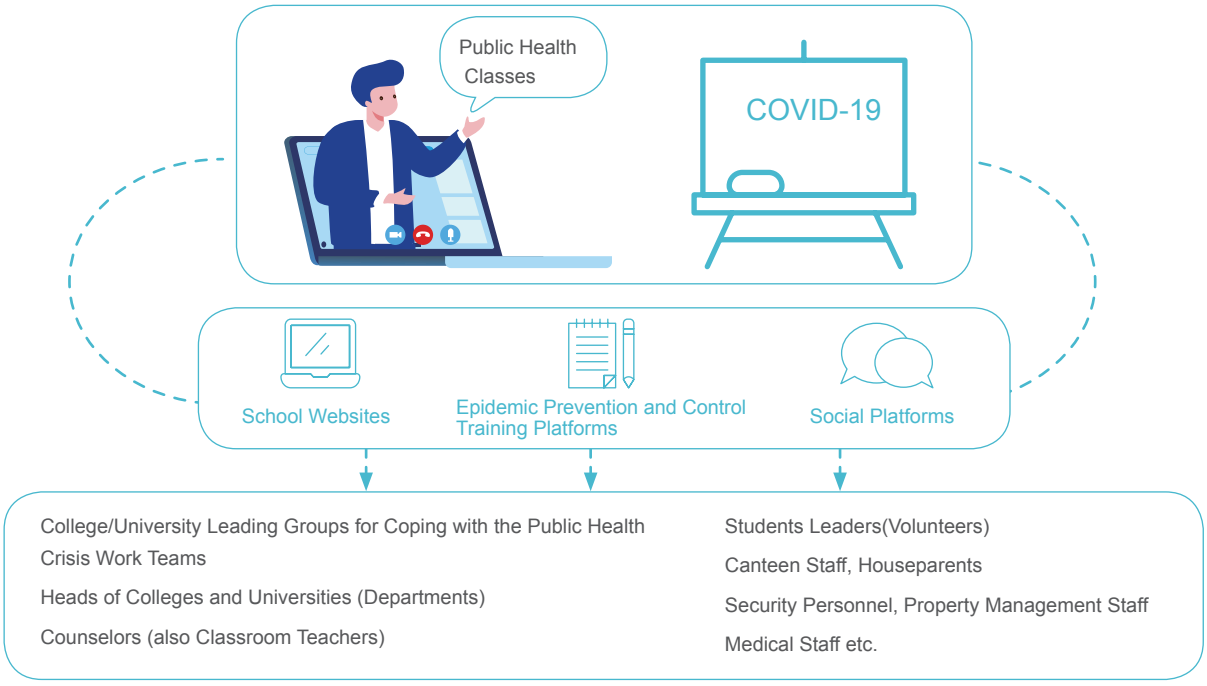


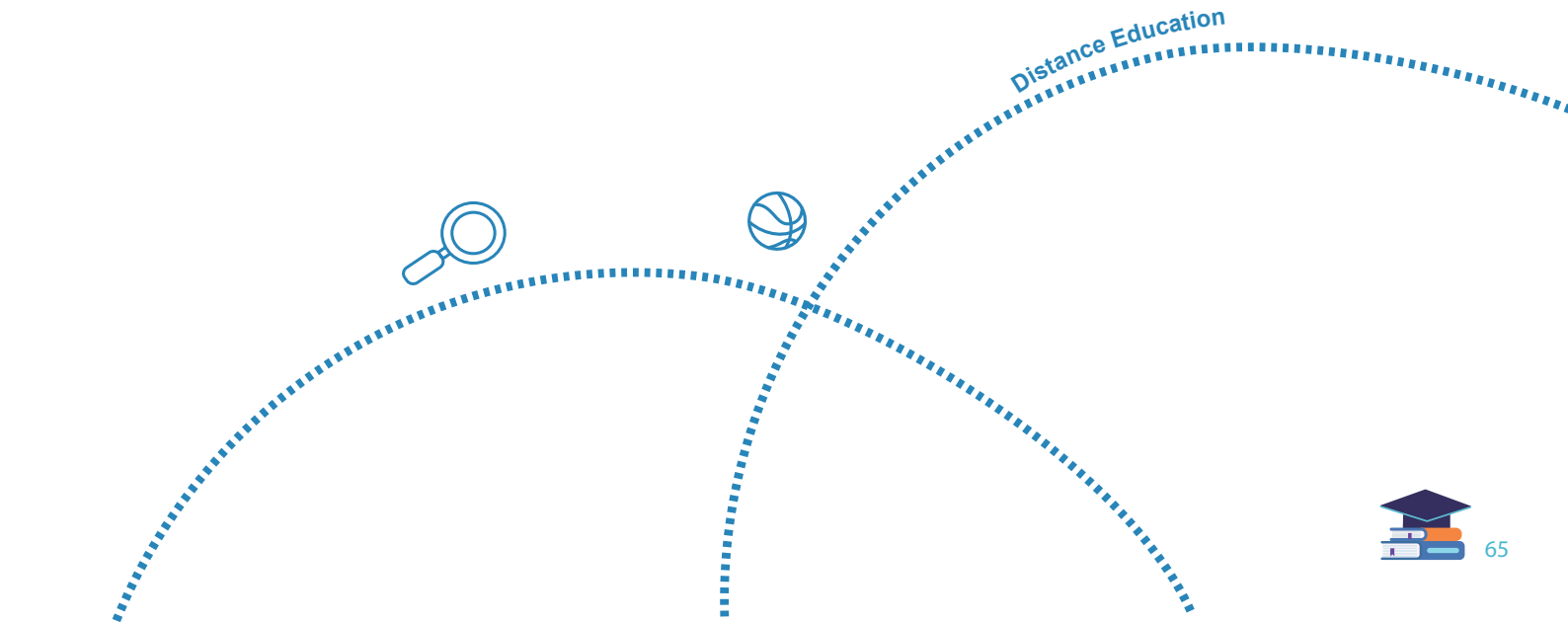
Figure 3 Publicity and education on the epidemic

6. Monitoring the health status of teachers and students

Colleges and universities should set up an information surveillance mechanism using tools, such as big data platforms and Health QR Codes, to keep track of the information regarding the overall health status of teachers and students, their travel records, and epidemic management in the community. Colleges and universities should sustain daily submissions of health information throughout the prevention and control period, and promptly report and handle any abnormalities that have been detected.

7. Information, advice and support services

Colleges and universities should establish on-line information platforms for epidemic prevention and control, formulate a staff-on-duty system, make the hotline number known to teachers and students, promptly respond to any questions raised by teachers and students, and proactively disseminate knowledge on epidemic prevention. They should closely monitor and provide the necessary support to those teachers and students stuck in high-risk outbreak areas, being quarantined for medical observation, and/or diagnosed with COVID-19. The various epidemic psychosocial support hotlines run by local authorities and education authorities can also be utilized to help staff and students protect themselves and offer psychosocial support.



1.Government

Figure 4 Key measures of the government during epidemic prevention and control

1.1 Promoting the organization and management of distance teaching and learning

In the battle against the epidemic, universities and colleges, led by the Government and assisted by relevant sectors, make joint efforts to provide effective distance teaching and learning.

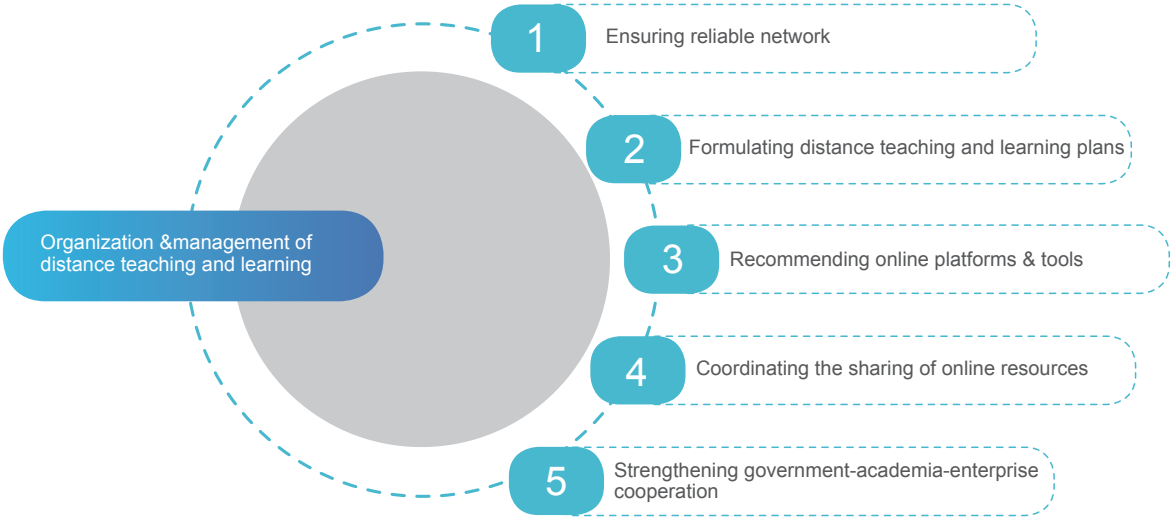


Figure 5 Key measures to organize and manage distance teaching and learning

1.1.1 Ensuring reliable network infrastructure

The Central Government should guide local authorities, educational institutions and enterprises to ensure reliable access to networking services. A 5G network should be preferred where possible.

The national education authorities should connect with national telecom carriers, while local education authorities should connect with local telecom carriers to provide fast and stable internet connections for distance teaching and learning activities. Telecom carriers should be encouraged to relieve the burden of internet bills on poor students.

1.1.2 Formulating national distance teaching and learning guidance

Local authorities should promote the organization and management of distance teaching and learning, by introducing policies on distance teaching and learning for colleges and universities to formulate plans in the principle of tailor-made and diversified approaches. Integration of both online and offline teaching should be explored and the transition from online to offline teaching upon students' return to campus should be arranged to ensure undisrupted teaching and learning.

By 08 May 2020, 1454 colleges and universities had launched online teaching. About 103 million teachers opened 1.07 million courses. There were 17.75 million colleges and universities students taking courses online.

1.1.3 Recommending online platforms and tools

The administrative department for education should collect high-quality platforms and tools according to certain requirements. They should consult industry experts and select comprehensive and professional high-quality platforms, resources and cases for selection and use by college teachers and students. Access to high-quality online courses and virtual simulation experiment teaching resources should be provided to universities across the country. The platforms' selection standards include: 1) The platform must complete the relevant filing and approval procedures in accordance with relevant laws and regulations, so as to achieve legal compliance and meet safety requirements; 2) The platform must guarantee 24-hour operation and that the operation is safe, stable and smooth. The platform must also be equipped with professionals to conduct course review, teaching service management and safety assurance. 3) The courses provided by the platform should be used by colleges and universities that are suitable for online teaching and that support teachers to carry out online teaching activities. 4) The platform must promise to open course resources to colleges and universities for free during the epidemic prevention and control period, and provide free technology, software and service support.

Figure 6 Some of the recommended online learning platforms and solution providers

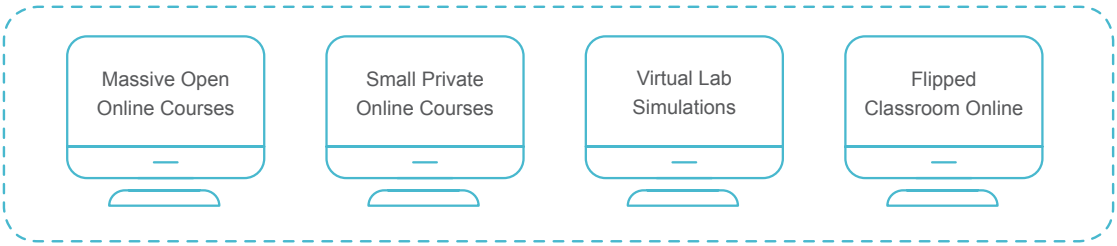


Figure 7 New methods of digital learning

1.1.4 Coordinating the sharing of online resources

The government and education authorities should coordinate and integrate national, local and school teaching resources to provide diverse, high-quality digital teaching resources covering all areas, such as opening the nationally-recognized MOOCs to the public, providing free virtual lab simulation resources, encouraging private online platforms to provide free resources, and encouraging training on distance teaching and learning.

1.1.5 Strengthening government-academia-industry cooperation

The partnership among government, enterprises and universities should be strengthened to effectively promote epidemic prevention and control in the education sector. Enterprises can effectively assist academia in alleviating any shortage of supply by rendering materialistic support in epidemic prevention and control. The government-academia-enterprise cooperation may help make educational resources accessible to universities to ensure distance teaching and learning and scientific research.

1.2 Monitoring and evaluation of distance teaching and learning quality

Policies and standards on distance teaching and learning quality, monitoring and assessment need to be introduced and a system should be developed. Monitoring and evaluation on distance teaching and learning quality should be carried out and reports should be formulated and presented.

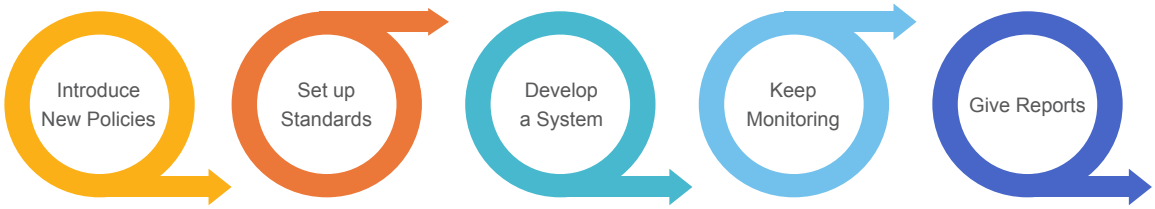


Figure 8 The process of monitoring and assessing distance teaching and learning

1.3 Exams and enrollment

Colleges and universities across the country should be guided to formulate plans to organize the second- round postgraduate entrance examination. The approach of the second round examination can be independently determined by each university/college which is suitable for the characteristics of each discipline and in accordance with the specific requirements to ensure safety, fairness and feasibility. Educational institutions should make preparation for contingency and those adopting remote re-examination should assess the applicability, security, reliability and sustainability of the platform to ensure that the requirements for second round examinations are met. Subject to the development of the epidemic, education authorities have the ability to postpone various certification exams.

1.4 Graduate employment and entrepreneurship

All government departments should take concerted measures to promote the employment and entrepreneurship opportunities for college graduates, such as raising enrolment for further education, expanding employment channels, employment service and career guidance, counseling and reinforcing support for severely affected areas etc.

Hubei Province has taken ten specific measures to help college graduates find jobs and start businesses: organizing an online job market; offering more positions for civil servants and positions in public institutions; increasing opportunities for further education; expanding employment at the grass-root level; promoting multiple channels for graduate recruitment; enhancing employment by boosting investment and industrial development and entrepreneurship; improving employment guidance services; providing assistance to students with special needs; vigorously attracting graduates to find jobs and start businesses in Hubei Province; and consolidating the responsibilities of boosting graduate employment on the competent government departments.

Source: http://www.hubei.gov.cn/zfwj/ezbf/202003/t20200330_2196883.shtml

1.5 Information and best practices sharing

Local governments should promote best practices and success stories in epidemic prevention and control among teachers and students before and after students return to school, to emphasize the responsibility of education sector in this endeavor. Promotion activities should be planned in detail and mainly organized online in various innovated and convergent manners, and via multiple means of media.

2. Colleges and Universities

Figure 9 Key measures for universities and colleges during epidemic control and prevention

2.1 Effective university administration

2.1.1 Campus contingency plans

Universities and colleges should evaluate the epidemic's short-term, mid-term and long-term impact, and develop campus contingency plans according to the local epidemic risk level.

2.1.2 Faculty management

It is necessary to properly allocate and manage college and university teachers' workload, offer psychosocial support and guidance, and recognize and incentivize teachers who have made outstanding contributions. Salaries and benefits of the teaching staff during this period should be guaranteed in accordance with regulations of the education authorities.

2.1.3 Faculty training

College and university teachers should be given training and support according to local conditions to meet the requirements of infection prevention and epidemic control, including psychosocial support and health care services. In order to support teachers' distance teaching, the Office of Academic Affairs or the Information Technology Center of colleges and universities should adopt a mode of online course and networking to carry out training for all teachers, so as to improve teachers' ICT skills for distance teaching. Some social third-party platforms also provide relevant technical and teaching support services for teachers.

2.2 Guidance on scientific research response

It is necessary to formulate guidelines for college and university scientific research and surveys during the epidemic prevention and control period, including designing emergency subjects to serve epidemic prevention and control, solving key theoretical and technical problems faced in this period; minimizing personnel gatherings and on-site activities; reducing offline conferences and suspending field trials, investigations and sampling that are not directly related to epidemic prevention and control; and increasing online services and collaboration etc.

Tsinghua University has set up a special emergency project for pandemic prevention and control technology. For example, in response to the problem of "medical staff in frontline facing high risk of infection", the topic of "isolation wards inspection robots" was proposed. This project exploits Tsinghua University's advantages to the full, integrates medicine and industry, and collaborates with multiple departments (Note: The School of Aerospace and Aviation, the Department of Mechanical Engineering, the Department of Computer, the School of Vehicles, and Beijing Tsinghua Chang Gung Memorial Hospital jointly participate). The project was launched on the first day of the Chinese New Year on January 25, put into clinical trials on the 16th day, and then went to the front line of the fight against the pandemic on the 30th day (Ditan Hospital, one of the designated hospitals for covid-19 patients), which made a great contribution to the pandemic prevention and control.

Source: https://www.sohu.com/a/370950158_105067
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In response to the urgent needs of the prevention and control of the new coronavirus pandemic, Renmin University plans to focus on setting up a number of projects to strengthen national governance related research, serve government decision-making and pandemic prevention and control. Projects range from public health, emergency management, public opinion guidance, to market supervision and legal construction. This shows Renmin University's confidence and determination in carrying out scientific research on the prevention and control of the pandemic and its impact on the economic society and international situation.
Source: https://news.ruc.edu.cn/archives/269588

2.3 Organizing distance teaching and learning

Universities shall select the best plan in line with their own conditions, infrastructure and network environments; work closely with course platforms under standardized management; strengthen supervision over the course content, quality assurance, teaching process and platform operation; and prevent harmful information from being disseminated, so as to ensure safe and smooth operation of distance teaching and learning.

While fighting hard against the COVID-19 epidemic, Wuhan University started online teaching on 17 February 2020 (the original starting date for spring semester). During the semester, 2,213 teachers opened 4,258 undergraduate courses. There were 23,865 students attending the online courses, making 303,217 person-time visits in the online teaching platforms. The opening rate of theoretical courses in the whole university has reached 97.46 percent.

2.3.1 Safety and health education for teachers and students

During the epidemic, all colleges and universities shall disseminate epidemic protection and control knowledge among teachers and students, and incorporate such themes as patriotism, life, a sense of social responsibility, respect for rules, and love and gratitude for colleges' and universities' activities.

2.3.2 Developing management approaches for distance teaching

Colleges and universities shall develop management approaches to distance teaching to strengthen their capabilities to organize and coordinate the work of distance teaching, ensuring that the quality and effect of distance teaching is equivalent to that of offline classroom teaching. They shall also make an overall plan for the continuity of the curriculum teaching programmes during and after the epidemic.

2.3.3 Ensuring environments and conditions favorable for distance teaching

Colleges and universities shall conduct an overall assessment of their distance teaching and learning environment, select distance teaching and learning platforms according to actual circumstances and ensure that distance teaching and learning proceeds smoothly by taking several measures as follows:

(1) preparing essential distance teaching and learning equipment, infrastructure and network facilities for their teachers and students to prevent all students from lagging behind;

(2) providing university and college teachers and students with necessary instructional software, tools and platforms;

(3) developing new distance teaching and learning resources and purchasing digital network services and teaching resources as required;

(4) recommending diversified distance teaching and learning methods to the lecturers;

(5) training university teachers and students to familiarize themselves with web-based teaching platforms, client applications and management systems to improve teachers' teaching skills and students' learning ability in the context of distance teaching and learning;

(6) building distance teaching and learning platforms and technical support teams, assisting teachers in creating classroom teaching and curriculum resources, collecting problems about platform operation and devising solutions without delay; and

(7) singling out and popularizing outstanding distance teaching and learning schemes and methods in a timely fashion.

2.3.4 Improving the support system for distance teaching and learning

Universities shall establish a security system for distance teaching and learning and improve it according to actual situations in real time:

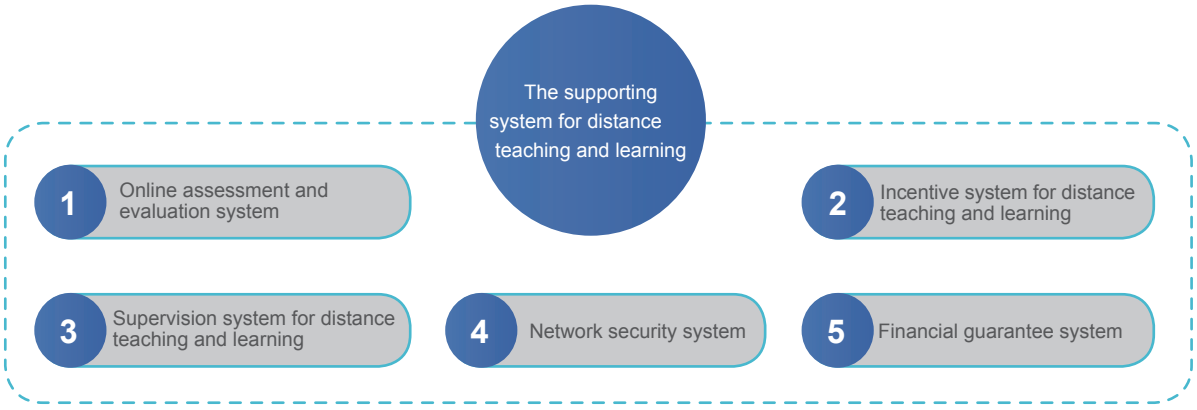

Figure 10 Several aspects of the security system for distance teaching and learning

2.3.5 Ensuring the quality of distance teaching and learning

Efforts should be prioritized to ensure quality assurance of distance teaching and learning. Based on the teaching arrangements in the current academic year, colleges and universities shall regularly organize online examinations and assessments to evaluate teachers, courses, students, or platforms, conduct surveys in teaching quality and satisfaction, and take timely measures to address problems found in the assessments and surveys.

Example: Colleges and universities use information technology to monitor the quality of distance teaching and learning and carry out statistical analysis of teaching contents and activities.

2.3.6 Organizing graduation-related projects and remote dissertation defenses

Universities can carry out the topic selection, proposal, supervision and defense of a dissertation relating to a graduation project in an orderly manner by answering questions online and organizing online defense. Teachers can use the graduation project guidance system, instant messaging software and video conference system to provide advice to students on how to complete their graduation projects or dissertations.

