Reference principles for
supporting students' home learning with e-learning modes

During the prolonged period of class suspension due to the COVID-19 epidemic, it is encouraging to see schools' adoption of flexible and innovative methods to achieve the goal of "suspending classes without suspending learning".   As revealed by the preliminary findings of a questionnaire survey in July this year and focus inspections conducted by the Education Bureau (EDB), schools have, amidst the epidemic, strived to familiarise themselves with e-learning and implement e-learning to various extents.   We observed that with the experience gained from practice, self-improvement had been made progressively by schools to enhance the effectiveness of learning and teaching.

e-Learning is just one of the many home learning modes and its effectiveness is determined by many factors.   There is considerable concern about the suitability of e-learning for young students and students with special educational needs (SEN), the impacts of e-learning on physical (including visual) health and mental well-being, the balance between the benefits of e-learning and the likelihood of Internet addiction, etc.   With the commencement of a new school year, and given the unpredictability of the epidemic, the EDB has, by drawing on the experience from various sources, developed this set of reference principles to support schools in mapping out contingency measures.   It is an opportune time for schools to expedite the development of e-teaching and enhance the effectiveness of e-learning, so as to sustain and consolidate the outcomes achieved.   For example, schools may further increase teachers' capabilities to use information technology (IT) in education, or establish a depository for e-learning and e-teaching resources.   This could equip schools better for providing continued support for students' home learning as necessary, as well as maintaining students' learning momentum and developing students' self-directed learning ability during the class suspension. Basically, before full (and phased) resumption of classes, schools should engage students in home learning through **a blended mode**, which means a combination of e-learning of various extents and other means of learning.

I.   Provision of software and hardware

To implement e-learning, irrespective of the extent, we must first ensure that students have access to appropriate basic devices and equipment.   Schools should take note of the different needs of students, and work with parents to prevent students from succumbing to abuse and Internet addiction.

1.   Appropriate basic devices and equipment

- Schools should consider the affordability of parents in general in determining the reference specifications (e.g. minimum requirements for hardware and software, operating systems, utilities and applications, and basic accessories) for purchase of mobile computer devices.   Please refer to the EDB website[1] for samples of the technical specifications for procurement of mobile computer devices.

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[1]   https://www.edb.gov.hk/attachment/en/edu-system/primary-secondary/applicable-to-primary-secondary/it-in-edu/CCF/CCFAP_SampleDeviceRequirementsSpecification_en.docx

- Schools with cross-boundary students (CBSs) should select e-learning platforms and learning management systems that are also accessible in the Mainland so that these students can use those uploaded educational videos and other learning materials.

2. Applying for subsidies to support needy students

- Schools should take the initiative to understand the needs of disadvantaged students in terms of mobile computer devices and Internet connection speed at their home. Early applications should be submitted on behalf of these students for subsidies under the Community Care Fund (CCF) Assistance Programme as well as support schemes run by other charities and non-governmental organisations (NGOs). It has been announced for the information of all public sector schools that the EDB, in view of the epidemic, would exercise flexibility in processing applications and accept applications submitted by all public sector primary and secondary schools implementing e-learning to purchase mobile computer devices for their needy students before the full resumption of classes. Schools may check out the EDB website[2] for details of the subsidy and application procedures. A number of charities and NGOs are also known to have rolled out initiatives to support students' e-learning during the class suspension. Links to the relevant websites are provided on the EDB website[3] for schools' reference. Besides, schools in general with a sufficient number of mobile computer devices procured could support needy students' home learning through the loan of devices.

- The Government has provided eligible families with a subsidy on Internet access charges, which enables needy students to have access to basic Internet services provided by operators of fixed or mobile telecommunication services. As for individual needy students without access to appropriate Internet services owing to their living environment, schools may, in accordance with the procurement procedures and guidelines set out in the relevant regulations/circulars, flexibly deploy grants such as the Composite Information Technology Grant and the Expanded Operating Expenses Block Grant to procure and lend portable WiFi routers and provide mobile data cards to these needy students to facilitate their e-learning at home. Reference specifications of portable WiFi routers have been uploaded onto the EDB website[4].

