

# **Facing the Pandemic: *Learning* at the Centre Stage**

## **Observations towards a New Normal**

(Revised, September 18, 2020)

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### **Preamble**

1. Hong Kong and the Chinese Mainland have undergone school closures since late January. Schools in Hong Kong were reopened in June, but soon closed again in July because of a third-wave of the pandemic. Into the semester starting September 2020, Hong Kong schools perhaps have suffered from the longest period of school closure, since January 27, 2020, with early school reopening in Mainland China and late school closure in other parts of the world. In this period, Hong Kong has practised suspension of class, but not learning, or "learning sans classes," which happens to be the slogan in all the four Chinese communities – the Mainland, Hong Kong, Taiwan and Macau.
2. During this period,
  - a) higher education moves rather smoothly into a distance mode, and the success of an institution depends on the use of e-learning modes during normal times;
  - b) near 100% of primary and secondary schools are engaged in on-line learning, with almost no exception;
  - c) kindergartens and nurseries suffered most, because there, education depends almost totally on face-to-face interactions and hands-on activities; on-line learning has to rely on parents, but (i) teachers are not trained to "teach through parents and (ii) there is great diversity and disparity among parents.

In this paper, we'll concentrate on primary and secondary schools. There are several major issues.

## Issue 1: Disparity

3. The question is: ***Do we have adequate infrastructural preparedness of the new normal of learning?*** The “home-based learning” has revealed huge disparity among students’ families?
  - a) The first sign of disparity appears in the weakness in infrastructure, in the shortage of hardware: computers<sup>1</sup> and network coverage. It’s not only a matter of absence in some families, but also a severe shortage of machines in almost all families<sup>2</sup>. There has been government aid for purchasing computers even before the pandemic<sup>3</sup>, but in the pandemic, there are philanthropic efforts to help with computers. There are also sizable donations of SIM cards<sup>4</sup>.
  - b) The second sign of disparity is with the parents, because of their different incomes, education levels, care for children and living conditions under the pandemic. This is an issue that sees no easy solution.
4. The whole-system on-line learning has revealed the disparity which is masked by the uniformity in schooling, which hides the diversity and disparity of student learning with the narrow “subjects” and simple scores.
5. Such disparity should not be taken lightly. As will be discussed below, on-line and self-regulated learning is going to stay as an essential part of the education system. To start with, the infrastructural hardware problem should not be taken for granted. It is associated with the new phase of development of human learning. Such infrastructure, personal computers and network coverage, should become a normal provision by society, not only in schools, but also in families, if blended learning is to become a new normal. The development of 5G should be sped up, even if only for our next generation.

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<sup>1</sup> Referring to “Large Screens”, excluding mobile phones.

<sup>2</sup> Even in families with computers, there is competition among children and home-working parents.

<sup>3</sup> The government has a BYOD (Bring your own design) scheme to help students with financial aid to equip themselves with large screening mobile devices.

<sup>4</sup> For example, the Hong Kong Jockey Club, one of the largest philanthropic organizations in the world, has given away 102,000 SIM cards, each with 30GB, for 4 months.

## Issue 2: Modes of Learning

6. The basic question is: ***Do we try to restore the formal classes as much as possible, or to exploit the window for more self-directed learning?***
- a) Some schools have tried very hard to follow the normal time-table. They try to transform face-to-face lessons into on-line mode. It is consensual now it is impossible to cover what would be conventionally covered using on-line teaching. This is more a challenge in the upper grades of secondary school, because of the pressure for public examinations.
  - b) Some schools condense the time-tabled classes from 35-40 mins to 15-20 minutes, and supplement with small group tutorials, and student self-directed tasks. They are still very much following the scheduled teaching in order to cover the curriculum requirements. This is more in the upper grades than the lower grades. In the latter, there is more flexibility, because there is no public examination<sup>5</sup>.
  - c) Many schools, and in the primary grades in particular, have adjusted to the curriculum, so that teaching in the formal curriculum is down-sized, and students are given alternative learning tasks.
7. Is the on-line mode a substitute for conventional mode of learning? The initial thinking of most schools and teachers is to use technology in order to simulate conventional modes of learning, as much as possible.
- a) It is commonly understood that it would be impossible to cover the entire conventional curriculum with the on-line mode, following exactly the conventional pattern, in terms of time allocation and types of interactions.
  - b) There are activities that cannot be carried out under home conditions, such as laboratory experiments, horticulture, sports activities, choir and orchestra practices, club activities, experiential learning outside schools, and so on.

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<sup>5</sup> In Hong Kong, there is only one public examination at the end of the 12<sup>th</sup> grade, which also serves as the basis of university admissions to higher education. The education reform about 20 years ago removed two other public examinations.

- c) There is a general fear that students are not under observation. Hence, it is difficult to know whether students are paying attention, and difficult to know their reactions. There are students who switch off their cameras, or place a photo to replace their faces. Hence, it is difficult to control the pace of the lessons while the teacher is talking to silence.
  - d) In any case, it would be unrealistic to expect students to focus on the screen for the conventional 6-7 hours a day<sup>6</sup>.
  - e) In lower grades, lessons and learning tasks have to rely on parents' assistance, which is precarious and is difficult to control.
  - f) Conventional teaching requires continuous formal or informal assessment in order to make sure that students have achieved the learning goals. This is not always easy in an online mode.
  - g) In order to substitute for a conventional lesson, teachers have to spend 5-10 times of time in order to design and prepare a video session. Teachers are exhausted. They face serious difficulties if they are also parents of one or more children.
8. Very soon, in a matter of 1-2 weeks, experiences have prompted most teachers and schools to adopt a more flexible approach. Most schools have a choice or combination of modes of home-based learning.
- a) Most schools have a readjustment of their time-table of on-line meetings with students, in a variety of ways:
    - i) Shorten the time of on-line interaction, for example, changing a 35-40-minute lesson to 15-20 minutes.
    - ii) Re-design the time allocation to different learning areas, e.g. giving more time to languages and mathematics.