2.4 Running re-examinations online for postgraduate enrolment

The online second round examinations for postgraduate enrolment commonly take the form of “the online interview system plus dual-position shooting”. Universities ought to develop guidance documents on the online second round examinations for postgraduate enrolment, such as work organization plans, basic process specifications, detailed operational procedures and contingency plans, disclose guidelines and Q&As on the online second round examinations, and execute a rehearsal in advance.

2.5 Carrying out activities to support employment and entrepreneurship

Universities shall take advantage of resources such as funds, information and platforms to carry out activities to facilitate and support the employment and entrepreneurship of the graduates, such as timely collecting, sorting out, storing and releasing information on talent supply and demand, holding online job fairs, setting aside special subsidies for undergraduate entrepreneurs, and encouraging graduates to start their own businesses.

2.6 Establishing mechanisms to help students and teachers in need

Universities shall collect the personal and family information on economically disadvantaged students and teachers and develop mechanisms and specific measures to support them. At the same time, they should work to ensure the sustainability of the support to lessen the impact of the financial disadvantage on teaching and learning quality.

3. Teachers

3.1 Strengthening support for students

College and university counselors play a vital role in collecting information, promoting policies and helping students stay mentally healthy during the epidemic and health emergency.

3.1.1 Fulfilling daily administration of students

During the school closures, college and university teachers should establish contact with students, keep them timely informed of the college/university's notification of epidemic control, know about students' situations, strengthen online student administration, handle unexpected events in due course and ensure students' safety. College and university counselors and class advisers may also keep in touch and work together with the parents via social media, cell phone and other tools, to keep updated about the students' situations and help solve the problems that the students may encounter during this special period.

3.1.2 Conducting life and health education among the students

In addition to epidemic prevention and control, teachers can promote life education, social responsibility, love and care and gratitude for students through such forms as sharing online articles, writing letters, and holding video conferences and thematic class meetings, so as to enhance students' awareness of life and health and develop a sense of social responsibility.

3.1.3 Caring for students in need

College and university teachers should stay informed of the health and mental condition of their economically disadvantaged students. They should pay more attention to the students with special difficulties in severe epidemic-stricken areas, impoverished areas, rural areas and remote areas, and respond to those students' demands. As for the students in poor learning conditions, teachers should prepare teaching plans and strengthen teaching guidance to ensure no student is lagging behind.

3.2 Improving teaching skills

College and university teachers should improve their teaching skills by taking part in teacher training and distance teaching and learning research activities to ensure that the quality and effect of distance teaching is equivalent to that of offline classroom teaching.

3.2.1 Receiving teacher training

The distance teaching and learning training programmes launched by universities can help teachers get to know distance teaching and learning platforms, tools and pedagogical skills. They can learn distance teaching and learning ideas and methods (including course development, instructional design and teaching management), share interactive teaching experiences and improve their competency-based teaching skills.

3.2.2 Conducting distance teaching and learning research

During the COVID-19 epidemic, college and university teachers can carry out distance teaching and learning research and brief surveys through preparation, information sharing, discussion, summarization and enhancement of a specific topic, all to improve teaching quality.

3.3 Practicing distance teaching and flexible teaching

During the school closures, teaching should be conducted in a flexible manner, i.e. flexible timetables and venues, remodeled learning contents, diverse teaching methods, multidimensional learning assessments, right learning resources, convenient learning environments, reasonable application of technology, effective learning support and special partners. The design and practice of distance teaching and learning and flexible teaching are processes of systematization where teachers should attach importance to six key links to ensure effectiveness.

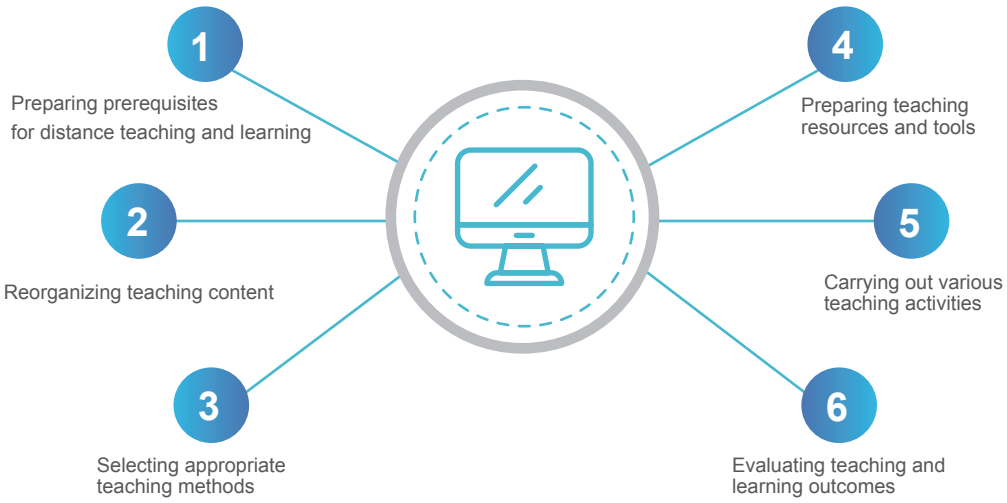

Figure 11 Six key links of distance teaching and learning and flexible teaching

3.3.1 Preparing prerequisites for distance teaching and learning

College and university teachers need to prepare prerequisites for distance teaching and learning, such as the physical space, basic technical conditions, internet access, teaching platforms and tools, online support services, teaching conditions etc.

3.3.2 Adjusting the syllabus and contents

Due to the changed teaching conditions during the epidemic, the old face to face teaching methods and contents of courses are no longer suitable for distance teaching. Therefore, college and university teachers should reorganize teaching contents according to teaching objectives and distance teaching conditions, and may, if necessary, change the order of the course contents, choose alternatives or remodel teaching units.

3.3.3 Selecting flexible instructional modes

During the epidemic period, teachers need to use proper means of communication, information sharing techniques, interactive teaching and instructional strategies to reach students, and colleagues and resources, thus forming various modes of distance teaching and learning. In selecting the right tools to organize distance teaching and learning, teachers should take into consideration the teaching resources and local network infrastructure, teaching ability, the students' characteristics, the anticipated teacher-student interaction models and the time duration of teaching activities. They can also adopt the inter-university collaborative teaching mode.

Table 1 Some examples of different organizational forms of distance teaching and learning based on teacher-student interaction modes and the time response of teaching activities

Time Response	Organizational Forms	Technical Means	Learning Resources	Learning Content	Requirements for Teachers and Students	Expected Results	Potential Risks
Synchronous Teaching	Live- streaming lectures	Live-streaming platforms	Existing courseware/ lecture notes	Knowledge taught through face-to-face lectures	Teachers should have the ability to use live-streaming tools while students need to stay focused for a long time before the screen.	Achieving outcomes as good as those of offline classroom teaching	Due to high requirements for network bandwidth, the live stream may lag or disconnect; the poor real-time performance of online discussion may also cause bad student experience.
	Online real-time interactive lectures	Interactive classroom software	Learning materials and guiding questions that teachers need to provide for students before class	Main points and difficulties	Teachers must have the ability to guide students to participate in interactive teaching activities while students need to exchange ideas actively with teachers online.	Achieving outcomes as good as those of face-to-face discussion	
Asynchronous Teaching	Web-based independent learning supplemented with real-time interactive Q&As	Online learning platforms and real-time interactive tools	Existing MOOCs or self-developed curriculum resources	Rich learning resources and complete learning activities	Teachers should be able to design curriculum resources including course videos and online learning activities while students need strong capabilities for independent learning.	Helping students improve their independent learning capability	Lacking a sense of community, the students with poor independent learning capability are likely to lag behind.
	Online collaborative learning guided by teachers	Online learning space, online collaborative learning platforms and learning analysis tools	Special websites, databases and learning tools	Individual and group activities; individual and group tasks	Teachers should have the ability to diagnose problems on the basis of data analysis results and use instructional interventions timely while students need to be able to work with others as well as learn independently.	Helping students improve their cooperative learning capability	There is a big gap between groups in terms of learning outcomes, and some students may lack enthusiasm for learning.

3.3.4 Preparing proper teaching resources and tools

When selecting learning resources for students, college and university teachers should consider the appropriateness of their contents, degrees of difficulty, structures, media tools and resources organization. When selecting learning tools for students, teachers should consider the serviceability of the tools and user friendliness.

3.3.5 Adopting various learning styles

College and university teachers should understand the features of distance teaching and learning and be flexible in adopting learning styles which are suitable for individual students, learning objectives and contents, and teaching scenarios. They should also use interactive methods such as clocking-in, mini programmes and role plays to increase student engagement and promote effective interactive learning.

3.3.6 Evaluating teaching and learning outcomes

The evaluation of distance teaching and learning at universities and colleges should consist of diagnostic evaluation, process evaluation and summative evaluation, shifting its focus from learning outcomes to learning processes and from teacher-centred instruction to learner-centred education.

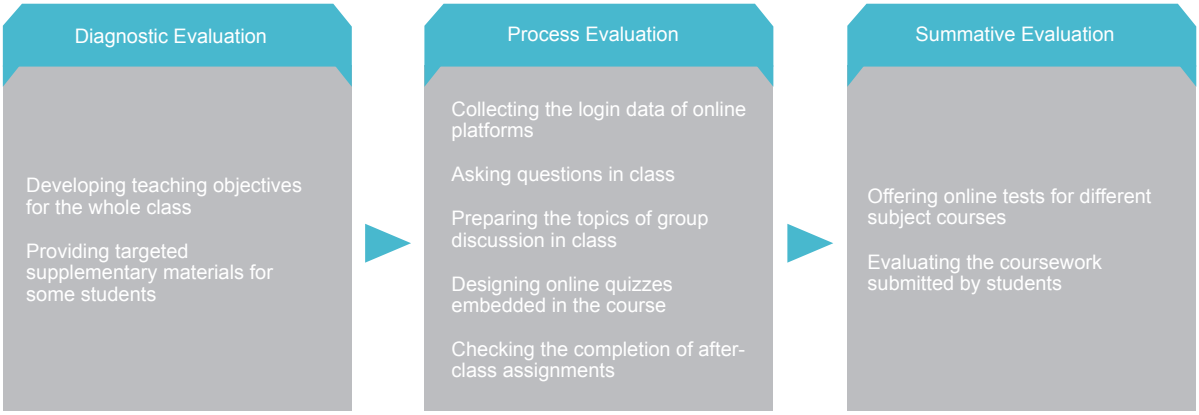

Figure 12 Diagnostic evaluation, process evaluation and summative evaluation

3.4 Supervising students' graduation projects or dissertations

Academic advisors should contact students via social software or cell phones to better understand their task progress, provide advice and counseling, check students' performance in doing graduation projects or writing dissertations, and answer their questions on a regular basis. The advisers should also make the best use of web resources to prepare students for project or dissertation proposals, hold routine Q&A sessions, make reference data accessible to students, and help them determine their writing orientation, by adhering to the principles of diversified instruction forms, uncompromised dissertation quality and progressing as scheduled, with an aim to ensure that students complete quality graduation projects or dissertations as scheduled.

4. Parents

During the epidemic school closures, parents should pay attention to universities' notifications, support students' learning, ensure requisite stationery and learning facilities, and care about students' mental health and general well-being.

4.1 Providing a favorable learning environment

During the epidemic control period, students' learning model features web-based independent and ubiquitous at-home learning, so parents should provide support to the students with an appropriate environment and hardware and software facilities, such as a quiet learning environment, a stable internet connection, and requisite stationery and learning facilities. Parents should also encourage their students to search for helpful on-line learning resources as needed and help them develop proper online learning concepts and habits.

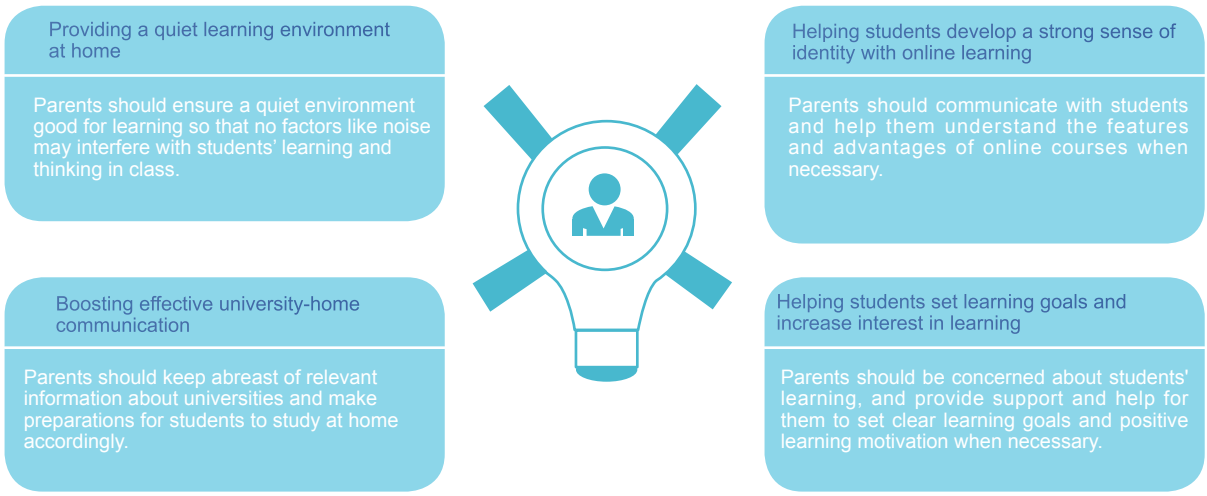

Figure 13 Online learning conditions

4.2 Supporting students' learning

Parents should give attention to universities' notifications and support students' distance learning in different ways. Parents should encourage students to make learning plans on their own and help them make necessary timely adjustments. During the epidemic, parents should also play an exemplary role to help students develop good online learning habits.

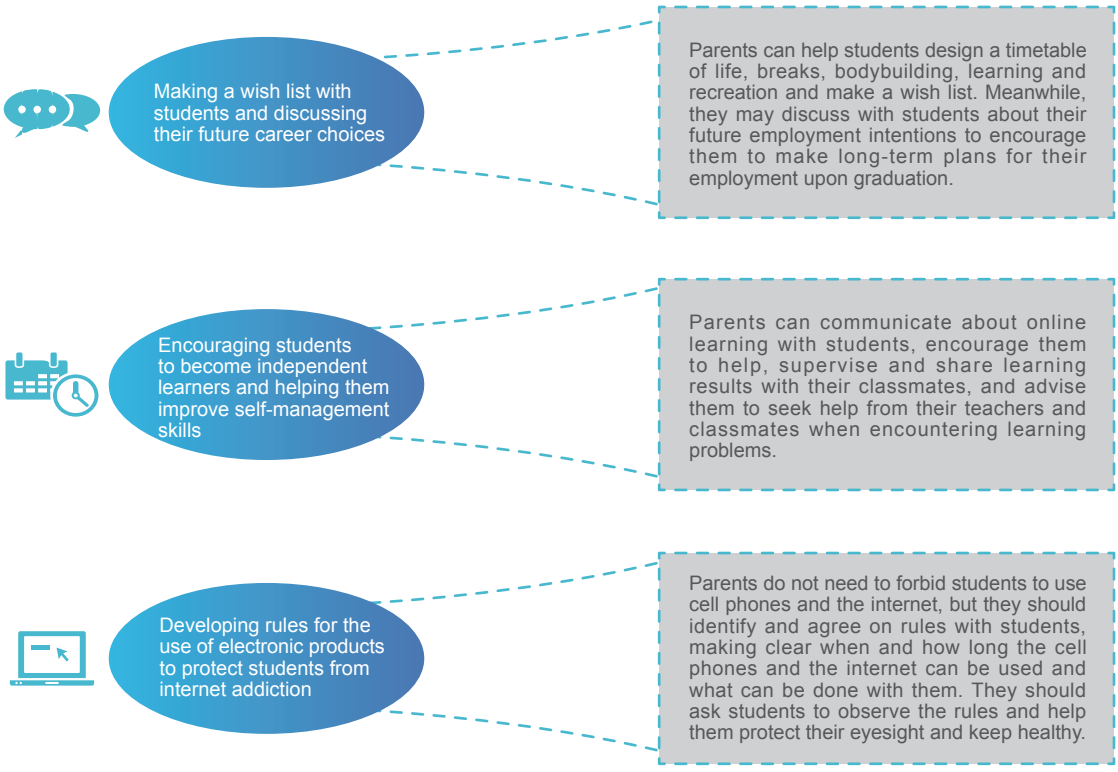

Figure 14 Several ways to help students develop good learning habits

4.3 Managing emotions

During the epidemic, in addition to helping students relieve stress, parents should care about students' emotions and learning performances, adjust their own physical and mental conditions properly, refrain from passing on negative emotions to students and help students get out of abnormal mental states soon.

5. Students

The independent learning ability of college and university students refers to their competence to set learning goals, use methods effectively, monitor and evaluate their own learning processes and make career plans. During at-home learning, students should strike a proper balance between study and rest. These are needed by both national and international students.

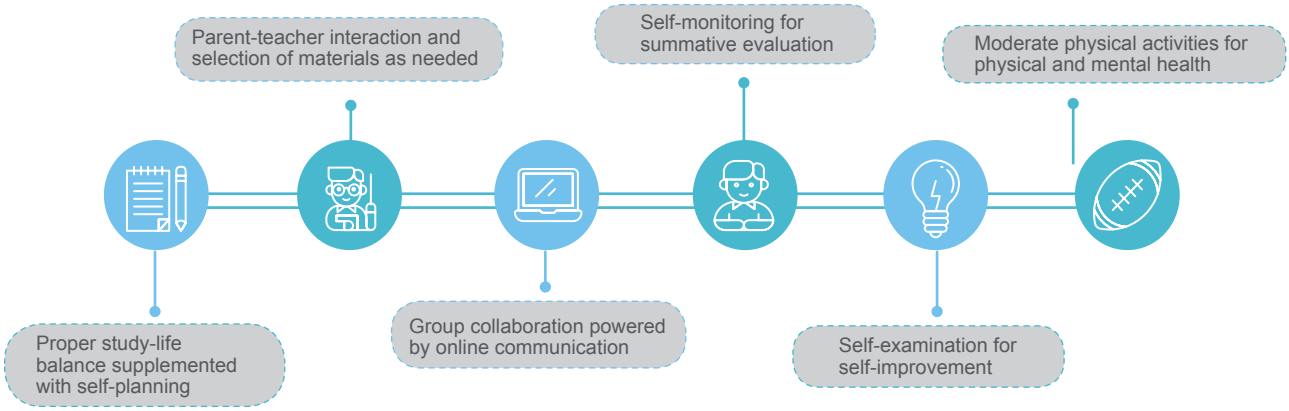

Figure 15 Six key elements of at-home learning

5.1 Balancing study and life by self-planning

College and university students should make well-designed daily schedules to strike a proper balance between study and rest, select courses, resources and tools according to their own career plans and orientation for course learning, and personal development to improve targeted skills.

5.2 Keeping in touch with teachers/counselors, and selecting learning materials on demand

As students are aware of college/university rules during the epidemic from their counselors, they need to make sure that the college/university can reach them via calling their cell phones, timely check the information released in online class groups, report health conditions and other personal information to counselors through the platforms, and actively participate in intramural thematic activities. Students may choose learning materials from a huge pool of resources according to their own plans and interests.

5.3 Cooperative learning powered by online communication

College and university students can take advantage of various social applications and platforms to create learning groups and communities for research, communication, content creation, resource sharing and cooperative learning. To ensure effective cooperative learning, they should focus on five essential factors, i.e. keep positive interaction, stay interdependent and encouraging, shoulder individual and group responsibilities, develop interpersonal skills, and promote group growth.

5.4 Self-monitoring and self-evaluation

College and university students may conduct self-evaluations based on learning objectives, personal learning status or comparison with their peers' study performances. By evaluating their own work and examining daily behaviors, they can record personal progress and changes and improve previous goals and plans, thus giving play to the dynamic role of self-evaluations to the greatest extent possible. The self-evaluations can be conducted from three aspects, i.e. what they have understood, what they want to know and what they have learned, by using rating scales, completing learning status tests and drawing concept maps.

Table 2 The three aspects of self-evaluations

What have I understood?	What I want to know?	What I have learned?
Review the knowledge you have now acquired and make a list in a table.	(Add a list of problems you want to solve to the table).	(After solving the problems and completing learning tasks, summarize learning experience and gains and reflect on shortcomings in your learning).

5.5 Self-reflection for self-improvement

College and university students can conduct self-examination on a regular basis or ask their teachers or classmates for feedback, summarizing their own independent learning performance, relations with their parents, cooperation with classmates or family members, and communication with teachers. They should conduct effective self-examination with five steps, namely, description, reflection, the identification of contributory factors, evaluation and learning.

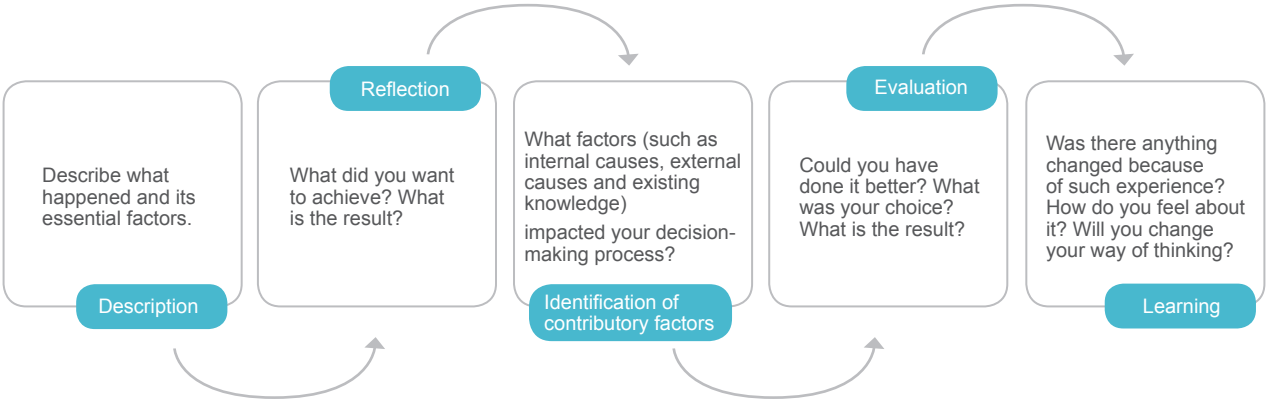

Figure 16 The five steps of self-examination

5.6 Exercise moderately and maintain both physical and mental health

The effective ways of ensuring both physical and mental health are to build a good bedtime routine, keep a balanced diet, do moderate physical activities and socialize with others on the premise of practicing physical distancing. Students should seek psychosocial support prior to reopening when possible.

During the home isolation, college and university students have few chances to talk with friends offline. Therefore, they should actively enhance communication with their family and do housework voluntarily to help parents out. At the same time, they should keep in touch with their friends online as a way to relieve stress and maintain friendships. In addition to protecting themselves from the epidemic, they should be aware of their social responsibility and contribute to the work of epidemic control as much as possible. International students, staying in the country of study, should also pay attention to strengthening the contact with family, teachers and friends.