3. Home-school consensus on prevention of abuse and Internet addiction

- Schools, parents and students should reach a tripartite consensus on an Acceptable Use Policy, which explicitly sets out rules about the proper use of mobile computer devices. Schools should provide parents with guidance and assistance, so that they could install filtering software to protect their children from inappropriate online contents and better manage the time their children spend on home learning (including Internet surfing). In this regard, schools may make good use of the support offered by the EDB, such as seminars for parents as well as enquiry hotlines for parents, teachers and students in need, and e-safety resources provided by other government departments and NGOs, details of which are available on the EDB webpage

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[2] https://www.edb.gov.hk/en/edu-system/primary-secondary/applicable-to-primary-secondary/it-in-edu/ITE-CCF/ccf_index.html
[3] https://www.edb.gov.hk/en/edu-system/primary-secondary/applicable-to-primary-secondary/it-in-edu/other.html
[4] https://www.edb.gov.hk/attachment/en/edu-system/primary-secondary/applicable-to-primary-secondary/it-in-edu/ReferenceSpecificationsOnPortableWiFiRouter_E.pdf

(http://www.edb.gov.hk/il/eng).

II. Teachers' readiness and technical support

In determining the extent and mode of e-learning, schools should consider, among others, teachers' IT literacy.   The EDB has set up a dedicated webpage on supporting students' home learning with e-learning modes, which seeks to equip teachers with the required knowledge and skills.   Schools are expected to strengthen school-based training, and foster collaboration and exchange among teachers.

1. Support from the EDB

- Dedicated webpage (https://www.edb.gov.hk/ited/eh):
    - ➢ self-learning online courses on introductory tips and good practices about the use of e-teaching tools;
    - ➢ video clips of webinars on different topics, ranging from schools' sharing of pedagogical skills and planning strategies;
    - ➢ a new series of webinars, which cover more subject-related e-pedagogies, and schools' successful experience in the effective use of e-learning strategies to support students' home learning as gathered by the EDB through focus inspections, school-based support services, etc.   Teachers may enrol on these webinars during the class suspension, and relevant details are available on the EDB webpage (https://www.edb.gov.hk/ited/webinar);
    - ➢ reference principles on supporting students' home learning with e-learning modes during the class suspension;
    - ➢ instructional videos on the use of e-learning platforms, the flipped classroom strategy, real-time online teaching, online assessment tools, etc.; and
    - ➢ school-based implementation experience consolidated by the IT in Education Centres of Excellence (CoE).
- Schools may apply for the on-site or remote support services offered by the CoE, or call the EDB hotlines on 3698 3669 or 3698 3571 for enquiry and support.
- Other resources include the dedicated webpage on diverse resources for continuous learning (https://www.hkedcity.net/home/en/learning) and Go eLearning platform (https://www.hkedcity.net/goelearning) set up by the Hong Kong Education City, and EDB One-stop Portal for Learning and Teaching Resources (https://www.hkedcity.net/edbosp) and curriculum resources about COVID-19 [5] provided by the EDB.

2. Support at the school level

- School leaders may provide teachers with school-based training on e-learning tools and strategies, technical know-how, e-safety, etc.   Moreover, teachers with experience in teaching different subjects and e-pedagogy may form groups for collaboration and mutual enhancement.   Platforms for interaction and support may also be established in schools for teachers to share teaching resources, insights about

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[5]   https://www.edb.gov.hk/en/curriculum-development/resource-support/learning-teaching-resource-list/kla-resource-lists/index.html

the design of learning materials, and teaching outcomes.

- Teachers should be encouraged to join external support networks so that they could further interact with other educators to exchange knowledge and successful experience.   Schools may visit the EDB webpage[6] for details.

- Schools may designate IT staff to render support to teachers and students when necessary.   The designated personnel may, for example, conduct technical tests to gradually familiarise users with the application of e-learning tools and platforms; help with the setting up of user accounts for access to e-learning resources/platforms and customisation of login procedures; and share with the whole school solutions to common technical issues.

- Schools should cater for the particular needs of individual students and parents by rendering technical support and answering their enquiries.