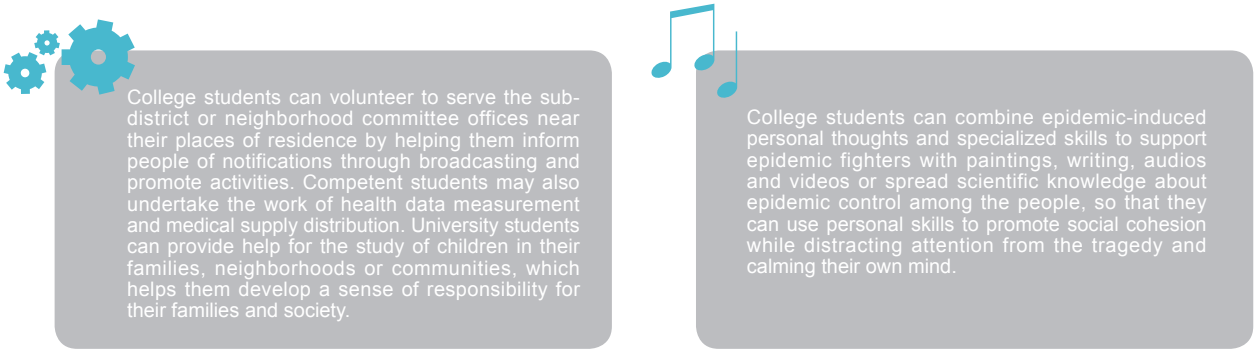

Figure 17 Ways to volunteer during the epidemic

School Reopening

1. Prior to reopening

1.1 Government guidance

As regards conditions for class resumption and the evaluation standards, education authorities need to give guiding opinions and requirements in accordance with the government's general epidemic prevention and control plan. For colleges and universities, school reopening arrangements should be coordinated under the principle of "tailor-made approaches for each college". To this end, education authorities need to review the class resumption plans submitted by each college and give suggestions to make it pragmatic and feasible. Built on approved class resumption plans, colleges and universities should make a staggered timetable for class resumption. Education authorities and other related administrative departments should oversee how classes are resumed across colleges to ensure the safety of teachers and students on campus.

1.2 Elaborating reopening plan and training plan

According to the general situation of epidemic prevention and control, colleges and universities should develop a return-to-campus schedule with safety in mind, and submit it to education authorities for approval. First, colleges and universities need to identify those who should defer their return or should be collectively quarantined for medical observation. Then they need to make arrangements that enable the faculty and students to return successively in groups, based on specific hours per day), in alignment with the epidemic prevention and control requirements specified in the documents issued by the central government and by local governments.

Colleges and universities should issue a "Notice on Class Resumption" beforehand to publish epidemic prevention and control measures to be taken in the course of return. Alongside that, before reopening its faculty and students should undergo training and drilling online in regard to epidemic prevention and control knowledge and skills, the process of return and emergency response plans.

Before returning, faculty members ought to get in touch with the leadership of their departments and students should get in touch with their tutors or counselors. Faculty members or students need to determine when to return and whether to undergo medical observation on the basis of their own risk level identified by their schools, and learn in detail their colleges' arrangements for check-in time, check-in flow, access routes, board and lodging.

1.3 Making teaching arrangements

Colleges and universities need to make adjustments for postponed class resumption as required by education authorities, and make a response plan for the students who cannot return when classes are resumed. In this connection, it should leverage its online platforms, high-quality online courses and software to organize distance teaching and learning and develop online classrooms (Figure 18) in ways that help maximize the effectiveness of teaching.

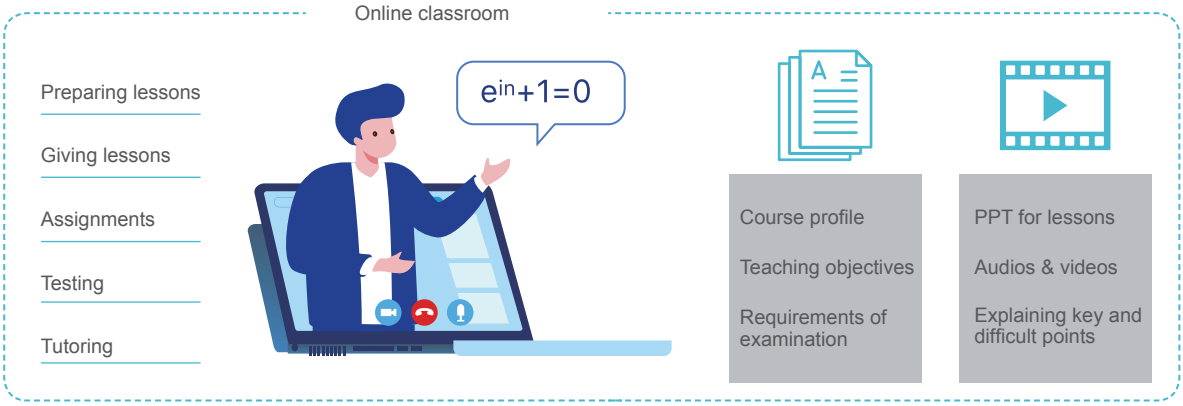

Figure 18 Arrangements for distance teaching and learning

1.4 Monitoring health data

Information concerning the whereabouts and state of health (SoH) of every teacher and student during the epidemic should be collected without any exceptions. With the "daily reporting" and "zero reporting" systems put in place, a department or school needs to meticulously review and systematize the data reported by its faculty and students within 14 days before class resumption, and then list those who are allowed to return.

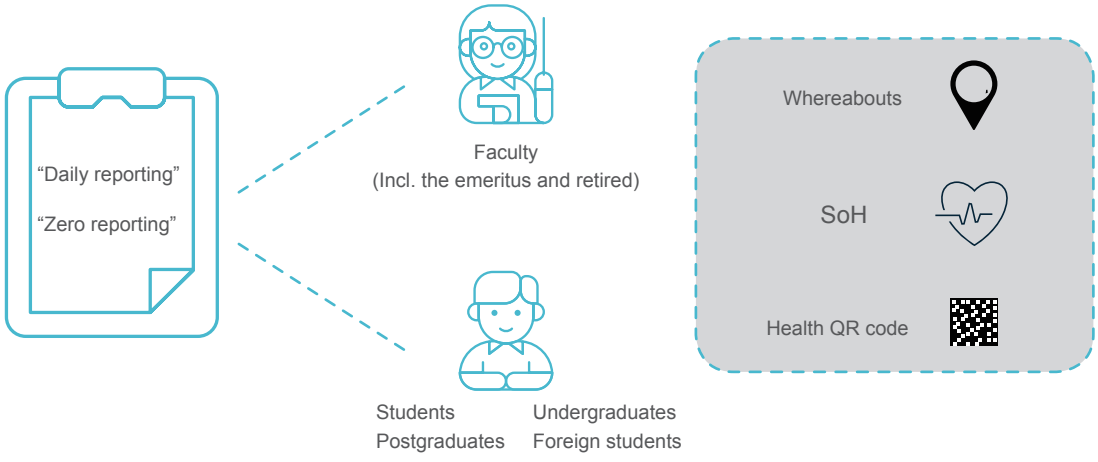

Figure 19 Health Monitoring

1.5 Improving the campus environment

To ensure effective epidemic prevention and control on campus, colleges and universities need to do thorough cleaning and sanitize public areas like classrooms, canteens, dormitories, libraries, activity centres and toilets. Beyond that, sufficient taps, as well as cleaning supplies like hand sanitizers, soaps and paper towels, should be made available, especially in key public places where there may be lots of people and public surfaces, such as classrooms, outside of toilets, canteens and libraries, so as to ensure the faculty staff and students practice good hand hygiene.

An independent group quarantine and medical observation area should be established at a designated location not close to any classroom or canteen, and is prevented from engaging an air exchange with other indoor areas. Such area needs to be equipped with a management system, a specially-assigned person in charge, and safety protection supplies as well.

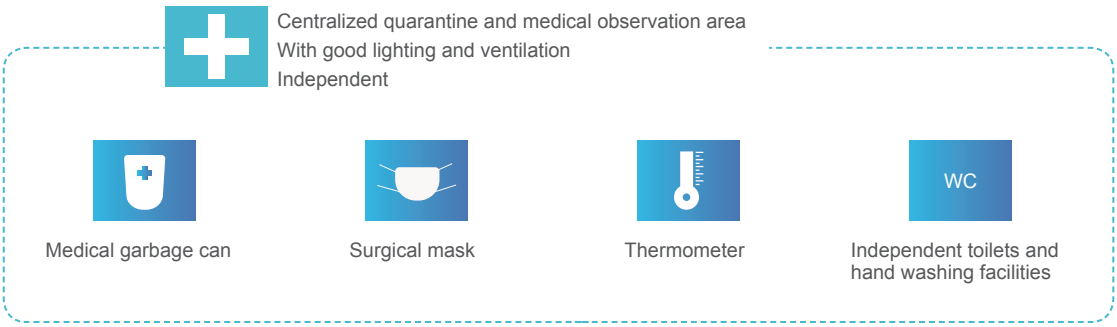

Figure 20 Centralized quarantine and medical observation area of campus

1.6 Strengthening campus safe operations

Colleges and universities should be kept under closed-down management during the epidemic. That means visitors need to go through an identity review, identity registration and temperature measurement. Colleges and universities ought to organize a security overhaul before class resumption as part of stronger campus management. Problems and risks should be registered, and relevant solutions should be developed for problem resolving and risk control.

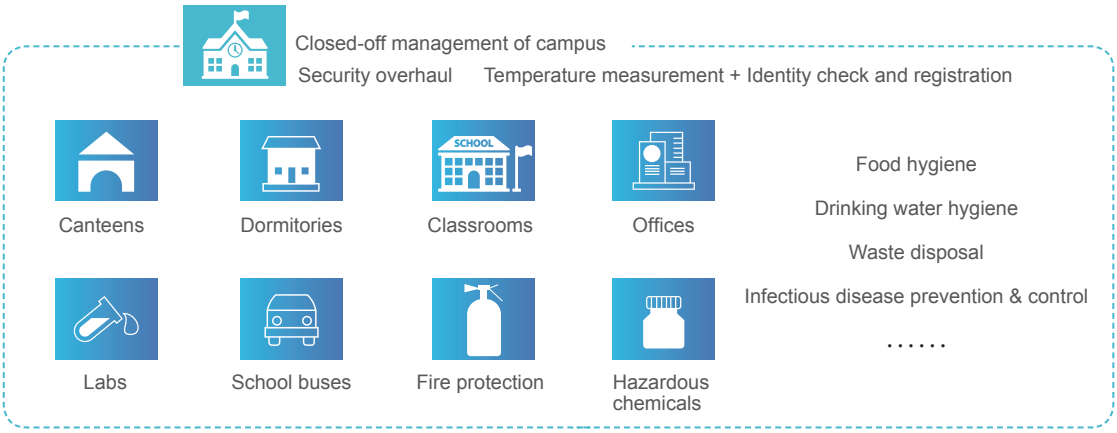

Figure 21 Campus security management

1.7 Supplies support

Colleges and universities need to prepare a “List of Supplies for Epidemic Prevention and Control”, and store a complete range of supplies sufficient for epidemic prevention and control. Such supplies require a warehouse entry-exit registration. Funds should be raised as specified, from various sources, for emergency response during the epidemic prevention and control. Communication with canteens, supermarkets, stores and other business operations should be improved as a way to keep daily necessities systemically and readily available at stable prices.

Table 3 List of supplies for Epidemic Prevention and Control

List of Supplies for Epidemic Prevention and Control on College/University Campus	
Type	List
Testing supplies	Contactless thermometers, mercurial thermometers
Disinfection supplies	Chlorine-releasing disinfectant, 84 disinfectants, hand sanitizers, UV-lamps, sprinklers, etc.
Protection supplies	Disposable medical gloves, surgical masks, helmets, latex gloves, isolation gowns, etc.

1.8 Mechanisms for liaison and interaction with communities, government, healthcare authorities and epidemic prevention authorities

Colleges and universities need to join local education authorities, healthcare authorities, epidemic prevention authorities, disease prevention and control agencies, medical institutions (fever clinics, designated hospitals), sub-district communities and public security bureaus in developing joint prevention and control mechanisms where contacts and contact information are clearly indicated. Meanwhile, all these stakeholders should make a coordinated emergency response plan.

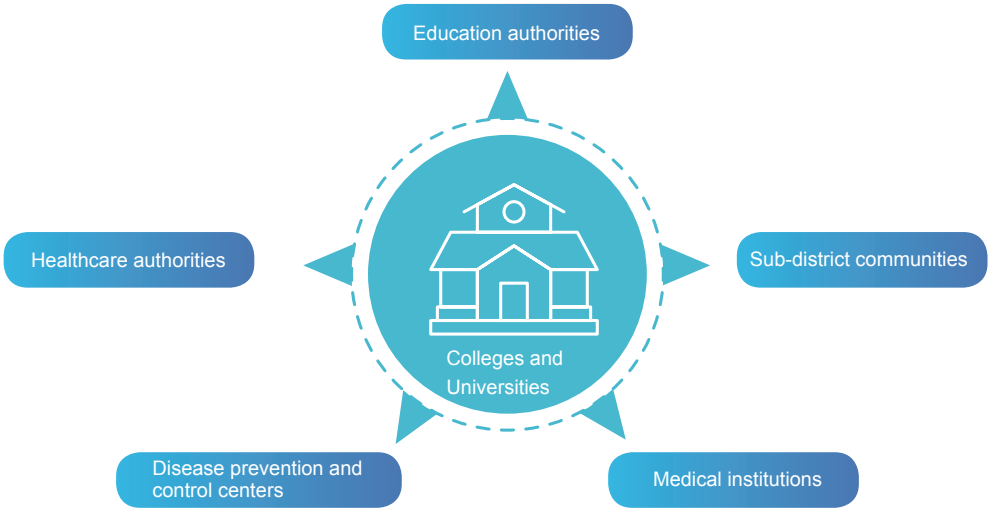

Figure 22 Joint prevention and control

1.9 Emergency drilling

In the event that a confirmed or suspected COVID-19 case is found among the faculty or students, colleges and universities should activate an emergency response mechanism involving the general offices, hospitals, logistics departments, security departments, student affairs departments and HR departments, and directly report the case on line within two hours. Meanwhile, the case and affected areas should be isolated immediately, and close contacts should be quarantined for medical observation at a designated place. Furthermore, colleges and universities need to notify the competent healthcare (disease control) authority of the case, and wait for health professionals (referral, isolation-based treatment, sampling survey, screening of close contacts, area disinfection, etc.) to handle it.

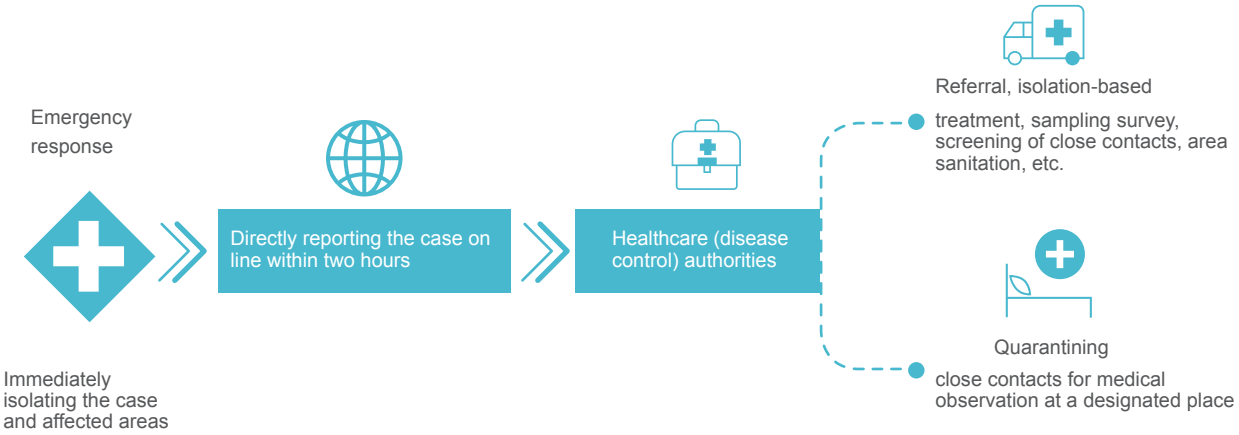

Figure 23 Emergency drilling

2. Return to Campus

2.1 Risks evaluation and categorized response plans

Risk evaluation and category-based handling of teachers and students who have returned holds the key to epidemic prevention on campus. A campus should establish return-to-campus standards for teachers and students from different regions, on the basis of their relevant epidemiological history and symptoms (if any).

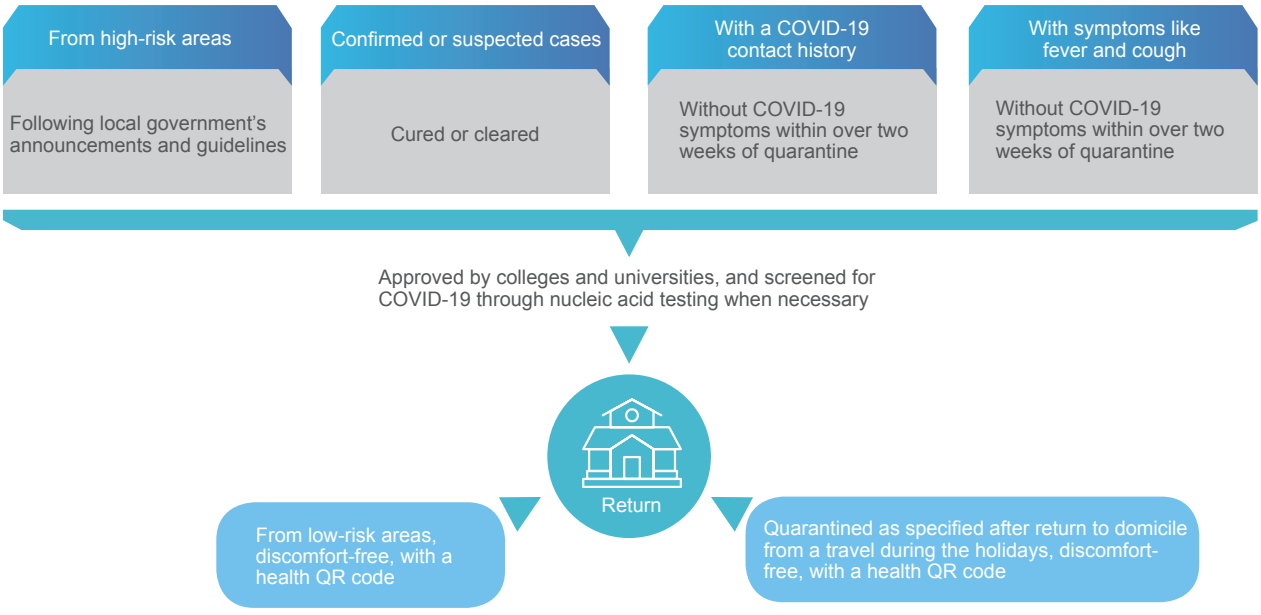

Figure 24 Policy on risk evaluation and category-based handling of teachers and students who have returned

2.2 Personal protective guidelines on the way back to school

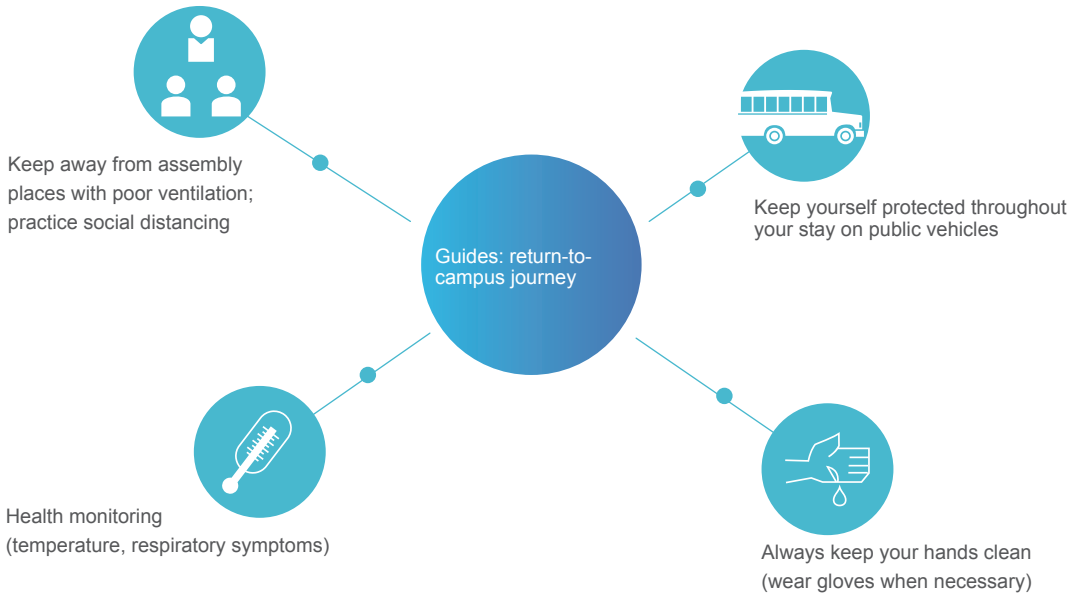

Figure 25 Guides: Return-to-campus journey

It is recommended that college and university teachers and students return by private cars if possible, and properly wear masks throughout the journey along with other required protective measures taken. Hands should be washed or sanitized frequently to keep them clean, and don't touch eyes, mouth, nose and face. Teachers or students should keep away from assembly occupancies with poor ventilation, stay at least one meter from other people, and keep the tickets bought for the journey. Beyond that, they should actively monitor their own SoH.

2.3 Personal protective guidelines on the way back to school

Figure 26 Health Evaluation on Return-to-campus Day

College and university teachers and students who have already returned should fill in the "Health Registration Form" accurately. Colleges and universities need to establish a temperature measurement point. The faculty and students of colleges and universities need to return in staggered groups, and every entrant should stay at least one meter away from other people. As part of health evaluation, colleges and universities should assign their own doctors or external physicians to inquire and examine teachers and students. Those who pass such examination should follow the specified route for check-in and registration. Those who show abnormality are required to be put under quarantine, or go to the nearest fever clinic, followed by category-based handling on the basis of diagnostic results.

2.4 Guidelines for quarantine and medical observation at designated places

Colleges and universities should designate a quarantine and medical observation area meeting the requirements of epidemic prevention and control, or turn to local government if their conditions are insufficient for that. Colleges and universities are required not to resume classes before such establishment is finished.