III. Modes of implementation

With reference to schools' experience, a blended mode of learning and teaching is considered most desirable during the class suspension because it not only caters for the diverse backgrounds, needs and abilities of students, but also promotes self-directed learning among students.   Schools should factor in grade levels, subjects, teachers' competence, support measures, etc. when adopting a suitable mode of implementation.

1. **Blended mode:** Home learning is not equivalent to e-learning.   A blended mode allows greater flexibility in learning and teaching activities to address the diverse needs of students and provides different channels for maintaining regular contact with parents and students.

   - As revealed from schools' implementation experience, the vast majority of special schools have assignments and other learning materials printed out for mailing to individual students or collection by parents, and they find this highly conducive to students' learning.   The same approach is adopted by about half of primary schools and around one-third of secondary schools, and most of these schools consider such an approach effective.   In addition, some schools have educational television programmes and audio learning materials saved on compact discs or USB storage devices so that students could engage in learning offline.   In case of any CBSs having no access to their school's learning platform and website, schools should deliver learning materials to them through other means.   To facilitate students' learning at home, schools should constantly review students' needs, and make use of different media and channels to provide students with teaching contents, teachers' instructions, study notes, assignments, texts for extra-curricular reading and other learning materials.

   - Teachers may, depending on the actual circumstances, communicate with parents and students via telephone or mobile applications, so as to grasp students' learning progress and difficulties and provide them with guidance and emotional support. To ensure that feedback on students' assignments could be given in a timely manner, teachers may ask students to take photos of completed assignments and send them the photos through electronic means.

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[6]   https://www.edb.gov.hk/en/edu-system/primary-secondary/applicable-to-primary-secondary/it-in-edu/other.html

- To further provide opportunities for self-directed learning among students, schools are expected to conduct open-ended learning activities, such as extensive reading, project learning, exploration and information searching.

2. **e-Learning mode:** e-Learning mode can be broadly categorised as asynchronous and synchronous. Schools may make a choice according to their contexts.

Asynchronous:

- Schools provide learning materials for students and assign them learning tasks or assignments through electronic means, such as email, e-learning platform, learning management system and cloud storage. Students then follow teachers' instructions to engage in self-learning activities, which may involve reading, information searching, preparation and revision, and interact with peers or seek guidance from teachers through electronic means. Teachers will, with reference to teaching targets, observe and evaluate students' learning progress, and take follow-up actions or provide guidance accordingly. All primary schools that have responded to the questionnaire survey indicate that they have produced teaching videos, which are supplemented with related exercises.

Synchronous:

- Real-time online teaching is conducted via web conferencing platform or application, with teachers on screen elucidating learning contents, interacting with students, and providing guidance and feedback instantly. Since live streams are recordable, students may view or replay whenever they prefer. A varying level of real-time online teaching is adopted by most secondary schools.

- Real-time online teaching is only one of the many e-learning strategies, which should not be regarded as the only way to support students' home learning. To sustain students' attention, online lesson time should not be overly long. In general, each session may last 20 to 25 minutes, which is shorter than the usual lesson in school. In particular, learning sessions for lower grades should be kept short.

- As advised by the Department of Health, children aged between two and six should be discouraged from using electronic screen devices for long durations, and be reminded to take breaks to relax their eyes. In principle, real-time online teaching mode is not recommended at the kindergarten level. For ways to support kindergarteners' learning at home, please refer to the "Strategies for Kindergartens to Support Children's Learning at Home[7]".

- Unless for brief communication with the school on their learning and emotional needs, young primary school students and students with attention deficit are not supposed to go online for real-time online teaching. In fact, young primary school students and students with special educational needs (SEN) could only engage in e-learning with parental assistance, and yet such assistance is not always available because of time and capability.

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[7] Letter on Support for Children's Learning at Home and its annex entitled Strategies for Kindergartens to Support Children's Learning at Home
(https://www.edb.gov.hk/attachment/en/edu-system/preprimary-kindergarten/about-preprimary-kindergarten/KG%20Letter%20and%20Annex_E_20200511_Final.pdf)

IV. Changes in learning and teaching modes

Student-centred planning for learning

- Students' home learning should not be confined to the teaching progress set for usual lessons in school. Schools should not stick to the regular school timetable when scheduling real-time online teaching for different subjects, but should instead adhere to the basic principle that such arrangements would not result in extra pressure on students and parents.

- Schools should, through review and re-planning of curricula, adapt and organise teaching contents, and flexibly adjust the teaching pace. With the flexibility accorded by home learning, schools are in a better position to work out student-centred, personalised learning arrangements, and thus cater for the diverse needs of students.

- Learning tasks should focus on the development of self-directed learning ability and learning habits. As such, primary schools should maintain communication and collaboration with parents, in order to help students work out their home learning schedule. On top of study, time should be set aside for home workout, the pursuit of wholesome interests and hobbies, etc. This will enable students to lead a healthy lifestyle and thrive both physically and mentally.

- Adopting one single teaching mode or strategy across the board is not recommended. Instead, schools are expected to exercise professional judgement, having regard to subjects, grade levels, learning topics, teaching contents, activity nature, as well as students' abilities and interests. Teaching modes or strategies could be adopted in combination. For example, while Primary 1 and Primary 2 students are not supposed to join real-time online lessons, schools may help them lay a solid foundation for learning by means of extensive reading, educational television programmes, project learning, simple craftwork, workout, etc. For higher grade students, schools may gradually increase the weight of e-learning using the blended mode, say one or two times a week.

- Real-time online teaching, if arranged, should be student-centred as well. Teachers may highlight the teaching foci by editing or trimming the usual learning contents, give instructions to students beforehand, and draw up plans for lesson preparation and post-lesson extension activities, etc. Greater emphasis should be put on the flipped classroom strategy. Teachers should make good use of the limited time in real-time online lesson, inspiring students to ask, think and interact, solving problems with them, and wrapping up the lesson succinctly. For the optimum use of online lesson time, assignment instructions may be given to students and parents after the lesson via mobile application or e-learning platform.

- There should be enhanced flexibility in the design of assignments and learning tasks. For example, through interdisciplinary collaboration, schools may engage students in cross-curricular extensive reading, project learning, exploration activities, online peer group discussions or sharing, as well as physical and music appreciation activities with a refreshing effect. Study contents that bear relevance to everyday life not only makes learning more interesting, but also helps students consolidate what they have learnt.

- Schools should help students acquire the attitudes, skills and basic computer knowledge required for e-learning. These include information literacy, and awareness of e-safety, prevention of Internet addiction and excessive use of mobile computer devices. Also, meaningful, diversified e-assignments and online lessons should be designed to further develop and consolidate students' competence in this regard, and help them exercise self-discipline. Schools may refer to the framework on "Information Literacy for Hong Kong Students" and related learning and teaching resources provided by the EDB (http://www.edb.gov.hk/il/eng).

Making good use of assessment resources to gauge learning progress

- In light of the needs of students at different grade levels, and the particular circumstances of CBSs and needy students, school leaders and teachers may adjust the objective, schedule, frequency, content and mode of internal learning assessment or explore alternative options, and provide students with timely and diversified feedback.

- Schools may make use of the STAR platform (https://star.hkedcity.net), which contains assessment tools and assessment tasks covering the subjects of Chinese Language, English Language and Mathematics from primary to junior secondary levels, to conduct assessment for learning. Schools may obtain an instant analysis of students' performance by class, grade and special group, as well as an analysis of incorrect answers for reference, and access the resource bank of the EDB's Web-based Learning and Teaching Support (WLTS). Furthermore, schools may obtain the performance analysis of individual students, which will guide their follow-up actions to cater for learner diversity more effectively.

Addressing students' developmental and emotional needs

- The need for social distancing during the epidemic may arouse negative emotions among students and even parents. Hence, teachers should observe more closely students' emotions and behaviour, and encourage students to learn to be grateful, resilient and positive towards life. Caring for one another can counteract negative emotions.

- During the class suspension, schools should be aware of the needs of students with SEN, non-Chinese speaking students, CBSs, needy students, etc. Schools are expected to, through interdisciplinary collaboration, provide students and parents with technical support and address their queries.

- As for newly-admitted Primary 1 students, schools should particularly see if they could adapt to the new setting, and whether they are psychologically and emotionally fine. These students should be helped to establish good learning habits and maintain a passion for learning. At the beginning of the school term, class teachers may call or message the students, so as to forge a bond with them and learn more about their learning styles and needs. Teachers may as a first step, assign simple tasks to these students, and at a later stage, provide them with structured learning materials.