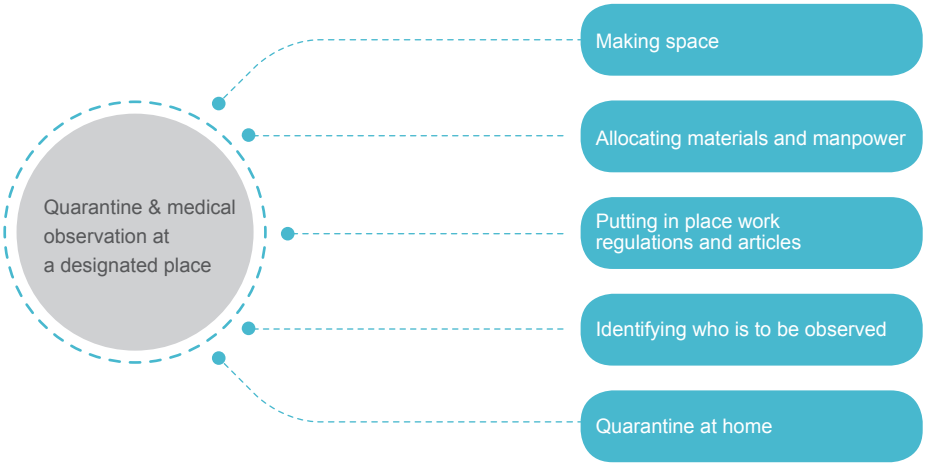

Figure 27 Guides: Quarantine and medical observation at a designated place

2.4.1 Requirements for the quarantine place

A quarantine and medical observation area should be established in an independent, remote, accessible place, and be cordoned as a means of closed-off management. Its inside zones need to be clearly labeled and well ventilated. It should provide separate single rooms equipped with necessary living facilities with disinfection measures taken every day.

2.4.2 Allocating materials and manpower

A quarantine and medical observation area should be provided with sufficient anti-epidemic supplies (masks, thermometers, disinfectant, etc.), and competent health professionals and support crew.

2.4.3 Putting in place work regulations and articles

The work regulations and articles that ought to be put in place for a quarantine and medical observation area include regulations on entrant application and approval, procedures for daily health monitoring and reporting, requirements for disinfection, requirements for referral vehicles, and regulations on release application and approval.

2.4.4 Identifying who are to be observed

Those to be observed include:

Teachers and students from high-risk areas, who are required to be re-screened for the infectious virus through nucleic acid testing;

Teachers and students with fever or respiratory symptoms who are not diagnosed as infected with the virus but need further diagnosis;

Teachers and students who once had close contact with suspected infected cases; and

Others who need to be observed (e.g. students majoring in clinical medicine, students once exposed to the risk of contacting confirmed infected cases or asymptomatic virus carriers, entrants identified as risky in health screening).

2.4.5 Quarantine at home

Colleges and universities may have local teachers and students quarantine themselves at home as appropriate. To this end, designated staff members should be assigned to keep in contact with such teachers and students (or parents), as an approach to keep updated on their daily SoH.

2.5 Check-in and registration

As colleges and universities are expected to avoid large-scale check-in and registration whenever possible, electronic registration is recommended as a way to minimize close contacts. Students should check in in a staggered manner as pre-arranged by their college, and report to their class monitors, counselors and parents promptly after their arrival.

Those who cannot return on schedule due to reasons related to epidemic prevention and control, self-quarantine or, illnesses should go through due procedures of registration and leave request.

It is recommended that colleges and universities provide a counter for secondary temperature measurement and personal information checking at entrances of dormitory buildings and office buildings among other places, if conditions permit. Access for anyone who fails to meet return-to-campus requirements should be denied.

Colleges and universities need to develop a visitor management mechanism that covers visitor registration, practice of hand hygiene, temperature screening and distribution of masks. Visitors should be escorted by a staff member to the designated places for business, rest or meals.

3. After reopening

3.1 Basic knowledge of quarantine and protection

Teachers and students who have already returned should develop the awareness of protection, and take protective measures like disinfection and quarantine whenever necessary.

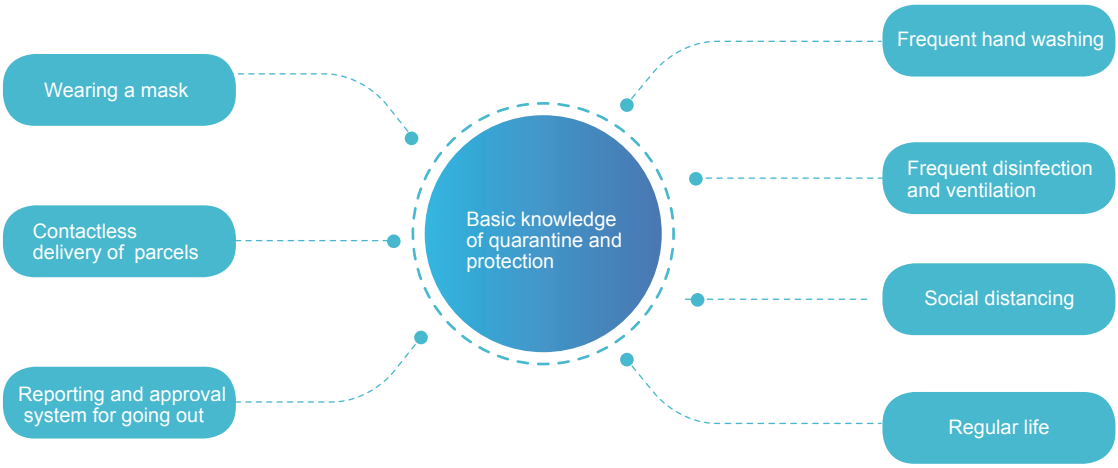

Figure 28 Basic Knowledge of Quarantine and Protection

3.2 Management and protection of different groups

3.2.1 Students

(1) Better education and guidance: As part of appropriate response to the epidemic, colleges and universities should actively spread knowledge about epidemic containment.

(2) Health monitoring: Students should go through temperature measurement before entering their dormitories. In the event of any abnormal temperature, colleges and universities need to promptly handle the case by activating the response plan for public health emergencies.

(3) Strict daily management: In the course of epidemic prevention and control, students should not leave the campus. In the event that a leave is truly necessary, leave request procedures should be strictly followed with the route and means of transportation identified beforehand. A student dormitory needs to be put under closed-off management whenever possible, and everyone is required to wear a mask for entrance and exit.

(4) Student meetings: colleges and universities should adjust forms and time of student meetings, and avoid big gatherings by staggering meeting time and recording what is to be shown in a meeting beforehand.

(5) Student activities: gathering-based cultural activities on campus should be suspended. Colleges and universities may encourage a wide range of online courses, exhibitions or exchanges. In the event that a gathering-based student activity is truly required, an application for approval should be filed and appropriate anti-epidemic measures should be taken.

(6) Sports: Healthy students may do moderate exercise every day as a way to enhance their physical health. Yet, indoor gathering-based activity should be avoided.

(7) Students who haven't returned: students who postpone their return due to travel control, abnormal temperature, quarantine or hospitalization should be monitored with "close follow-up" and "daily reporting". Such students should be strictly examined when they return, and should not return to class before they get a clean bill of health.

(8) Students should perform hand hygiene after any contact with animals.

(9) A voluntary overseer system may be developed to help enforce regulations on student management, such as temperature measurement, health reporting, mask wearing, frequent hand washing and gathering bans.

3.2.2 Faculty

(1) The faculty of colleges and universities should be strictly forbidden to leave the campus. Faculty members should not go out for trips, meetings or other activities during epidemic prevention and control. In the event that it is necessary for faculty members to leave the campus, they should submit a written leave request, and report their intended route. Any plan to visiting a key epidemic area should be suspended until the first-level public health emergency response is lifted.

(2) It is recommended that the faculty members of colleges and universities go to work by private car or bike or on foot, and avoid using public transport means.

(3) Colleges and universities are required to strictly implement entrant identity authentication and temperature measurement measures.

(4) Reducing group activities: Any gathering-based meeting or indoor activity should be avoided whenever possible. To reduce the cross-infection risk, work can be done via online group or videoconferencing.

(5) Maintaining teaching activities: A teacher should wear a mask in class until the first-level public health emergency response is lifted. Colleges and universities may encourage teachers to tutor students in academics and dissertations online.

(6) Creating new contents and models of recreational and sports activities for faculty: In principle, gathering-based recreational and sports activities involving faculty should not be organized until the first-level public health emergency response is lifted. On the other hand, colleges and universities may encourage online cultural exchanges and awareness activities, and organize sports activities like work-break exercises as a way to improve their faculty members' physical health. However, all these activities should not be done in any packed indoor place. Beyond that, psychosocial support hotlines and online help platforms should be established for faculty members in need. Teachers who are at high risk should be identified and referred in time.

(7) Follow-up work with faculty members who postpone their return: Teachers who postpone their return due to travel control, abnormal temperature, quarantine or hospitalization should be monitored with "close follow-up" and "daily reporting". Such teachers should be strictly examined when they return, and should not return to work before their clean bill of health is obtained.

3.2.3 External personnel

Any unwarranted access of any external personnel should be denied. If outsiders truly need to enter a campus for business purpose, they should contact the department in charge, which then should send a staff member carrying a campus access card to pick up the visitor at the gate and go through the registration procedure.

3.2.4 Medical faculty members and students

As clinical teachers and interns have to contact patients during work or study, they should strictly follow the self-protection measure while performing clinical tasks as required by each hospital. Meanwhile, they need to actively monitor their own SoH, and swipe their health cards every day. Clinical teachers and interns who complete their clinical work should follow the instructions below when they go to a teaching area:
(1) Before going to a teaching area after working or studying at a general clinic or ward, clinical teachers or interns need to sanitize themselves by taking off their work clothes, thoroughly sanitizing their hands and replacing their masks with new ones.

(2) Clinical teachers or interns who fail to adopt protective measures after close contact with suspected cases at a general clinic or ward are advised to be put under quarantine for medical observation at a designated place or at home. They should not go to any teaching area. Yet, if clinical teachers or interns have taken protective measures while contacting suspected cases, before going to a teaching area, they should strictly follow applicable regulations on quarantine and disinfection by correctly sanitizing their hands, taking off protective suits, taking a shower, changing their clothes and putting on new masks.

(3) After working or studying at an emergency clinic, fever clinic or isolation ward, in principle, clinical teachers or interns need to go through a 14-day quarantine period before resuming classes. If offline teaching is necessary within the period, before going to a teaching area, they should strictly follow applicable regulations on quarantine and disinfection by correctly sanitizing their hands, taking off protective suits, taking a shower, changing their clothes and putting on new masks.

3.3 Management of key places

3.3.1 Offices

In the event that multiple faculty members work within the same space, each of them needs to wear a mask. In a reception scenario, both the visitor and the receptor need to wear a mask. Faculty members should use their own computer only. That means they should not attempt to use a utility computer or others' computers. Faculty members should wear masks while delivering a paper file, and remember to wash their hands before and after such delivery. Alcohol-based hand sanitizers should be provided in offices if possible so that faculty members can practice hand hygiene regularly.

3.3.2 Teaching areas and labs

(1) Teachers, students and classroom managers should wear a mask in the teaching areas. Anyone with suspected COVID-19 symptoms should not enter any teaching area.

(2) Teachers and students should all practice social distancing.

(3) During epidemic prevention and control, all the labs of colleges and universities need to suspend off-campus hunting of and studies on wild animals unless for disease research or epidemic prevention and control purposes, and stop training on animal receiving and access. No new batch experiments should be conducted. Beyond that, labs should be guarded and patrolled to ensure security.

(4) Used lab supplies, gloves, paper towels, masks and other wastes should be sorted as specified, and put in specialized garbage bags for disposal.

3.3.3 Dormitories

(1) In principle, a faculty or student dormitory should accommodate not more than six persons, be put under closed-off management, and maintain access control based on real-name authentication and temperature measurement while visitors are allowed to visit. Within a dormitory area, students should not gather or drop around.

(2) The "daily reporting" and "zero reporting" systems should be implemented for dormitories.

(3) Each dormitory should be put under centralized and dynamic management, and submit "three reports per day" in the morning, at noon and in the evening and conduct evening roll calls. Students who stay out all night shall be held accountable.

(4) Students should be directed to keep good personal hygiene by regularly airing and washing personal beddings and clothes, and sanitizing them as necessary. Dormitories should be kept clean with garbage taken out timely and inspections carried out regularly.

3.3.4 Canteens and restaurants

(1) Everyone needs to have their temperature taken before entering canteens. The access of anyone with abnormal temperature should be denied.

(2) Faculty members and students should stay at least one meter one another in a chow line, and wash their hands before each meal.

(3) Canteens should serve meals at designated points based on an extended staggered timetable.

(4) Colleges and universities may encourage their canteens to prepare set meals with fixed dishes in ways that enable teachers and students to leave immediately after taking food. This can shorten waiting time in a chow line. It is recommended that canteens suspend buffets.

(5) Colleges and universities may encourage teachers and students to pack food and eat at their offices or dormitories, as a way to reduce gatherings within canteens. Alternatively, an order-based delivery system can be put in place.

(6) Within a canteen, any two eaters should neither share a bench nor sit face to face. It is recommended that the spacing between seats be widened to at least one meter as a way to avoid gatherings and reduce unnecessary conversations.

(7) Colleges and universities may encourage teachers and students to carry their own dinnerware for dining. Dinnerware and drinking cups and glasses should not be shared and should be sanitized after every use.

(8) All dishes should be kept hygienic. Dinnerware needs to be sanitized at a high temperature and well managed.

(9) Ingredient sources should be strictly overseen. To this end, canteens need to verify certificates of ingredient sources, instruct deliverymen to go through temperature measurement and put their measurement results on record. Furthermore, vehicles for purchasing and delivering ingredients are required to be cleaned and sanitized. Wild animals should not be used for food preparation.

(10) Canteen workers should wear work clothes and keep them clean during work, and punch in with their health cards every day based on health monitoring.

3.3.5 Libraries

(1) Libraries should reduce access during epidemic prevention and control. The access of those with abnormal temperatures should be denied. Entrants should wear masks. If possible, facilities for cleaning hands should be provided at key places, such as the entrances of libraries, communal computers and device, to ensure that the faculty members and students can clean their hands immediately before and after they enter and exit libraries and after they have touched public items.

(2) Libraries should define a daily upper limit on entrants, widen the seat spacing, and appropriately disperse people inside. Any gathering-based activity should not be organized in a library.

(3) Libraries should encourage lending e-books, and fine-tune rules for borrowing, returning and handling printed books. It is recommended that returned books be sanitized, with UV for example, before being put back on shelf.

3.3.6 Gyms and student activity centers

Colleges and universities should suspend any extracurricular sports activities and contests on campus during epidemic prevention and control, and adjust the contest schedules according to epidemic evolvements. All indoor gyms and activity centres should remain closed until epidemic prevention and control is lifted. While outdoor spaces should be open as usual, their access needs to be limited at the peak of the epidemic.

3.3.7 Service centers

Colleges and universities should shift to online service if conditions permit. Meanwhile, offline service should be provided on an appointment and dayparting basis. One going for offline service needs to go through temperature measurement, and wear a mask throughout the entire service process.

3.4 Management of major activities

3.4.1 Environmental disinfection

Every day, offices, teaching areas, labs, dormitory areas, canteens, restaurants and public toilets should be sanitized up to appropriate standards. In particular, disinfectant should be sprayed on or used for cleaning frequently-used articles. In principle, a central air-conditioning system should not be used unless truly necessary, and in that case, the system should be maintained, cleaned and sanitized under epidemic prevention and control regulations with records kept for future reference.

3.4.2 Traffic control

A campus should be kept under closed-off management, and the access of any unauthorized personnel should be denied. For this, the gates for access should be minimized, and equipped with temperature measurement points. Colleges and universities need to design accessible traffic routes to the quarantine and medical observation area and temporary control areas. Spaces should be allocated for parking of various vehicles, and such spaces should be sanitized regularly.

3.4.3 Meetings

Any medium-sized or large meeting place should be kept out of service until the first-level public health emergency response is lifted, as videoconferencing is preferred at present. In the event that a gathering-based meeting is truly necessary, the instructions below should be followed:
(1) The selected meeting place should be spacious and equipped with sufficient seats. It is recommended that participants stay at least one meter from one another. In principle, the central air-conditioning system there should not be used.

(2) The participants should go through temperature measurement check.

(3) The duration of the meeting should be limited. In the event that the meeting is long, doors and windows should be opened every hour as a means of ventilation.

(4) The size of the meeting should be limited. The upper limit of participants is twenty. Any necessary exception should be reported and registered in advance, and anti-epidemic measures should be taken for the participants.

3.4.4 Garbage and waste disposal

Garbage should be collected, transported and sanitized on the same day it is produced. A vehicle for collecting or transporting garbage should be sanitized every time when it enters or departs from a refuse transfer station. On-campus refuse transfer stations, garbage cans and waste mask containers should be sanitized twice a day. Colleges and universities should additionally provide capped containers labeled with “for mask disposal only” and with a disposable bag inside to ensure procedure-based disposal of waste masks. Such containers should be sanitized using chlorine-releasing disinfectant twice a day.

3.4.5 Express service and take-out food delivery service

It is recommended that colleges and universities make arrangements for receiving and sending parcels by teachers and students beforehand according to the local situation. In this connection, parcel distributing centres should be established with measures to limit gatherings put in place. Whenever possible, designated personnel and vehicles should be assigned for sending and picking up parcels on fixed routes as a way to reduce the risk of epidemic spread. External takeout are not allowed.

3.5 Emergency handling of confirmed or suspected sporadic cases or mass infection

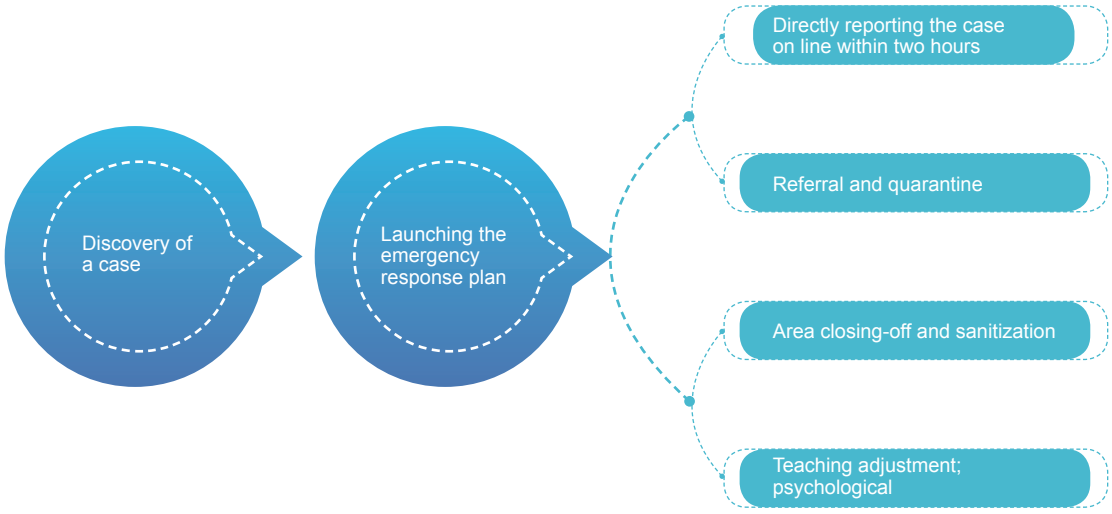

Figure 29 On-campus emergency handling of cases

(1) In the event that a faculty member or student is confirmed or suspected as a COVID-19 case, colleges and universities should promptly launch the coordinated emergency response mechanism developed for epidemic prevention and control, and directly report the case online within two hours. Meanwhile, the case and affected areas should be isolated immediately, and close contacts should be quarantined for medical observation at a designated place. Furthermore, colleges and universities need to notify the competent healthcare (disease control) authority of the case, and prepare the case for handling by health professionals (referral, isolation-based treatment, sampling survey, screening of close contacts, area disinfection, etc.).

(2) Colleges and universities ought to combat mass infection using the strategy of “preventing internal spread, avoiding outflow, enhancing treatment”. In the event that mass infection is suspected, colleges and universities should promptly launch the coordinated emergency response mechanism developed for epidemic prevention and control, and directly report the incident on line within two hours. Meanwhile, colleges and universities should immediately stop gathering-based activities, and notify hospitals and epidemic prevention and control work teams of the incident without any delay. On that basis, leaders of colleges and universities should work on the frontline to play a commanding role, and secondary departments should take coordinated actions like the establishment of temporary quarantine areas, disinfection and personnel mobility control. Furthermore, colleges and universities need to notify the competent healthcare (disease control) authority of the incident so that the latter can make arrangements for treatment of close contacts, isolation of areas and terminal disinfection. When necessary, to prevent epidemic spread, colleges and universities should take steps like local or overall suspension of classes, and provide psychosocial support and counseling for their faculty and students with parents kept updated.

4. Teaching transitional period after school reopening

The college and university students from rural areas, poverty-stricken counties and of migrant workers must have suffered the most since they have faced several challenges concerning to remote learning, including the challenge of connectivity, availability of personal devices and trained teachers to facilitate the e-learning platforms effectively. Some students who were behind their peers before the pandemic, will likely be farther behind due to having missed months of school. The college and university administrators and teachers are encouraged to work out how to make up the lost classroom time and help learners fix the damage the pandemic has caused to their' learning. The following strategies can be included:

(1) Take students learning outcome evaluations after school reopening. Know the students' level in every course exactly.

(2) Adopt a flexible teaching and learning approach. Colleges and universities can tweak timetables and can encourage sheer flexibility to allow time for students' interaction. No rushing to or pressuring students to complete courses. No extra teaching contents are added. Avoid putting extra mental and study pressure on the students. Hybrid learning can be continued with much more flexibility and through better facilitation of the online learning platforms.

(3) Curriculum implementation and assessment adjustments. Modify and improve course content and evaluation/assessment standards based on learning outcomes and performance.

(4) Introduce innovative instructional methodologies and practices for better teaching quality. Support students in remote or poor areas by giving after-school classes.

1. Developing college-level procedures and systems for psychosocial support during the public health crisis

1.1 Setting up a psychosocial support team

In view of the epidemic, colleges and universities need to launch a plan for setting up a psychosocial support team as soon as possible. The team should consist of class advisers who know the students, psychology health teachers with professional backgrounds, school or department leaders in charge of student education, security personnel and representatives of students as well. Alongside that, a regular meeting system should be set up for the organization.

1.2 Creating personal mental health profiles

Colleges and universities should lead their students to evaluate their mental state by themselves, and create personal mental health profiles. A personal mental health profile needs to cover general demographic information and a mental self-evaluation questionnaire, which encompasses high-risk symptoms and behaviors like anxiety, depression, suicide and self-harm, and sleep deprivation. Students may evaluate themselves more than once as they deem necessary. And, a psychology teacher may ask a student to go through primary and secondary evaluations so as to track the student's mental state and make available well-informed psychosocial support.

1.3 Disseminating mental health knowledge

Mental health knowledge should be integrated with general knowledge of the epidemic. The dissemination may be in various forms and cover all aspects of mental health knowledge. A mental health knowledge brochure is recommended to be formulated. The content needs to cover common mental stress response, common techniques for and notes on emotion regulation, ways to deal with an emergency and so on.

In light of mental characteristics of college students, mental health knowledge may be communicated in more lively and interesting ways, such as online lectures and symposiums. Activities on the theme of mental health during the epidemic, such as quizzes focusing on psychological health and other anti-epidemic knowledge, short video contests and wall newspaper contests, are also good examples. Students should be encouraged to participate. Activities of sports, music, dancing and painting (on- and offline) should be carried out to let students have fun and help them gain a positive mentality and improve their mental health. Participation in these activities can be encouraged with incentives like grants and extra credit for personal performance appraisal.

1.4 Delivering psychosocial support

Colleges and universities need to open a psychosocial support column, which features diverse contents and various theme-based sections on their websites. Themes of sections may include online counseling, mental health knowledge lectures, videos/short videos, mental self-evaluations and more. The online counseling section is supposed to deliver online service backed by colleges

and universities' psychological counseling rooms or centres, and provide information about online counseling or counseling hotlines opened by professional psychological counseling organizations and psychology departments of hospitals. Moreover, colleges and universities should make available an offline psychosocial support service that allows students to make appointments with psychology teachers whenever they have the need.

In the mental health knowledge lecture section of the psychosocial support column on its website, colleges and universities need to chronologically list mental health knowledge lectures given by the psychology teachers or those from other colleges. The video/short video section should upload videos on the theme of mental health, and sequence them according to the number of clicks. The mental self- evaluation section should focus on mental self-evaluation questionnaires designed for different personal profiles.

2. Psychosocial support for teachers and students

2.1 Key points of psychosocial support prior to reopening

First of all, effective anti-epidemic measures are the primary underpinning of psychosocial support before class resumption. In fact, guidance on epidemic prevention and control provided before class resumption offers effective mental comfort, as students can be reassured by well-designed anti-epidemic measures, student-specific self-protective measures and emergency handling procedures.

Second, students should be encouraged to stay positive about class resumption. They are allowed to return to campus as long as they follow anti-epidemic rules and adequately protect themselves. Everyone counts in epidemic prevention and control, and mutual support and assistance is essential.

Third, guidance should be given to students on how they should psychologically prepare themselves for class resumption. After class resumption, alongside anti-epidemic measures, every student should live a regular life on campus and fulfill due academic tasks. Everybody doing their part is the best way to contribute to their college, society and the nation.

Fourth, schools should review available counseling services (on- and off-line) and mental health services in and around school. Ensure that students, teachers and parents are aware of available counseling services. Ensure severe cases that need urgent professional care are referred to healthcare centres.

2.2 Key points of psychosocial support after reopening

(1) Students should be led to gradually adapt to the campus life with anti-epidemic measures in place. A strict, standardized anti-epidemic plan brings about a sense of security and confidence. Student are expected to embrace the new life on the familiar campus, and do their best to keep life and study on a normal track, for example by visiting the library, their favorite canteens and doing moderate exercises as they would usually do.

(2) While it is understandable for students to feel maladaptive, colleges and universities need to encourage students to be positive about changes. In a public health event, everyone may undergo mental changes. What really matters is the effort to face up to such changes.

(3) Students should regularly take part in the healthy activities they are interested in, and live a regular life. They should refrain from smoking and drinking and stay positive.

(4) Students should maintain social contacts in ways that help build a strong social support network. It is possible for them to maintain normal social contacts while practicing social distancing and following requirements for epidemic prevention and control.

(5) Normalize messages about fear and anxiety and promote self-care strategies not only for students and their families but also teachers and other school staff.

(6) If attacked by negative emotions, students should know it is completely normal and accept their feelings as the first step, then talk to trusted friends or seek professional counselling and services.

2.3 Key points of psychosocial support for key groups

2.3.1 Graduating students

To help graduating students adapt, colleges and universities may:
(1) Guide graduating students to properly adjust their expectations, accurately evaluate themselves and make active efforts to seek jobs;

(2) Leverage both online and offline resources to provide all-round support for graduation, and streamline procedures and steps towards graduation;

(3) Actively seek job opportunities for graduates, and provide employment guidance and support;

(4) Lead graduating students to fine-tune their views on employment, and help them recognize that failure to find a job at this point is just temporary;

(5) Encourage graduating students to summarize the takeaways so that they can be more experienced on the job market; and

(6) Talk to trusted friends or seek professional counseling and services when needed.

2.3.2 Foreign students

Foreign students, distant from their motherlands, have limited access to social support in a public health event. To adapt to the new situation, they may:
(1) Regularly meet and talk with their relatives and friends back home via the internet;

(2) Follow their usual daily routines, get up and go to bed on schedule, and make plans for daily life and study;

(3) Regularly go out and do exercise while taking personal protection measures;

(4) Keep in touch with classmates and other foreign students;

(5) Organize online gatherings, online concerts and other online activities on festivals and holidays; and

(6) Promptly seek professional counseling and health care when negative emotions or emergencies difficult to handle occur.

2.3.3 Students being quarantined or treated

To adapt to the new situation, students being quarantined or treated should:

(1) Accept the fact of being quarantined or treated, follow the instructions of health professionals and epidemic prevention personnel, protect themselves with adequate measure, and build up confidence in recovery;

(2) Have nutritionally balanced meals every day, and do moderate exercise indoors if physical conditions permit;

(3) Establish a self-feedback mechanism to identify progress as a way of self-encouragement, keep in touch with others via the internet, regularly meet with family and friends online, keep interests and hobbies, deal with the fact of being quarantined or infected calmly, and try to make use of alone time; and

(4) Seek help from professionals if negative emotions are hard to overcome.

3. Key Points of Mental Adjustment of Teachers and Students

The impact of the epidemic on life, study and work tends to evoke mental stress reactions, which should be faced calmly and addressed with appropriate measures. Psychologically, one should be calm about normal stress reactions, and pay a moderate amount of attention to the epidemic. Behavior wise, one needs to follow regular daily routines, maintain moderate social contacts, and release negative emotions through physical exercise, mindfulness-based practice, positive thinking, music therapy, relaxation training, TCM-based health protection, stay connected to loved ones and talk to someone you trust. Help may be sought from professionals if necessary.

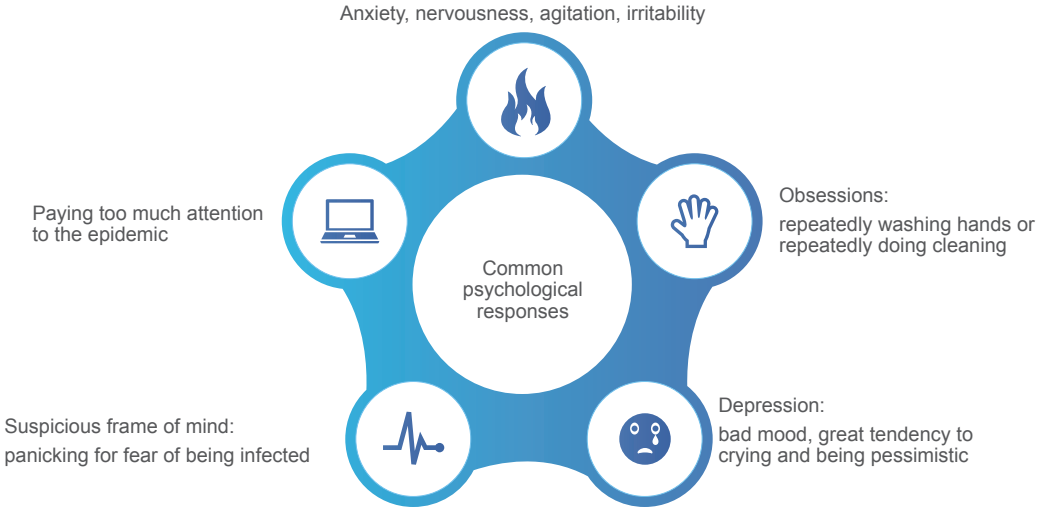

Figure 30 Common Mental Stress Responses Evoked during the Epidemic

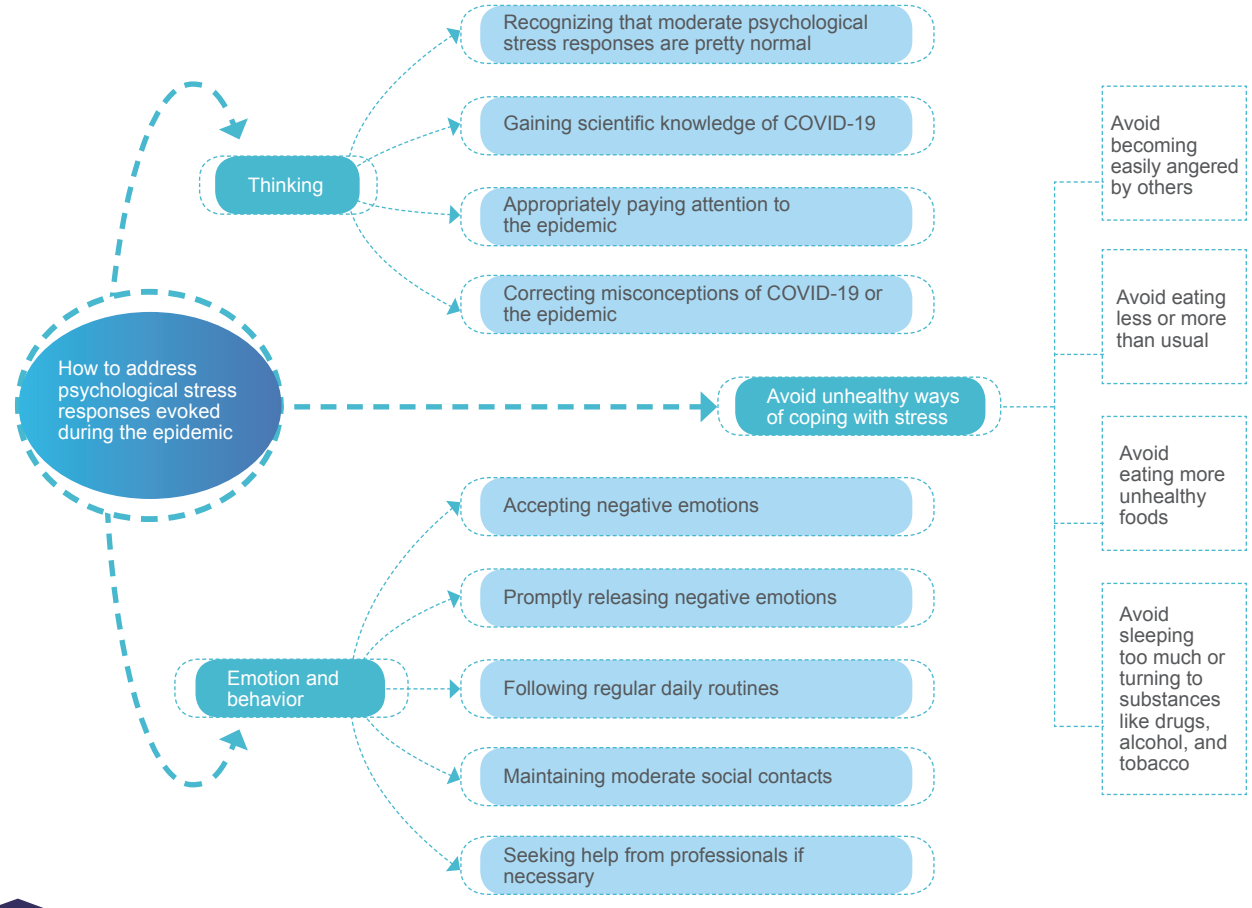

Figure 31 Methods for mental adjustment during the epidemic

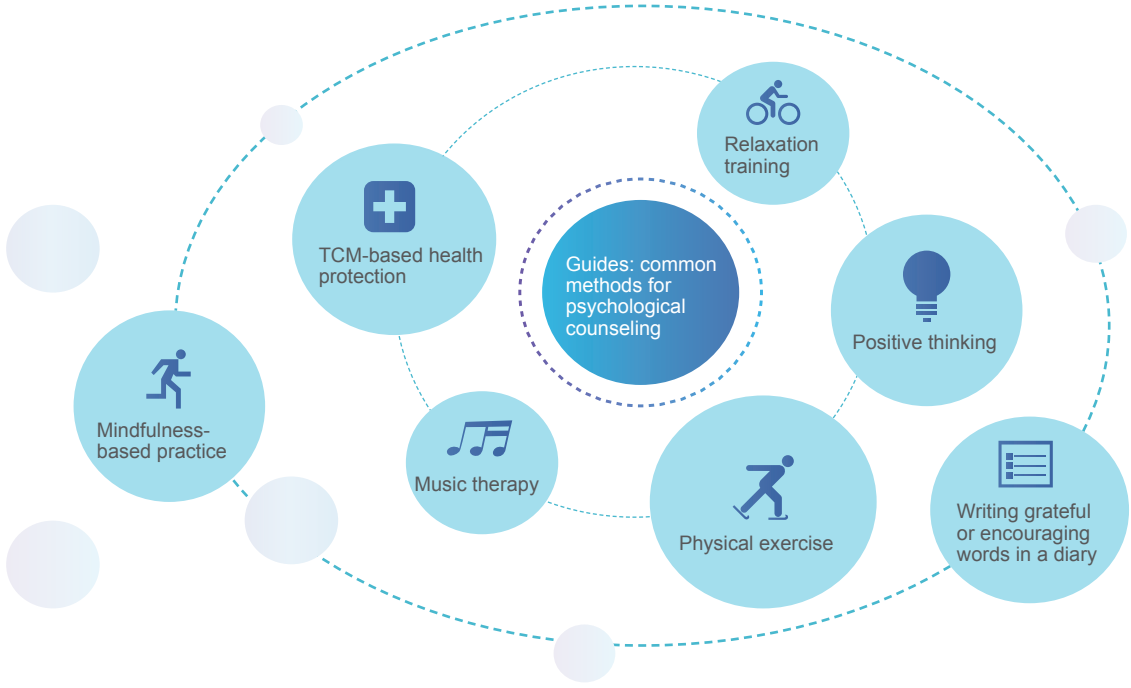

Figure 32 Common methods for psychosocial support

Reference

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Technical and Vocational Education and Training

Distance teaching and learning

1. Government

To make a good preparation for a normalized epidemic prevention, education authorities and Technical and Vocational Education and Training (TVET) colleges and schools should establish leadership groups for epidemic prevention at all levels, formulate and improve the work plans, system and process for epidemic prevention, and establish a joint mechanism to ensure the school routine, teaching and living, and maintain the school and social stability.

1.1 Issue distance teaching and learning guideline

National education authority should formulate plans for epidemic prevention and control, improve the policy systems and institutions for resources distribution, provide both software and hardware support, and guide vocational colleges and schools at all levels to carry out online education to ensure undisrupted learning when classes are disrupted.

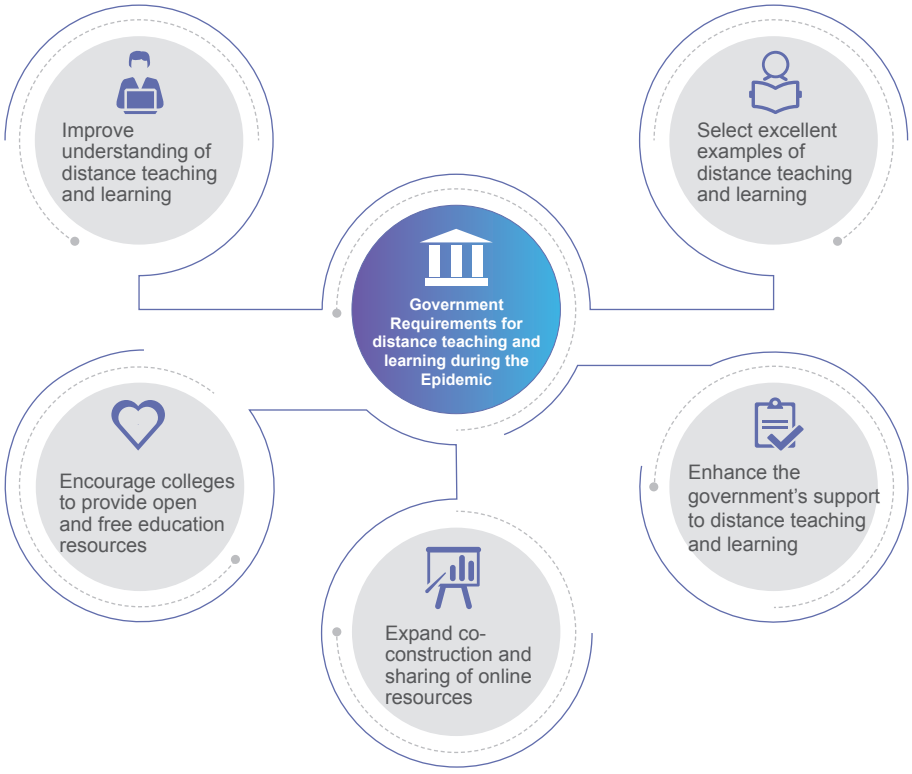


Figure 1 Government's overall guidance and coordination during the epidemic outbreak

1.2 Recommend distance teaching and learning platforms and tools

To facilitate teachers of vocational schools to choose effective tools for distance teaching and learning, education authorities should recommend live streaming tools for synchronous teaching, and online course platforms for asynchronous teaching. Radio and TV channels should also be considered for the teaching and learning needs in remote and poverty-stricken regions. Great efforts should also be made to strengthen the cooperation between the government, enterprises and education institutions to fight against the epidemic through education. Distance teaching and learning and scientific research will be guaranteed with a large number of open educational resources accessible to vocational colleges and schools.

Tools		Teaching Scenarios
Resource-Processing Tools	PowerPoint Recording Software Computer Screen Capture Software Video Production Software Multimedia Resource Processing Software	Lectures assisted by PPT Courses about video editing and software operation Micro lectures Courses rich in learning resource
Live streaming tools for synchronous teaching	Teaching-learning interaction software Social software Telecommuting software Online course platforms	Live Streaming Classes These tools can be used to conduct live distance teaching and learning considering interaction, network quality and convenience.
Online Course Platforms for Asynchronous Teaching	National Resource Bank of Vocational Education Local Platforms for Vocational Education Resources Online Course Platforms of Enterprises	Asynchronous Courses These platforms can be used in light of the needs of schools and curriculums.

1.3 Promote education resources sharing

Education authorities should coordinate and integrate national, local, and school-related educational resources; make fully use of resource banks of TVET education to provide more diversified, alternative, and high-quality distance educational resources accessible to all regions; establish a sharing mechanism among different vocational colleges and schools; advocate online course platforms built by non-governmental sectors to provide high-quality course resources for free; and promote training of distance teaching skills for teachers.

Principles for Education Resource Coordination	Equal	The content of education resources should highlight guidance on learners' values and avoid contents with racial discrimination or cultural bias.
	Science-based	Digital education resources should fundamentally be helpful to prepare students for future life and should be science-based.
	Feasible	Efforts should be made to guide the construction and sharing of applicable teaching resources and improve their quality.

China opens 203 national database of vocational education, providing more than 130 excellent online courses for free.

1.4 Ensure reliable network infrastructure

The national government should coordinate efforts of local governments, TVET colleges/schools, and enterprises to ensure a reliable operation of network infrastructure, and build 5G networks in areas where possible.

Education authorities should connect with internet providers to provide fast and stable network services for TVET colleges/schools to carry out distance teaching and learning, and for teachers, students and parents to obtain digital education resources and engage in distance learning. Telecommunications companies are encouraged to lower fees for needy students.

1.5 Adjust policies on students enrolment

(1) Adjust the enrolment policy of technical and vocational education and training. Enrolment should be closely linked with employment. Training should be designed for specific targets, professions and positions. The structure of enrolment should be adjusted in accordance with the economic development, industrial structure and employment stability, and cultivate the urgently-needed talents.

(2) Implement online enrolment. It is recommended that TVET colleges/schools should make full use of the internet, TV, radio, and new media to carry out various forms of enrolment publicity, so that the majority of candidates and parents can fully understand the policies of TVET education enrolment, employment, scholarships, and funding.

1.6 TVET Graduates employment and entrepreneurship

(1) Hold online entrepreneurship competitions. TVET colleges/schools can launch online skills contests, and other activities including copy writing design, project design, PowerPoint aided presentation, report and speech, and thesis defense.

(2) Expand employment channels and introduce “cloud application”. Education authorities should pay close attention to the epidemic trend, suspend offline recruitment fairs, coordinate and organize online recruitment fairs, and establish a targeted recruitment platform to publish employment information and job application information for free to bridge employers graduates. Encourage TVET colleges/schools to improve students’ skills in online job applications, and to make great efforts to disseminate employment information, strengthen school-enterprise cooperation, expand employment channels, and enhance employment guidance to promote high-quality employment.

1.7 Ensure financial investment

The central financial department and local education authorities should enhance cooperation, and the local financial departments should allocate funds in an orderly manner and accelerate the allocation and use of funds in accordance with the principle of "giving priority to urgent and special issues". This will ensure that funds for epidemic prevention and control are readily available and the use of the funds is monitored.

Local education authorities should establish a "green channel" for procurement, improve procurement efficiency in light of the needs of epidemic prevention and control, and guarantee the quality of procurement.

Local education authorities at all levels should guide colleges and schools to formulate funding guarantee schemes for epidemic prevention and control based on actual conditions; evaluate the demands for funds; refine safeguards for funds; and make good use of financial department funds, school-owned funds, donations and funds collected by other channels.

1.8 Publicity and information dissemination

(1) Publish epidemic-related information and disseminate information about epidemic prevention and control. Education authorities should release correct epidemic-related information, conducting education on epidemic prevention and control, and promptly refute false news and information.

(2) Show good examples of distance teaching and learning. Education authorities should organize online sharing activities for excellent online courses and collect good cases from different platforms for collaboration in TVET education.

2. TVET colleges and schools

2.1 Launch emergency response plans

TVET colleges/schools should anticipate the short-term, medium-term and long-term impacts of the epidemic, and develop emergency response plans based on the local alert levels. They should also fully deploy and integrate all kinds of resources, such as human, financial and material resources. And, they should actively and effectively deal with school closure and ensure "undisrupted learning when classes are disrupted".

2.2 Ensure distance teaching and learning environments and conditions

TVET colleges/schools should adjust and postpone the reopening of schools. Teaching plans should be rescheduled and rearranged. Based on its characteristics, each institution should take advantage of available resources to carry out learning and teaching activities, including the current online platforms, high-quality online learning resources and relevant software. The educational institutions are expected to establish suitable online classrooms for local students, organize teachers to conduct live streaming classes and answer questions online, and carry out teaching activities and educational assessments to ensure a complete learning and teaching process (such as lesson preparation, instruction, assignment, examination and tutoring) to ensure high quality learning and teaching.