V. Close communication and cooperation between parents and schools

- Whether it is the blended mode or e-teaching strategy, close communication and

cooperation between parents and schools are indispensable. Schools should prepare guidelines such as those on leading a healthy life, frequently asked questions and answers on online learning, instructional videos, tips on information literacy, etc., to assist parents in supporting their children's home learning with right attitudes and actions. Drawing on the diverse resources on the EDB's dedicated webpage on using e-learning modes to support students' home learning (https://www.edb.gov.hk/ited/eh), schools may roll out parent education activities covering such topics as e-safety, information literacy and eye health.

- During the class suspension, schools usually approach parents through telephone, mobile communication applications, notices and learning management systems to gauge students' learning progress. To enable parents to understand the objectives and specific arrangements of learning activities, keep track of their children's learning progress and grasp how to work with schools in supporting their children's learning, schools may organise webinars, remote meetings and class-based activities for parents or call them for direct communication. It is imperative that parents recognise their active role in maintaining their children's learning momentum and know the channels for seeking teachers' help when their children encounter difficulties.

- For younger students, parents may arrange simple parent-child exercises or games at home, so as to enable their children to learn through play. On top of discussing with their children about the ways of home learning, parents may work out a daily schedule for study, play, lunch and exercise, and keep track of the progress of their children's daily learning. Besides, parents should encourage children to try to solve problems on their own and seek help when necessary, in order that they could develop the abilities of self-management and self-directed learning.

- For older students, parents may start off by building a good parent-child relationship. On this basis, parents could proceed to find out their children's interests, strengths and weaknesses, emotions, etc., and encourage them to face challenges positively and give full play to their potential and strengths.

- Where circumstances and resources permit, schools should take better note of students' family situation and their relationship with parents. School-based educational psychologists, school social workers, and student guidance teachers/officers/personnel may be assigned to provide students and parents with parenting education or guidance services, in the hope of relieving their stress. Cross-disciplinary collaboration should be fostered to enable comprehensive follow-up actions. If necessary, schools may refer parents and students to related organisations for further assistance and support.

VI. Holistic planning and continuous refinement

- Apart from a flexible approach for handling crises, school leaders should have holistic planning and coordination. They should review their school's current situation (including the pace of implementing e-learning), ascertain the status and needs of students and parents, and identify the aids and resources available within and outside campus. Also, they need to lead the teaching force in making concerted efforts to achieve synergy. At different stages, there should be viable policies and

specific work targets for continuous enhancement in learning and teaching effectiveness.

- Schools should develop guidelines and suitable methods for maintaining close communication with teachers, parents and students. As observed, schools are able to disseminate messages via telephone, email, intranet, mobile communication application, built-in messaging function of learning management system, etc., keeping the above parties updated, and thus ensuring transparency in related arrangements and support measures.

- Schools should establish mechanisms for monitoring, review and feedback, and employ practical methods to canvass the views of teachers, parents and students in a timely manner, which would inform schools' reflection on their work effectiveness. Also, through assessment of learning efficacy, schools should provide feedback on curriculum planning, and continuously refine arrangements and measures for supporting students' home learning.

- Schools should, on an ongoing basis, review the position of their tasks (e.g. progress of school-based programmes, quality of teaching materials, and application of various learning and teaching modes) and the effectiveness of home learning. By consolidating the successful experience or solutions, schools should proceed to find out more about students' learning and developmental needs, and take timely follow-up actions to support their positive development. Such actions may involve improvements to delivery and collection of learning materials, enhancement of learning assessment modes, flexible coordination between discipline and guidance services, further measures to ensure students' physical, mental and emotional well-being, more effective channels for home-school liaison, etc.

- Schools should keep themselves updated on the latest announcements and measures of the EDB and other government departments, including the Centre for Health Protection under the Department of Health. Through ongoing reviews of their implementation experience and establishment of more flexible and responsive mechanisms, schools should get well prepared for the phased or full resumption of classes. The EDB will continue with relevant focus inspections to look into the situation of schools and disseminate good practices within the school sector.

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