2.3 Conduct teacher training on digital skills

teachers' skills and abilities during the response to the epidemic. These skills and abilities can be effectively elevated from different aspects, including distance teaching and learning strategies, information technology application capabilities, online interactions, and relevant services to support learning. It is feasible for TVET colleges/schools to launch various information-based teaching competitions during distance teaching and learning to increase teachers' awareness and enthusiasm for participating in the information-based educational reform.

2.4 Evaluate and monitor the quality of distance teaching and learning

(1) Design a distance teaching and learning supervision system, organizing teaching supervisors to research on how to effectively implement distance teaching and learning.

(2) Allow teaching supervisors to select a small number of students to carry out surveys about home learning experiences and assess the quality of online learning.

(3) Avoid forcing teachers to punch in and out online, fill in tons of online forms, or submit a great amount of paperwork irrelevant to teaching.

(4) Conduct data analyses and research using the big data of distance teaching and learning to provide evidence-based support to improving the teaching process and the use of resources.

2.5 Strengthen TVET Colleges/schools-industry cooperation

During the epidemic, education institutions should maintain close relationships with cooperative enterprises, protect the rights and interests of students in internship, ensure their safety when they are off duty, and collaborate with enterprises to strengthen security and humanistic care for on-duty students.

Establish working profiles to follow up on students' employment changes, employment needs, and physical conditions during the epidemic.

School staff should conduct comprehensive one-on-one investigations for every graduate, and update students' working profiles daily.

Actively adjust working methods to strengthen the collaboration between schools and enterprises based on enterprises' labor demand and students' preferences.

Wuhan Vocational and Technical College takes a new approach with their Remote Internship Programme. During the epidemic, the School of Mechanical and Electrical Engineering of Wuhan Vocational and Technical College and Wuhan Wuxin Electric Technology Co., Ltd. jointly developed the Remote Internship Programme. The project combines students' learning, teachers' live stream teaching and engineers remote practical operations together. The project team involves colleges, enterprises and a platform designer. The enterprise engineer is responsible for the content planning and course live broadcast. The curriculum experts in the college develop the projects which combine engineering and courses. The college teachers are responsible for converting the enterprise projects resources.

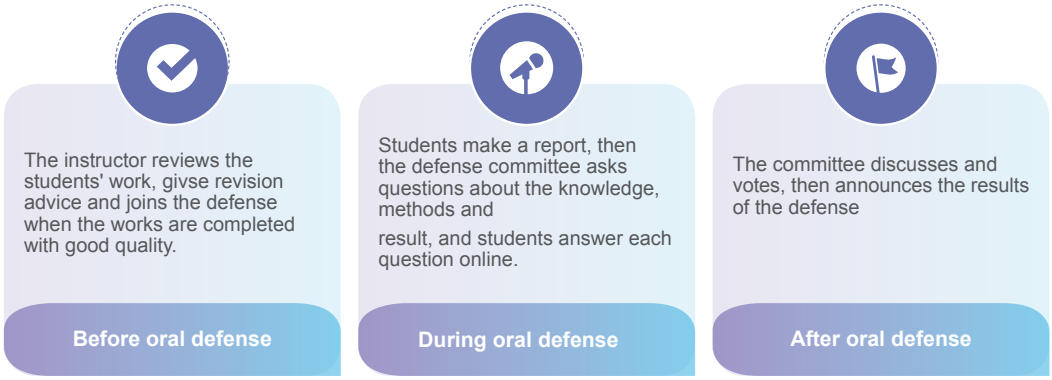
2.6 Provide support for students' internships and practices

TVET colleges/schools should take internship courses online to integrate professional theories with practical experience. To facilitate online practice, TVET colleges/schools should build specially designed smart classrooms, combined with virtual simulation training platforms, and make good use of various online learning resources. In a smart classroom, there is one teacher delivering lectures, another assistant teacher demonstrating the operational steps live on the internet, and students developing the real experience by using virtual simulation devices. Under this circumstance, the integrated online internship courses can be totally accomplished via the internet, making sure all of the teaching plans are finished during the epidemic.

2.7 Organize remote dissertation defenses

TVET colleges/schools should implement detailed workflow and technical solutions, form supervision teams, and conduct online thesis defenses based on the regulations of the national education department during the epidemic.

Those defenses should be conducted via videoconferrences, making the procedure for online defenses similar to the offline ones. Throughout the entire defense process, recordings and screen shots should be taken to ensure fairness and equality.



2.8 Safety and health education

TVET colleges/schools should make full use of the school website, epidemic prevention training platform, social media and other channels to set up health education workshops, with instructions from specialized personnel to educate teachers, students and other staff members in schools to learn how to protect themselves and conduct regular disinfection. In addition, it is necessary to organize different types and levels of online training sessions for them to learn about relevant knowledge and policies, master schools' epidemic prevention and control workflow, and prepare for school reopening.

2.9 Conduct health monitoring

For students taking online courses, it is also necessary to monitor their health status at the same time.

(1) Establish an information reporting and reviewing system, and implement an information retrieval mechanism. Keep track of the locations of each staff member (including the retired personnel) and student, assign dedicated personnel to collect and manage the daily physical health status reports, and send those statistics to the superior departments after confirmation by school leaders.

(2) Class teachers should collect, review and report the basic information of students on schedule and accurately, such as their physical health status, current home address, and the physical health conditions of their family members. As for students in internship, class teachers should also collect and report the enterprises' names, addresses, specific epidemic prevention and control measures and emergency contacts.

(3) In addition to the above-mentioned basic information, class teachers are also required to report students' location information on a daily basis, such as whether they have moved across different regions or having had contacted with high-risk groups.

(4) Establish an information platform for epidemic prevention and control, formulate a system for staff members to manage their shift duty, and publicly announce the office telephone numbers during the epidemic. Provide necessary support to teachers and students who are staying in high-risk areas, isolated under medical observation or who are already confirmed patients.

3. Teachers

3.1 Strengthen support for TVET students

(1) Class teachers and tutors should strengthen their connection with their students. They should pass on the school's epidemic prevention notifications on time, learn about students' situation, strengthen online management, handle emergencies in real time, and ensure students' safety. Furthermore, they should keep in touch with parents through social software and telephone, learn about the dynamics of the students, understand their actual difficulties, and work with parents to educate and guide the students during this special period.

(2) Teachers should take the initiative to provide sufficient learner support to ensure students' learning by considering the particularity of distance teaching and learning and the differences in students' needs. Considering students' limitations in abilities, time, energy, knowledge, and technology application, teachers should adjust the teaching methods at any time according to the topics and contents.

(3) Enhance the effectiveness of students' online interaction. It should be emphasized that all students participate together in the virtual learning community. Teachers should lead and guide the whole process. Teachers will use social media and platforms to provide timely feedback to students' questions and promote active teacher-student interaction.

3.2 Improve teaching skills

(1) Collaborative teaching, research, and lesson preparation. Using the "Internet + Teaching and Research" approach, each team can choose online platforms and software according to their conditions and activity requirements, to support the development of these activities, such as videoconference platforms, cloud lesson preparation platforms and social media.

(2) Training on distance teaching and learning platforms and tools. Teachers should actively participate in school training on the use of distance teaching and learning platforms and tools, and become familiar with them.

3.3 Implement distance teaching and flexible teaching

(1) Prepare distance teaching and learning conditions

Set up essential hardware and choose a suitable teaching environment. In terms of infrastructure, TVET teachers should have terminal devices (such as computers), webcast or recording systems, cameras, microphones, speakers, and other necessary equipment. The hardware is the foundation for distance teaching and learning.

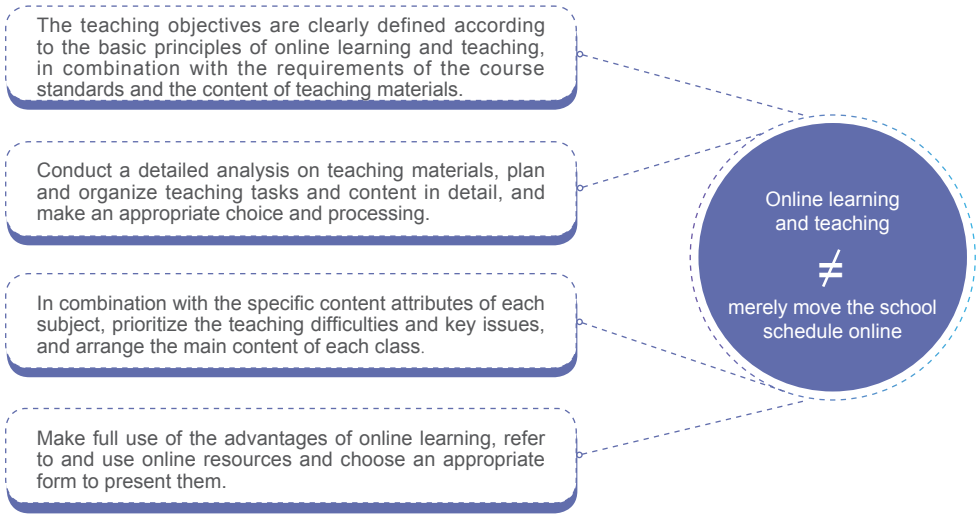
Teachers should ensure internet bandwidth and smoothness of the teaching process. For example, the bandwidth requirements of most webcast platforms are at least 80-100M.

In terms of teaching environment, teachers should choose a quiet environment with bright light and pleasant background.

Prepare teaching resources and tools. When preparing distance teaching and learning resources, teachers should collect or organize teaching resources according to teaching design plans, such as teaching courseware, and audio, video and text resources. The teaching resources should be as simple and straightforward as possible, with prominent content.

(2) Re-organize teaching content

The school-based teaching methods and the content of many courses are not suitable for distance teaching and learning. Teachers should adjust the content according to the actual conditions and available resources, taking advantage of the flexibility of distance teaching and learning.



(3) Choose appropriate teaching methods and tools

Teachers can adopt and refer to the distance teaching and learning platforms and tools recommended in the government's overall guidance in the first part of this manual, or they can independently choose tools that meet the actual needs of the course and the students, and determine the form of teaching, including live streaming and recorded online courses.

For live streaming classes, instructors need to make, collect, or organize courseware, electronic textbooks, auxiliary resources, and reference materials of the relevant course content, and conduct trial preparation and practice in advance.

For recorded online courses, lecturers need to use video recording and editing tools to shoot, edit and produce online learning resources, and timely release them online for students to learn by at home. Teachers should also provide appropriate learning support services to enhance teacher-student interaction and focus on students' questions and provide in-time feedback.

(4) Carry out various teaching activities

- Before class

TVET teachers may publish preview tasks for each lesson. For self-learning content, teachers can provide students with learning slips to help them engage in knowledge construction.

- In class

In the live streaming class, teachers should enter the classroom in advance, prepare all equipment and materials, and pay attention to their appearance and manners. During the lecture, teachers can interact with students through online discussions, interactive surveys, peer review, opinion sharing, and online Q&A to make the class engaging. They can design online inquiry activities, connect teaching with real life and activate students' real life experiences. The inquiry task should be flexible and give students space to experience, think, and develop.

- After class

Appropriately assign homework, arrange students who missed the class to make up via replaying videos of lectures, as well as other forms, and strengthen students' weak links to improve their knowledge system.

3.4 Organize online exams and assessments

Teachers should adjust the course evaluation method according to the actual situation of distance teaching and learning, such as resetting the class teaching objectives, adding multiple evaluation methods, increasing the proportion of process evaluation, changing the examination to the evaluation of curriculum design works, and organizing online testing.

At present, centralized online examinations supported by face recognition technology can already be realized in the field of distance education. The online learning platform provides a variety of process assessment forms, and the data results such as punch sign, classroom questions, participation in discussions, and statistics on the completion of homework after the class can all be a powerful support for process assessment. Some of the practical training has to be done online, and there will still be more training that needs to be conducted when the epidemic is over.

3.5 Ensure learning and teaching outcomes

After remote classes, teachers should establish channels for communication, feedback and online Q&A with students, to enhance teacher-student interaction and avoid the students' feeling that they are not receiving enough attention due to the separation of time and space in distance teaching and learning, which can affect their learning. Furthermore, teachers should know and resolve students' actual questions in time.

Enhance the interaction between students and reduce the loneliness of home study during the epidemic through collaborative methods such as learning communities and group cooperation.

Pay special attention to students with insufficient online learning hardware conditions and unsatisfactory network environments, and establish a one-to-one support mechanism. Teachers should keep a record of each student's online learning results. This will be helpful for the teaching and extra instruction for certain students after school reopening.

Take the initiative to contact and communicate with parents to understand the student's learning status, and at the same time, get the support of the parents.

3.6 Care about students

(1) Some of the students are in areas severely affected by the epidemic. TVET college/ schools should establish a one-on-one system to facilitate contact, and for classroom teachers to alleviate the students' mental, learning, and life pressures caused by the epidemic. This will make it possible to introduce relevant government and school policies to them, and strengthen education and guidance.

(2) Students in internships. Internship instructors should contact students one by one, caring about their students' work status, physical and mental health etc. Classroom teachers should pay attention to safety information daily and strengthen safety education. Archives should be filed for the school, and a report on students' status should be updated daily.

(3) Students staying out of their hometown. Information on students who are temporarily unable to return home due to the epidemic should be collected promptly, including their locations, whether their family members are in the know, whether they are facing difficulties in their daily life, and whether they are in contact with their local communities. It is necessary to appease students' tense emotions, relieve their psychological pressure, guide them in establishing a positive and correct concept of prevention and control, and actively cooperate with local communities.

(4) Students with financial difficulties. Learn about the situation of the students and their families in time and provide them with material assistance and equipment, especially for students with special needs who are eligible under various support policies issued by the state and the school.

(5) Students with academic difficulties. For the students with learning difficulties, attention should be paid on their credits and online class performance. Such students should know where and from whom they can get help. Urge them to formulate reasonable life and learning plans, gradually achieve learning goals, and build up their confidence.

4. Parents

4.1 Provide favorable learning environment

(1) Parents should ensure a suitable learning environment for TVET students during home study, avoid background noise and interference, and provide a comfortable and safe environment.

(2) Parents should provide necessary supplies to ensure the working function of the internet, computer equipment and software.

(3) When students are studying at home, parents should also set a strict demand on themselves, and create a good learning atmosphere for their students.

4.2 Supervise Study

(1) With the help from teachers from TVET colleges or schools, parents should supervise their students' development of a daily schedule and learning plans.

(2) Parents should supervise students to better comply with teachers' management, complete

online courses and homework, and maintain a positive and firm attitude towards online learning.

(3) Parents should prevent students from being addicted to games and TV, guide them to keep a balance between study and relaxation, and motivate them to participate in activities that are beneficial to their physical and mental health.

4.3 Care about students' mental health

(1) Parents should do their best to avoid crowded spaces during the epidemic, and work from home as much as possible. When parents must go outside, they should protect themselves by wearing masks and washing their hands frequently.

(2) Parents should keep their houses tidy, regularly open windows for at least 30 minutes each time, disinfect the house at least twice a day, and encourage students to join them in exercises at home to improve their immunity and mental health.

(3) Parents should pay attention to students' emotional state and study performance, avoid conveying negative emotions to students, and detect any abnormal psychological and behavioral state in time.

5. Students

5.1 Prepare distance learning equipment

Check the internet connectivity for study at home, and prepare basic equipment needed for distance learning in accordance with the specific requirements of schools and teachers. Get familiar with online learning platforms or software for the online learning.

5.2 Report health status on time

Students should report their health status on time in accordance with the requirements of communities and schools. If there is any suspicious symptom like fever or cough, students should take the initiative to report it, wear a surgical mask or medical mask, avoid contact with others, and seek medical treatment in a timely manner.

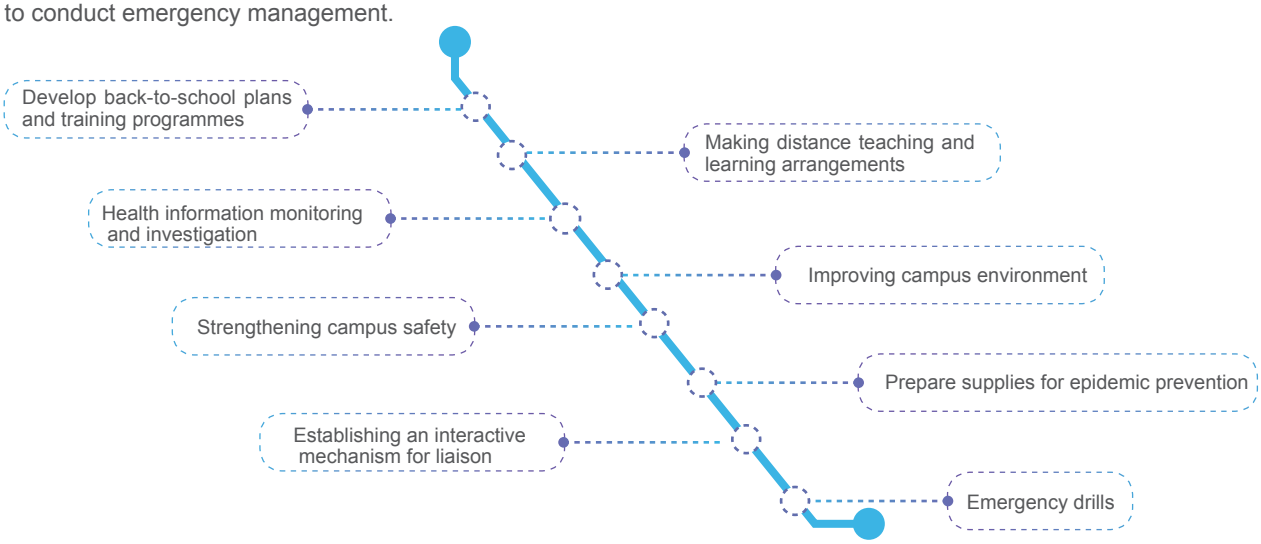
5.3 Distance learning

Students should arrange their own schedules in accordance with the curriculum arrangement issued by their schools or teachers, attend live stream classes on time, and make a good plan for recorded courses as well. Establish learning groups and communities via various social software and platforms; carry out cooperative learning, research, communication, content creation and resource sharing with classmates. Summarize courses by conducting self-evaluation on learned contents and keep a daily record of the progress and changes, so as to improve plans and maximize the effectiveness of the self-evaluation.

School Reopening

1. Preparation for school reopening

To make a quick emergency response to the outbreak, under the guidance of the government, with consideration to actual conditions, TVET colleges/schools should establish an emergency organization to conduct emergency management.



1.1 Development of back-to-school plans and training programmes

Each TVET college and school should combine its specific situation to achieve the following goals:

(1) Establish an effective organization of back-to-school affairs and preparation of post-return epidemic prevention and control plans;

(2) Study the epidemic situation fully and carry out health checks among TVET teachers and students; and

(3) Formulate a reasonable arrangement of back-to-school time and a schedule of returning batches of students.

① In accordance with the requirements of local government or education authorities (no earlier than the prescribed school reopening time), and in light of the actual conditions of the epidemic, the prevention and control work, and the reopening of other local schools, each school should formulate a plan for its teachers and students to return to school in batches, which will be announced to the TVET students one week in advance.

② To avoid TVET students' contacting infection caused by a peak flow of people, staggering the peak (staggering different batches in the same area in the same period of time), staggering areas (staggering severe epidemic area and other areas) and staggering grades (staggering TVET students in different grades) should be adopted for returning to school.

③ For areas with more severe outbreaks, school reopening may be delayed depending on the actual situation.

④ TVET teachers and students are not allowed to return to school when they are falling ill.

(4) Training programme on epidemic prevention:

School websites, official accounts on social network, class groups, lectures, video learning, knowledge competitions, and learning materials should be used to publicize prevention and control policies and measures, as well as knowledge on healthy travel, psychosocial support, personal protection, healthy environment etc., so that teachers and students can master the knowledge of prevention and control, and raise awareness of prevention. Students should be guided not to believe in or spread rumors.

1.2 Making online teaching arrangements

To ensure the continuity of teaching, it is necessary to coordinate distance teaching and learning before returning to school:

① TVET students who do not meet the requirements for returning to school should continue with online learning. For details of the conditions for returning to school, please refer to the first section of the second part of school reopening: Risks evaluation and diversified situation response plans

② In order to prepare TVET students for school reopening, it is recommended to stop distance teaching and learning on the day or two days before the reopening.

③ In order to ensure the quality of teaching, the content of the online courses should be tested after the school reopens. According to the actual knowledge of the TVET students, a support group should be set up to formulate a catch up plan if necessary.

④ The first two weeks of the semester are mainly based on face-to-face courses, supplemented by online courses. Based on a comprehensive study on the situation of epidemic prevention and control, the school should determine the time for overall recovery of face-to-face courses.

1.3 Health information monitoring and troubleshooting

(1) Health monitoring: Mainly by self-monitoring, temperature taking upon entrance or exit etc.

(2) Health surveillance: History of exposure to the epidemic, typical symptoms of the epidemic, and other emerging health problems.

(3) Health monitoring requirements

① Special health monitoring and continuous statistics fourteen days before school reopening;

② Before entering a gathering place, TVET teachers and students should take body temperature And, anyone with a temperature higher than 37.3℃ should be discouraged from entering the place;

③ Seek medical treatment at a nearby hospital in case of any suspicious symptoms; and

④ Keep a record and track absence due to illness. Any abnormality such as increase in infectious respiratory diseases should be promptly reported.

(4) Requirements for preliminary investigation

① Comprehensive and accurate knowledge of epidemic-related information and health status of all staff, TVET students and relatives in close contact with them;

② Carry out personal health monitoring for all TVET teachers and students who return to school, and sign a letter of commitment on the day of registration; and

③ Strictly implement the "daily report" and "zero report" system.

1.4 Campus environmental improvement

Work out plans and standards to improve the campus sanitary environment, comprehensively improve the campus environment, and strictly clean and disinfect classrooms, canteens, dormitories, libraries, activity centres, toilets and other public places. Different items in different places need to be cleaned and disinfected in different ways, as shown in Table 1.

Table 1 Disinfection requirements for places and articles

Places and Articles	Cleaning and Disinfection Methods
Books and periodicals	Book disinfector, UV lamp
Computer screen, keyboard, mouse, class microphone, etc.	Wipe and disinfect with 75% alcohol cotton piece or cotton ball
Sanitary wares such as rags and mops,	After cleaning, use a disinfectant containing 500mg / Leffective chlorine to soak them for 30 minutes
Tableware	Boil or use circulating steam to sterilize it for 15 minutes; or sterilize it with sterilized cupboard; or use solution with effective chlorine content of 250mg / L to soak it for 30 minutes, then rinse with clear water and dry

Note: The frequency of cleaning and disinfection can be appropriately increased for frequently used articles.

The setting of medical observation quarantine sites should meet the following requirements:

(1) Quarantine site location

① No matter whether the school has any quarantined person, it should set up medical observation quarantine sites in advance;

② There should not be any cross flow between concentrated quarantine sites and the dormitory area for ordinary students; they should be as far from each other as possible;

③ A quarantine dormitory should be a well-ventilated single room with a separate toilet and strictly refuse all visitors;

④ The elevator or stairwell at the quarantine site should be able to accommodate a first aid transfer stretcher; and

⑤ Quarantine sites should be equipped with storage space for medical waste that is under closed management.

(2) Setting requirements

① A sign in a quarantine area should be clearly visible with a prompt of "no admittance". A warning line should be set three meters away from the entrance of the residential quarters of the isolated person to prevent people from entering it by mistake;

② The isolated dormitory must be equipped with daily necessities, protective equipment and disinfection supplies;

③ A quarantine area should be equipped with appropriate emergency and first aid materials, and medical personnel, as well as security personnel to handle emergencies at any time; and

④ According to the layout of a quarantine site and the requirements of relevant medical institutions, a reasonable observation process should be developed.

1.5 Strengthening campus safety

(1) During the epidemic, the campus is under closed management, to achieve "one school one gate"(with side doors closed, only leaving main gate open). Any external personnel and vehicles are not allowed to enter the campus without special reasons and permission.

(2) Doormen should wear special work clothes, trousers, shoes, and disposable medical masks. They should not wear work equipment when returning to the living area.

(3) Any vehicle entering the campus must be sterilized completely. Anyone entering the school must wear masks and have their identity verified first. Official visitors should obtain the consent of relevant departments before entering the school.

(4) Security guards need to follow the requirements of "three inquiries, three tests", namely, who are you, where are you from (any person coming from an epidemic impacted area needs to be reported immediately), and where are you going; and three test items: body temperature (no higher than 37.3℃), no cough, shortness of breath or other symptom. Each item should be normal before entering the school.

(5) All visitors are required to take body temperature. Anyone with a fever should be immediately isolated. In this case, the site needs immediate disinfection.

(6) Security guards should make a record of three categories of personnel in a timely manner (out-of-school visitors, anyone with a fever, and those on a delayed return). Report to dedicated staff immediately in case of any emergency. Even if there is no special situation, it is necessary to report the recorded information to the working group on a daily basis.

(7) TVET students are forbidden to go out without permission.

1.6 Preparation for epidemic prevention

(1) The school should pay close attention to the impact of the epidemic on education, teaching, learning and living costs; study and judge in advance the material and financial needs for the epidemic prevention and control; and formulate a timely funding plan for the epidemic prevention and control in the school.

(2) In accordance with the requirements of the "emergency green channel", the school's finance department should promptly use the emergency funds for major emergencies that occur in the school, and guarantee the funds for the epidemic prevention and control.

(3) To increase the supplies of protective equipment the school's medical offices should reserve a certain number of medical masks, disposable gloves, hand sanitizers and cold medicines. All public areas are equipped with disinfection and cleaning materials to ensure the normal operation of all kinds of public equipment.

1.7 Establishment of an interactive mechanism for liaison

All TVET colleges/schools should strengthen communication with health departments, disease control institutions and hospitals, actively strive for professional technical guidance, and strive to ensure the support of epidemic prevention personnel and supplies after school reopening. In combination with the actual work of the school, it should establish an interactive mechanism for liaison with communities, government offices, health and epidemic prevention departments, and organize the formulation and implementation of work plans and relevant systems for epidemic prevention and control, such as multi-level prevention and control work contact network, and a work system of epidemic prevention and control information reporting.

1.8 Emergency drill

To further implement the prevention and control of the epidemic in schools and enhance the acceptance and compliance of all teachers and students to the epidemic prevention measures, each TVET college and school can carry out relevant drill activities according to the actual situation. In the process of an emergency drill, an appropriate number of teachers and students can be arranged to participate directly while other teachers and students watch and learn through online video in order to reduce personnel gatherings.

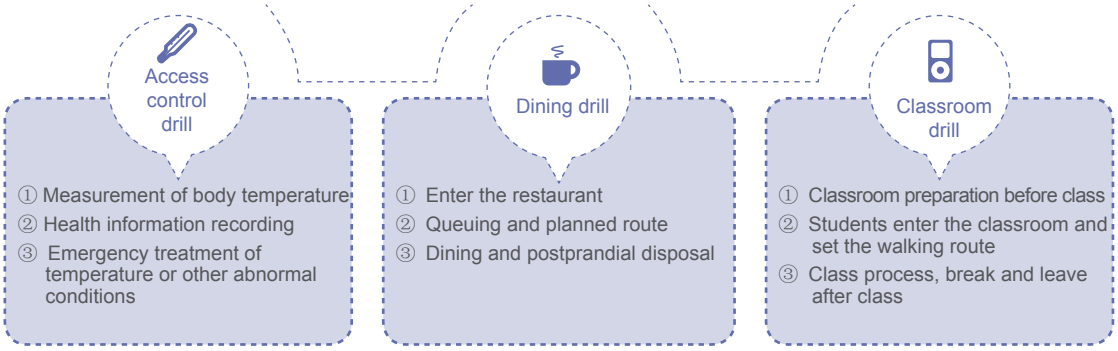


Figure 1. Content of emergency drill

2. Return to campus

2.1 Risks evaluation and diversified situation response plans

Three principles ought to be met in determining the opening time:

(1) The epidemic situation is mostly under control.

(2) The school has basic prevention and control capabilities in place.

(3) The public health of TVET teachers and students and the safety of campus are effectively guaranteed.

On this basis, each school should combine its actual situation and, under the premise of meeting the requirements for local epidemic prevention and control, formulate a refined prevention and control plan, to implement "one school one policy". However, if the school has multiple campuses, and the old campus is densely populated with high student mobility and inadequate epidemic prevention conditions, returning to school is not recommended. In addition, before the reopening of school, TVET teachers and students should be strictly investigated to ensure their health and safety.

2.2 Personal protective guidelines on the way back to school

Public places during the epidemic are potentially contaminated areas. Reasonable self-protection and disinfection measures on the way back to school can effectively reduce the chance of infection.

(1) It is recommended to return to school by a private car and avoid taking public transport as far as possible. When taking public transport, you should wear a disposable medical mask or medical surgical mask.

(2) Always maintain hand hygiene and reduce exposure to public facilities or parts of the vehicles. Avoid using hands to touch mouth, nose, and eyes. When sneezing or coughing, use a tissue or elbow to cover your mouth or nose.

(3) Avoid staying in crowded and poorly ventilated places. Attention should be paid to the condition of the surrounding passengers to avoid close contact with suspicious persons. Keep the travel ticket information properly; record the travel time and boarding place to cooperate in a relevant close contacts investigation and as the basis for a school audit.

(4) Monitor health status. Take the initiative to measure body temperature if suspicious symptoms are found. Try to avoid contact with other people, and seek timely medical treatment.

2.3 Health assessment on the day of returning to TVET colleges/schools

On the day of returning to school, all returning TVET students should be checked again. Any TVET student who meets the following conditions may not return to school for the time being.

(1) Within 21 days before returning to school, the TVET student has had a fever or suspected symptoms, or any of his/her immediate family members living together has had a fever or suspected symptoms.

(2) The TVET student has been exposed to a confirmed/suspected patient within 21 days before returning to school.

(3) The TVET student is currently living in a high-risk or medium-risk area.

(4) The TVET student is required to accept a local medical observation.

(5) The TVET student is now living in a place outside China.

2.4 Guidelines for centralized quarantine and medical observation

(1) Personnel under medical observation

1) Personnel with a contact history:

① Anyone who returns to school from high or medium-risk areas or abroad within 14 days;

② Anyone in close contact with a confirmed and suspected patient within 14 days; and

③ Anyone taking the same transportation vehicle with a confirmed patient reported by the media in the past 14 days.

2) Patient with an infected early atypical symptom:

Anyone who has a fever, cough, diarrhea, etc., but has not been confirmed as a infected patient by the hospital.

(2) Management requirements for medical observation quarantine

① Within 30 minutes after receiving a notification of quarantine, escort the person to an isolated area.

② Issue and sign the Home or Centralized Quarantine Medical Observation Notice and the Medical Observation Monitoring Registration Form within two hours to ensure that the quarantined person complies with the isolation requirements, and conduct body temperature measurement, respiratory symptom monitoring, and registration and reporting twice a day within the prescribed 14 days of medical observation. He/she is strictly forbidden to leave the quarantine area, let alone go out and walk around. He/she should implement daily control measures to prevent the spread of the virus.

③ If he/she has any typical symptom or other physical discomfort, he/she should contact the hospital for referral.

④ Dormitories under medical observation are equipped with living necessities and medical quarantine items. Dedicated canteen personnel will be assigned to deliver bento every day. Each tableware and drinking utensil can only be provided for one person, then disinfected after using.

⑤ Mental status assessment and guidance should be conducted promptly for the quarantined person.

⑥ Spray disinfectant on indoor objects' surface and indoor air twice a day, as well as the outdoor air and ground that is within ten meters from the medical observation area. Domestic waste produced by the quarantined person should be treated as medical waste. Strengthen garbage sorting management, collect and transport it in time, and clean the garbage container, which should be disinfected regularly via a disinfectant containing 500 mg/L of effective chlorine. For the treatment of his/her urine and feces, it is recommended to use a chloric disinfectant and then pour it into the sewer.

(3) Criteria for coming out of quarantine

At the expiration of a medical observation period, if there is no abnormal condition, and the test of respiratory pathogenic nucleic acid is negative for two consecutive times (with a sampling interval of at least one day), a written health certificate will be issued by the medical and health institution responsible for medical observation. Then he/she can come out of quarantine.

2.5 Check-in and registration

To reduce the risk of cross infection, the school should try to avoid centralized registration. It can adopt an electronic registration or other ways. The school should add temporary observation points at the designated entrance and exit of the campus, and TVET teachers and students should arrive at the school in batches according to the requirements for returning. After checking their identity, they should accept body temperature measurement and symptom inquiry when registering. Qualified personnel should enter the campus according to the specified route. (See Figure 2 for the flow chart of enrollment and registration.)

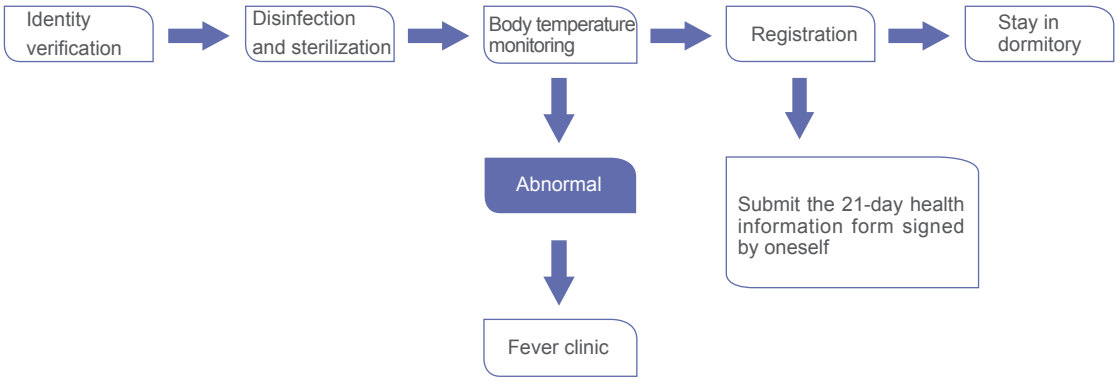


Figure 2 The flow chart of enrollment and registration

3. Management and protection of TVET teachers and students after reopening

3.1 Basic knowledge training of quarantine and protection

(1) Proper use of masks

When staying alone in ventilated non-epidemic areas, you don't need to wear masks. Suitable masks should be worn at different places. See Table 2 for details.

Table 2 Selection of masks for different uses

Place and usage	Type
Epidemic areas	Medical masks are recommended. The best choice is medical surgical masks and medical protective masks.
Densely populated public places	Medical surgical masks
Highly populated or closed public places	Medical protective masks (N95 or KN95 masks)
Conduct on-site investigations on patients, isolate observation areas, and transfer confirmed patients	Medical protective masks (N95 or KN95 masks)

Note: It is recommended that the duration of wearing a mask should be no more than four hours. If the mask is contaminated by blood or saliva spatter, it must be replaced immediately.

(2) Strict hand hygiene

Fully wet hands under flowing water, apply hand sanitizer evenly to both hands, and wash in sequence according to the seven steps of palm, back, finger seam, finger back, thumb, fingertip, and wrist. The entire hand washing process lasts at least 15 seconds.

(3) Sanitary disinfection

Window ventilation is the simplest and most effective way to keep the air clean. Frequently open the doors and windows, and open the windows at least once a time in the morning, at noon, and at night for at least 30 minutes each time. When natural ventilation is not available, mechanical ventilation such as an exhaust fan can be used to minimize the use of air conditioning systems. Air disinfection can be carried out by a moxa fumigation method.

(4) Maintaining physical distancing

Before the outbreak is completely lifted, we should wear masks, avoid face-to-face conversation, and try to maintain a distance of more than one meter. Avoid shaking hands, hugging and other close contact. All articles are specially used by special personnel, especially tableware, cups, towels, etc. When dining together, use public chopsticks and spoons. Separate meals are recommended.

3.2 Management and protection of different groups

(1) TVET student management

① During the period of epidemic prevention and control, TVET students are forbidden to go out without approval.

② Strengthen educational guidance. TVET students are forbidden to go out, dine together, gather or go to densely populated public spaces. They should work and rest on schedule, and develop good hygiene habits. Strengthen online and offline health education and psychosocial support.

③ A system of volunteer supervision among TVET students can be set up to supervise the implementation of relevant regulations on TVET student management, including wearing masks, washing hands frequently and avoiding gatherings.

④ Strengthen the education of TVET students' personal protection knowledge; the emphasis of education should vary for students in different grades or majors.

⑤ During the epidemic, continuous health monitoring and "daily reporting" should be implemented.

(2) Staff management

① Strict control of staff going out. During the epidemic, it is not recommended to travel or participate in meetings and activities, and those who truly need to go out should fulfill the written leave procedures and report their itinerary.

② It is recommended that teaching staff take private cars, bicycles or walk to work and avoid taking public transport vehicles as far as possible.

③ Strict implementation of the identity verification and temperature monitoring system is required when entering the campus .

④ Reduce group activities. Do not hold on-site meetings or indoor activities as few as possible.

(3) Off-campus personnel management

Any outsider and/or external vehicle is not allowed to enter the campus without special reasons and permission.

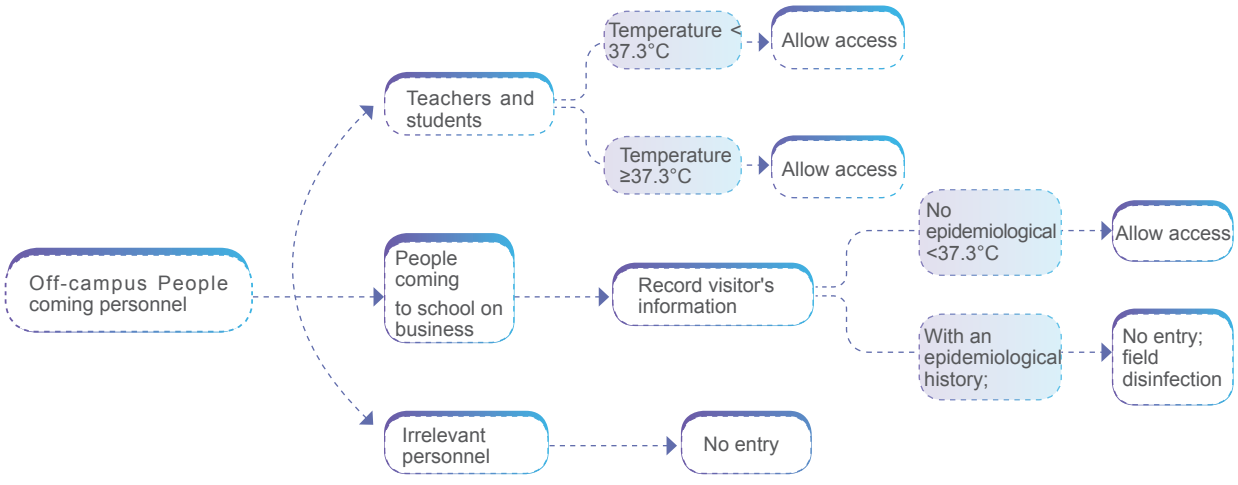


Figure 3. Off-campus personnel management

3.3 Management of key places

(1) Dormitories

① Dormitory buildings should be equipped with body temperature screening posts. TVET students should stagger the time they enter and leave their dormitories in batches.

② Strengthen the entrance control; strictly prohibit the entry of unrelated personnel into the dormitory building.

③ Make a proper arrangements for TVET teaching staff and student accommodation. In principle, there are no more than six people in a dormitory, no less than 2.5 square meters per person. Students in the same dormitory should avoid a head-to-head sleeping way, and try to broaden the space between each other.

④ Strengthen TVET teachers and students' personal protection knowledge education. Conduct proper disinfection and sterilization of the dormitory environment.

(2) Classrooms

① TVET teachers, students and classroom administrators should wear masks in the teaching area and avoid entering the teaching area once they have suspicious symptoms.

② Keep a certain distance from each other to avoid close contact.

③ Use a relatively fixed classrooms and seats, and sit at intervals.

④ Limit the number of students for experiment and practice class (training class 20-30 people per room, dangerous chemicals and experiments 10-20 people per room). TVET students are required to wear suitable clothes and masks before entering the laboratory.

(3) Canteens

① Take body temperature before entering canteens. People with abnormal body temperature are not allowed to enter.

② The dining time should be staggered, and the two-door entrance and exit are determined according to the one-way flow of people. A ground control line is set in front of the window (ground stickers can be used) to ensure that the queue is straight to prevent crossing.

③ Try to shorten the time for TVET students to choose meals. Dishes are arranged according to a package, which will be ready at one window. In the dining area, seats are set in the same direction with a one-meter distance. If seats cannot be set in the same direction, a baffle will be inserted between them. TVET teachers and students are encouraged to bring their own tableware and to wash their hands before dining.

④ Canteen staff should strictly follow hygiene regulations and the morning health inspection system, and wear masks during work.

⑤ Strengthen the safety and supply management of food materials and supplies, and increase the stock to ensure the normal operation of canteens. It is prohibited to purchase ingredients of unknown origin, wildlife, living animals, and poultry and livestock of unknown source.

⑥ During the epidemic, the production and sale of raw and cold food, cold meat, cold dishes, cold noodles, and decorated pastries are prohibited. Raw and cooked food should be strictly separated to prevent cross-contamination of food. Keep a food sample according to regulations.

(4) Libraries

① Reduce access during the epidemic. Take body temperature and wear a mask before entering.

② A library needs online booking. It is open during office hours. The number of people entering the library is limited daily. The seat spacing is increased, reasonable guidance is provided to the staff in the library.

③ Focusing on electronic books, the library reformulates the borrowing and returning rules for paper books. It is suggested that books and periodicals be disinfected via ultraviolet rays before returning to shelves.

3.4 Management of major activities

(1) Teaching activities

① Based on TVET students' home study during the extended school opening period, a practical combined plan of education and teaching is formulated. For TVET students who are temporarily unable to attend the university, and overseas students who are still abroad, special programmes should be developed to provide online learning support and psychosocial support.

② Earnestly organize the “first lesson after school reopening" and popularize public health knowledge.

③ Cancel local group activities and major sporting events.

④ The physical education class can use a combination of online and offline teaching modes. Teachers can provide teaching videos. The offline courses are staggered on the playground and provide on-site guidance. The number of students in each class should not exceed 30 to ensure a safe social distance.

⑤ Improve the teaching organization situation inspection scenario to ensure the teaching quality.

(2) Non-medical TVET student probation and practice protection guidance

① Select a proper mask.

Office and workshop protection advice: Ensure effective ventilation and air flow. Operation personnel who can maintain a safe distance of more than one meter do not need to wear masks.

For public place services, such as shops, hotels, community service centres and other places, it is recommended to wear a disposable medical mask or medical surgical mask.

② Wash hands frequently and keep good respiratory hygiene habits.

③ Try not to take public transport vehicles during the internship.

④ Proactively take temperatures before entering the work area. If they are normal, he/she can enter the work area. Maintain physical distance when many people work together and/or when receiving outsiders.

(3) Medical student probation and practice protection guidance

① Select a proper mask.

General outpatient, emergency, ward and other medical probation and practice protection advice: Wear a medical surgical mask or a higher-level mask.

Protection advice in the ward of a COVID-19 confirmed or suspected patient, ICU, an epidemiological

investigation, or a laboratory testing probation: Wear a medical protective mask.

② Strict implementation of hand hygiene. After contact with a suspected patient, if there is no blood or body fluid pollution in the hand, use the seven-step hand washing method directly to complete the hand cleaning.

If hands are contaminated after contact, first complete the hand washing, then use a disinfectant containing 75 percent medical alcohol to disinfect hands according to the seven-step hand-washing method. When rubbing, the disinfectant completely covers the hand skin. Just wait for it to dry in the air.

③ After returning to the dormitory from the hospital, the clothes are soaked in a chlorine-containing disinfectant for five minutes and rinsed repeatedly, or irradiated with ultraviolet light for 60 minutes.

④ Work clothes and shoes should be worn as much as possible in the course of hospital practice.

3.5 Emergency handling of confirmed or suspected sporadic cases or mass infection

(1)In case of a suspected infection among TVET teachers, students and school staff, an emergency reporting process should be started immediately. No unit or individual is allowed to conceal, delay, omit, misreport or fail to report.

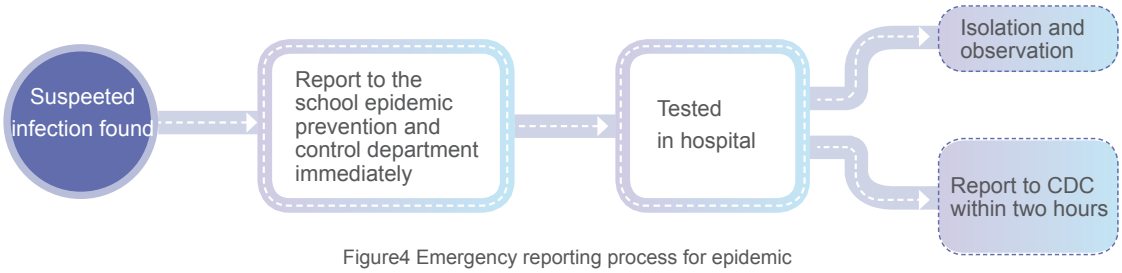


Figure4 Emergency reporting process for epidemic

(2) In case of a confirmed infection among TVET teachers, students and school staff, the personnel in close contact should be checked immediately and their personal information should be recorded. If someone's temperature exceeds 37.3 ℃ or there are suspected symptoms such as cough and discomfort, he/she should be transferred to the hospital for immediate treatment. If there are no symptoms, he/she should be subject to centralized quarantine and observation. Meanwhile, he/she should actively cooperate with the government's health authorities in epidemiological investigation and aftermath treatment.

TVET college and school students from rural areas, poverty-stricken counties and migrant workers must have suffered the most since they have faced several challenges concerning to remote learning, including the challenges of connectivity, availability of personal devices and trained teachers to facilitate the e-learning platforms effectively. For some students that have been behind their peers before the pandemic, the gap must have been further widened as students have missed months of school. The college/school administrators and teachers are encouraged to work out how to make up the missed class time and help learners fix the damage the epidemic has caused to the students' learning. The following strategies can be included:

4. Teaching transitional period after school reopening

TVET college and school students from rural areas, poverty-stricken counties and migrant workers must have suffered the most since they have faced several challenges concerning to remote learning, including the challenges of connectivity, availability of personal devices and trained teachers to facilitate the e-learning platforms effectively. For some students that have been behind their peers before the pandemic, the gap must have been further widened as students have missed months of school. The

college/school administrators and teachers are encouraged to work out how to make up the missed class time and help learners fix the damage the epidemic has caused to the students' learning. The following strategies can be included:

(1) Take students' learning outcome evaluations after school reopening in order to know the students' level in every course.

(2) Adopt a flexible teaching and learning approach. TVET colleges/schools can tweak timetables and can encourage sheer flexibility to allow time for students' interaction. Do not rush or pressure students to complete courses. No extra teaching contents should be added. Avoid putting extra mental and study pressure on the students. Hybrid learning can be continued with much more flexibility and through better facilitation of the online learning platforms.

(3) Curriculum implementation and assessment adjustments. Modify and improve course content and evaluation/assessment standards based on learning outcomes and performance.

(4) Introduce innovative instructional methodologies and practices for better teaching quality. Support students in remote or poor areas by giving after-school classes.

Psychosocial Support

1. Develop working procedures and systems

1.1 Set up task force

The TVET colleges/schools should be led by the school-level leaders in charge of student work, and psychology teachers (or hired psychosocial counselors) should form an on-campus psychosocial support group, and clarify their division of responsibilities. The group should carry out the organization and management of psychological epidemic prevention, and organize and complete the mental health survey and general consultation of students.

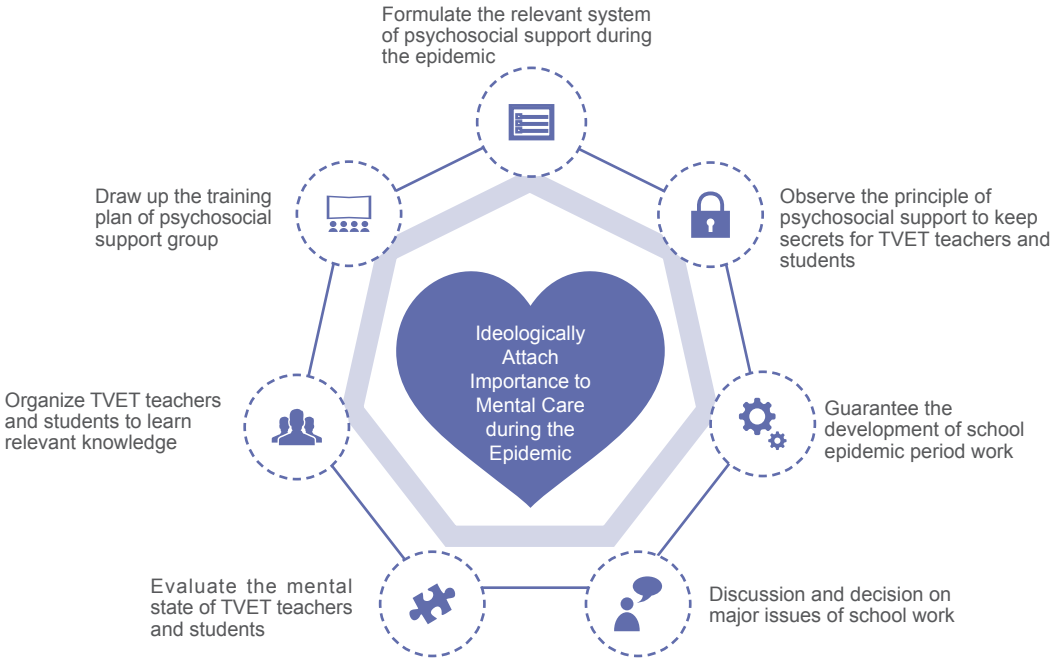


Figure 5 Responsibility chart of psychosocial support group

1.2 Provide personalized psychosocial support

According to the results of the symptom and behavior scale, the whole school population should be classified, and targeted mental counseling should be taken. Any high-risk situation should be identified and referred in time.

(1) General groups: Strengthen the awareness of mental health and safety for epidemic prevention, carry out targeted mental health education on epidemic prevention, avoid discriminating against TVET students affected by the epidemic, update the epidemic situation in real time, and provide a platform for psychosocial support.

(2) Special groups: This includes students with a mental record or tendency of mental problems, those who have weak mental tolerance, are prone to be sensitive and suspicious, and who exhibit negative, extreme and irritable psychology. During the epidemic, it is easier to lead to mental misunderstanding, so special attention should be paid.

(3) People in isolation: Stay connected and maintain social networks. Keep personal daily routines or create new routines if circumstances change. During times of stress, pay attention to your own needs and feelings. Engage in healthy activities that you enjoy and find relaxing. Exercise regularly, keep regular sleep routines and eat healthy food. Keep things in perspective. Seek information updates and practical guidance at specific times during the day from health professionals and the official website and avoid listening to or following rumours.

(4) People with underlying health conditions: Make sure to have access to any medications that you are currently using. Activate your social contacts to provide you with assistance, if needed. Be prepared and know in advance where and how to get practical help if needed, like having food delivered and requesting medical care. Make sure you have up to two weeks of all your regular medicines that you may require. Keep up with daily physical exercises. Keep regular routines and schedules. Start new hobbies in a new environment. Keep in regular contact with families and friends.

1.3 Mental health education

In combination with online and offline establishment of the “school, department, and class” three-level mental health work network mechanism, psychosocial support activities should be conducted in various forms.

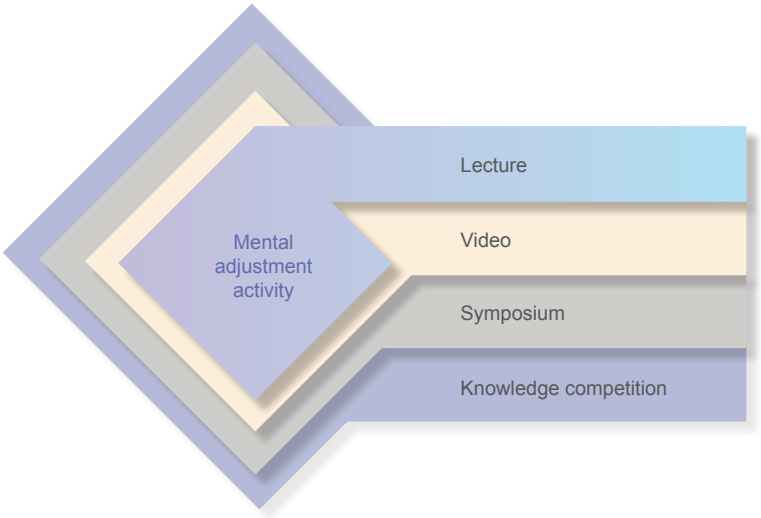


Figure 6 Mental adjustment activities

1.4 Start a Helpline

During the period of quarantine, TVET teachers and students can call the on-campus mutual help hotline or online consultation (including social and hospital professional institutions consultation hotlines or websites) to solve any mental confusion. Schools should strengthen the management of psychosocial support hotlines, use a standardized hotline service flow, follow the ethical principles of psychosocial support hotline service, and regularly analyze and summarize the information of call consultation.

2. Provide psychosocial support for TVET teachers and students

2.1 Before and after reopening

Before school reopening, online mental adjustment activities are the main approach to ensure the effective implementation of mental care for TVET teachers and students. The school should make full use of psychosocial support hotline or network resources to implement psychological counseling for TVET teachers and students through many ways and channels.

After school reopening, the school should aim at different mental problems of different groups of people to choose appropriate psychosocial support methods, and help TVET teachers and students establish a positive mindset to deal with the epidemic period safely.

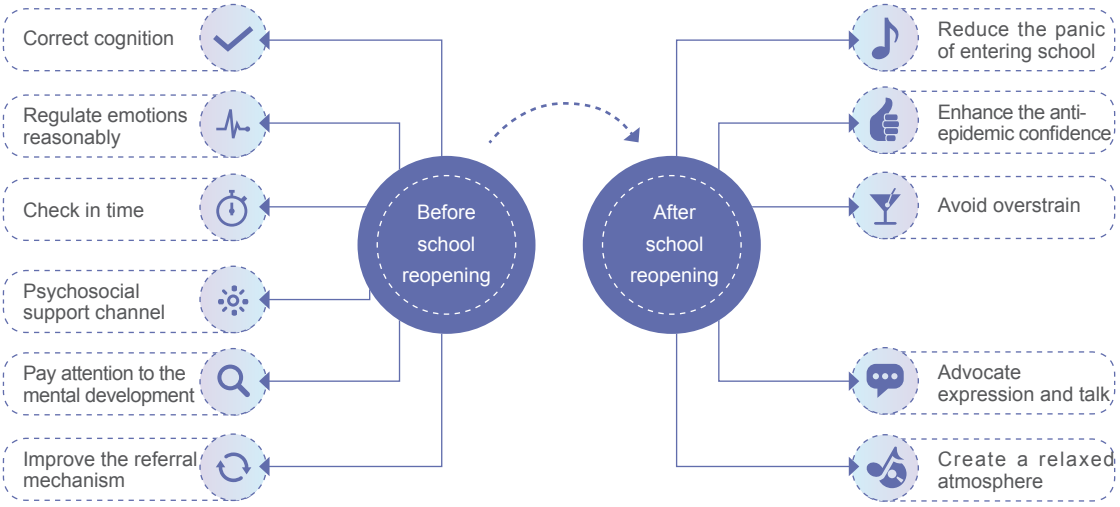


Figure 7 Key points of psychosocial support before and after school reopening

2.2 Key groups

(1) Graduates: They need active guidance on the graduation and employment pressures they are facing.

① Guide them to face the situation actively instead of complaining, build up confidence and keep a good mindset.

② Accept the emotion and pressure, try to adjust, change pressure into power, integrate their own advantages to make reasonable planning, and improve the competitiveness in job hunting.

(2) TVET students in need of quarantine treatment

truthfully explain the current physical conditions and the external epidemic situation, and fully respect them.

① Reduce anxiety and sadness caused by family worries and help TVET teachers and students communicate with their relatives.

② Give more company and comfort, pay attention to the patient's facial expression and body language, and use eye contact to meet the needs of inner security of sick TVET teachers and students, so as to enhance their confidence in treatment.

(3) Others: Students with study abroad programmes may need to change their plans due to the impact of the overseas epidemic, They may feel confused, alarmed and uneasy about the forced change of their original plans. Encourage students to take a long-term perspective, since the reality cannot be changed. We can expect the unknown, with the most comprehensive preparation and more academic accumulation to meet new possibilities.

3. Key points of mental adjustment of TVET teachers and students

3.1 Coping strategies for mental stress reactions to the epidemic

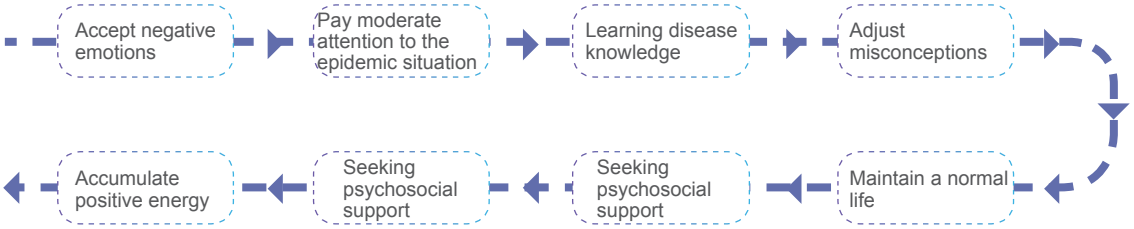


Figure 8 Coping strategies for mental stress reactions in face of the epidemic

3.2 Frequently used mental adjustment methods

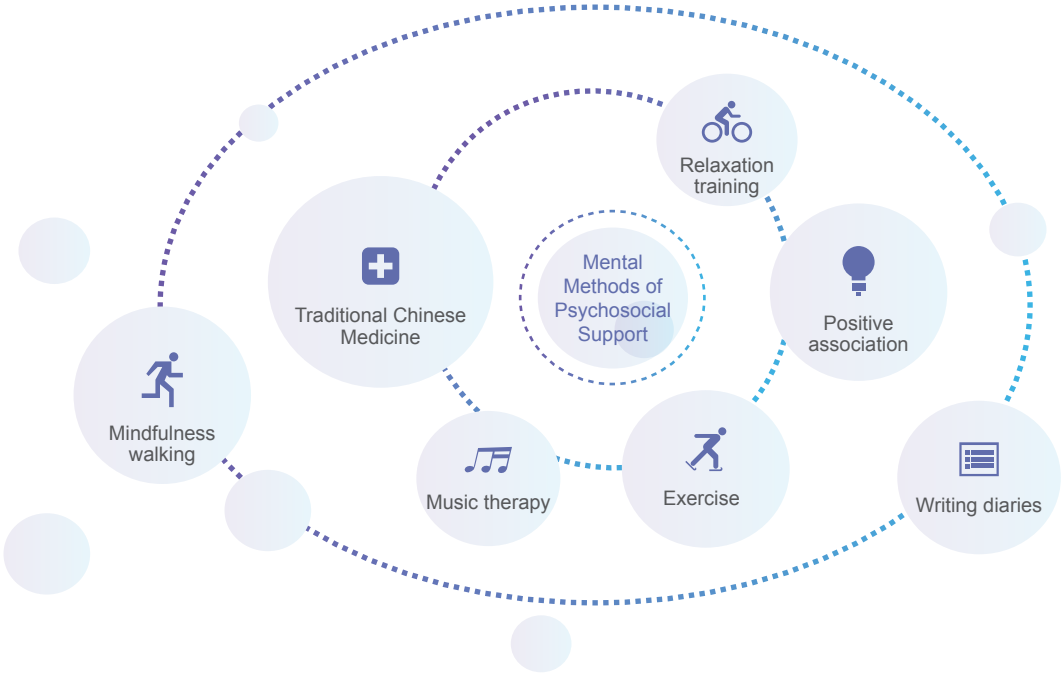


Figure 9 Common mental adjustment methods

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Partners

Ministry of Education of the People's Republic of China, National Commission for UNESCO of the People's Republic of China

Since the outbreak of the COVID-19 epidemic, the Chinese Ministry of Education and the Chinese National Commission for UNESCO have actively carried out collaboration with UNESCO and strengthened solidarity and mutual support with other member states to jointly combat the pandemic and strive to promote the recovery and development of the global education, science and technology, and culture undertakings. During the process of developing the Reference, the Chinese Ministry of Education and the Chinese National Commission for UNESCO have mobilized resources and forces from all parties to summarize and share experiences and lessons in education's response to the pandemic, and in a timely manner, to jointly explore and build a normalized response mechanism to the impacts of COVID-19. With coordination of the Secretariat of the Chinese National Commission for UNESCO, relevant departments of the Ministry of Education, namely the Department of Physical, Health and Arts Education, Department of Vocational and Adult Education, Department of Higher Education, Department of Science and Technology, Department of Basic Education and Department of Moral Education, have participated in policy guidance, outline mapping and content review.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

UNESCO believes that education is a human right for all throughout life and that equitable access must be matched by quality. The Organization is the only United Nations Agency with a global mandate that covers all aspects of education at all levels: its work encompasses educational development in pre-school, primary and secondary education, as well as in technical and vocational education and training, higher education and beyond. UNESCO is custodian to all global education Conventions. The Organization provides global and regional leadership in education, strengthens national and local education systems worldwide, and responds to contemporary global challenges through education. UNESCO has been entrusted to lead the implementation of SDG4 through the Global Education 2030 Framework for Action, and as such convenes the SDG4-Education 2030 Steering Committee which provides strategic guidance to member states and the education community, makes recommendations for catalytic action, advocates for financing, and monitors progress. During the process of developing this Reference, UNESCO has provided valuable support, especially for inputs to and proofreading of the four Parts of the Reference: Preschool Education, Primary and Secondary Education, Higher Education, as well as Technical and Vocational Education and Training.

United Nations International Children's Emergency Fund (UNICEF)

UNICEF is mandated by the United Nations General Assembly to help children around the world realize their rights to survival, development, protection and participation. UNICEF's work is guided by the UN Convention on the Rights of the Child and is committed to establishing children's rights as enduring ethical principles and international standards for children. UNICEF is there at every stage of a child's life to safeguard and promote their rights. UNICEF has delivered life-saving health supplies, built water and hygiene facilities, promoted facts over fear and support over stigma, and kept girls and boys protected and connected to education. It focuses special effort on reaching the most vulnerable and excluded children. UNICEF has been on the ground in more than 190 countries and territories during the COVID-19 pandemic, partnering with governments and front-line responders to slow the spread of the virus and minimize its impact on children worldwide. UNICEF has decades of experience and expertise in supporting quality learning for every child. During this pandemic, UNICEF is supporting distance learning opportunities for children who cannot access school. For the development of this Reference, UNICEF has provided strong support and important contributions, including but not limited to editing and content review of the Parts of Preschool Education, as well as Primary and Secondary Education.

The World Health Organization (WHO)

WHO was established in 1948 as the directing and coordinating authority in global public health within the United Nations system. WHO works worldwide to promote health, keep the world safe, and serve the vulnerable. The organization is guided by its founding principle that all people should enjoy the highest standard of health, regardless of race, religion, political belief, economic or social condition. It therefore works to ensure that a billion more people have universal health coverage, to protect a billion more people from health emergencies, and provide a further billion people with better health and well-being. WHO addresses social determinants of health, promotes intersectoral approaches for health, and prioritizes health in all policies and health settings, including in education approaches and settings. The Organization also provides guidelines and advice on preventing and treating health issues, and produces international reference materials and makes recommendations to bring better health to people throughout the world, including to learners in education systems. The WHO China Representative Office was established in 1981 in Beijing, and collaborates in achieving good health for China's citizens. WHO has provided effective advice and support for drafting the Reference's content in areas relevant to its mandate.

UNESCO International Research and Training Centre for Rural Education

International Research and Training Centre for Rural Education (INRULED) was jointly founded by UNESCO and the Chinese government in 1994. In 2008, INRULED was relocated to Beijing Normal University from Baoding, Hebei Province, to better serve UNESCO member states. The mission of INRULED is to promote sustainable socio-economic development in rural areas by bringing about positive changes in the thinking and behavior of rural people, who make up the majority of population in developing countries, contributing to the achievement of Education 2030 and SDG-4. INRULED contributes a lot in the compilation of the Reference's Part of Primary and Secondary Education, and drafting the Chapters of Distance Teaching and Learning in the Parts of Preschool Education, Primary and Secondary Education, as well as Higher education.

Peking University

Peking University is one of the top higher education institutions in China. The Institute of Child and Adolescent Health of Peking University, as a school-level academic research institute, was established in 1982. It is currently the only national institute of child and adolescent health and school health. The institute provides technical support in child and adolescent health and school health for such state organs as Ministry of Education of China, National Health Commission of China, All-China Women's Federation, General Administration of Sport of China, National Ethnic Affairs Commission of China, and Ministry of Science and Technology of China. Professor Jun Ma is the current director of the institute. The Institute of Child and Adolescent Health of Peking University is responsible for compilation of the Reference's Part of Preschool Education, and drafting the Chapters of School Reopening and Psychosocial Support of Teachers and Students in the Part of Primary and Secondary Education.

Beijing Normal University (BNU)

BNU is a comprehensive and research-intensive university with its main characteristics of basic disciplines in sciences and humanities, teacher education and educational science. Smart Learning Institute of BNU(SLIBNU)is affiliated to BNU, and serves as an experimental platform comprising scientific research, technology development and education, focusing on learning patterns research under ICT environments, smart learning environments design and platforms building that enable lifelong learning. SLIBNU participates in the compilation of the Reference's Part of Primary and Secondary Education, and drafting the Chapters of Distance Teaching and Learning in the Parts of Preschool Education, Primary and Secondary Education, as well as Higher education.

Beijing Foreign Studies University (BFSU)

BFSU is one of China's top universities, teaching 101 foreign languages. Best known for its excellence in foreign languages and literature, BFSU has also launched programmes in fields such as humanities, law, economics, management, education etc. The Graduate School of Education of BFSU, which was founded in May 2018, mainly focuses on international and comparative education, foreign languages and culture education, and contributes to BFSU's development goal as a multilingual, multidisciplinary and comprehensive foreign language university. The Graduate School of Education of BFSU is in charge of the compilation of the Reference's part on Technical and Vocational Education and Training, and drafting the Chapter of Distance Teaching and Learning of that Part.

Central South University (CSU)

CSU is a famous university in China. Xiangya School of Medicine (Xiangya), founded in 1914, is the first Sino-foreign jointly founded medical school in the country. Xiangya has been known by Chinese people as one of the top two medical schools in China for its excellence in medical education, research and treatment. Xiangya is composed of six schools and four affiliated hospitals, and offers thirteen programmes of bachelor's degree in medicine. Xiangya has thirteen national scientific research platforms, nine national key disciplines and sixty-one national clinical specialties. Seven of its medical disciplines have been ranked as the top one percent of ESI and the discipline of Clinical Medicine has been ranked as the top 1/1000 of ESI in the world. Xiangya Medical School of CSU is responsible for the compilation of the Reference's part on Higher Education, as well as drafting the Chapters of School Reopening and Psychosocial Support of Teachers and Students in that Part.

Hunan Traditional Chinese Medical College

Hunan Traditional Chinese Medical College is an excellent vocational college located in Hunan Province of China. The school, founded in 61 years ago, is now the Vice-Chair of the National Traditional Chinese Medicine Vocational Education Group and the Nursing Branch of the China Association of Chinese Medicine. It has the first batch of national demonstration sites of health support, and presides over the many national research and development projects, such as construction of the national teaching resource library and national teaching standards of the professions of acupuncture, moxibustion massage, as well as the traditional Chinese medicine health. Professor Chen Yan, the principal, jointly with Hunan University of Chinese Medicine, is in charge of drafting the Chapters of School Reopening and Psychosocial Support of Teachers and Students of the part on Technical and Vocational Education and Training in the Reference.

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