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<sup>6</sup> A typical school day is 8:30 to 15:30, including a lunch hour, but often with extended hours for extra-curricular activities.

- iii) Give more “silence” time for students’ self-regulated learning, thinking and/or undertaking learning tasks, such as reading, writing, drawing, completion, or projects for creation.
- b) Create asynchronous sessions either as a continuity of the synchronous session, or as a separate option.
- c) Create on-line simulation of science laboratory work, and on-line version of physical education, music and art learning.
- d) Create innovative DIY experiments, games, productions as meaningful learning activities.
- e) Organise small group discussions during or after whole-class sessions.
- f) Create space for non-conventional learning beyond the formal curriculum, e.g. cooking, classical music appreciation, participating in housework, Goldberg games, or self-selected learning option.
- g) Pay on-line “visits “ to individual students, often as a friendly personal chat, not necessarily on curriculum matters.

There are many other activities, most innovative and meaningful, concentrating on student learning, rather than curriculum content coverage.

9. The proof of the pudding is in the eating. Do students learn in the new mode?
- a) We can safely say that there is strong evidence that points to the possibility of students moving into self-directed mode of learning.
  - b) We are fully conscious that this is a drastic shift of the paradigm, and we should not expect what we expected in the traditional mode. From what we gathered from teachers and parents, most students do learn in the new mode.
  - c) It illustrates that students behave as active learners only if we trust they can be active learners. In other words, in the traditional mode, when students are not given opportunity to be active learners, how could we know if they could be active learners?

- d) There are indeed students who are not motivated. What is interesting is that (i) those who are active in the online or school-based mode may not be the most active in conventional classrooms ; and (ii) there could be a greater disparity among students' attitudes and outcomes of learning. This is somehow not surprising given the totally different setting, but should show us directions for improvement.

### Issue 3: Changes in Teachers

10. During this process, the change in teachers is visibly significant. The questions are: ***What is the nature of changes among teachers? What are the implications of such changes?***

- a) During the process of learning mode transformation, for many teachers, their concerns have shifted from “how I should teach” to “how students could learn”. Almost unnoticed, they have shifted their role from “instructors” to “designers of learning”. The concept of *design* has crept into the profession.
- b) Educators have been hosting the discussions, explorations, experiments and innovations about using technology in education. This is contrary to the situation before the suspension of in-person classes, where the discourse about technology in education had been mostly driven by technology experts or providers.
- c) Hong Kong, despite its “high performance” in PISA tests, and its high penetration of digital devices, is ranked very low in students’ “digital literacy” and teachers’ preparedness in adopting technologies in teaching. This has been discussed in details in a recent large-scale study in Hong Kong<sup>7</sup>. As a result, on-line learning had been only rare among schools in Hong Kong before the pandemic. However, the sudden school closure has

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<sup>7</sup> See Reichert, F., Lam, P., Loh, E.K.Y. & Law, N. (2020). *Hong Kong students' digital citizenship development: Initial findings*. Hong Kong: University of Hong Kong. See also <https://ecitizen.hk/events/event-7>. The ranking in PISA can also be found in the recent OECD report by F. Reimers and A. Schleicher (2020) *A framework to guide an education response to the COVID-19 Pandemic of 2020*. Paris: OECD.

created an unusual opportunity for teachers to ride on a fast track to move into on-line learning.

- d) The long period of school closure, unfortunate as it is, has given time for teachers to move from tentative to steady adaptation of new technologies, to begin to move into mastery and innovations. This is a case of quick maturation. This is perhaps also attributable to the general climate which is favourable for new technologies in the Hong Kong society at large.
- e) Teachers are swift in making changes. The context is that, in Hong Kong, there is only a broad framework for the curriculum, and decisions on teaching and learning are “school-based”. Hence, teachers are quite prepared to make their own decisions. Meanwhile, the rather fluid social situations (because of an extended period of social unrest) have also prepared teachers for quick adaptations. Nonetheless, the change this round is enormous.
- f) During the process, teachers learn new techniques, search for new learning resources, select among different technological tools, and design new pedagogies. But more importantly, they learn to look at “how students learn”, to understand learning from the students’ perspectives, to understand home environments in which students live, and to re-define the new role of a “teacher”.
- g) There has been a tide of professional development, mostly among volunteer peer efforts: e.g., training for technologies and video production, sourcing of learning resources, webinars for exchange of practices, etc. These take place both within schools and among schools.
- h) During this period, teachers in general take up all the new tasks and new roles not only willingly, but also with a positive attitude. There have not been complaints, despite the hard-work and difficulties. There is no waiting for directives from any authority. Teachers report even greater harmony within schools because of the necessary collaborative efforts.
- i) There is also an interesting phenomenon, that teachers collaborate with little regard to their ages, administrative positions, teaching experiences and

views about pedagogy. It has been a magnificent experience for real professional collaboration in harmony.

- j) The political unrest, which preceded the pandemic, and which has influenced teachers, does not seem to have affected their professional undertaking.

#### **Issue 4: The New Normal**

11. The question is: ***Would there be a New Normal when the pandemic retreats? Or would things fall back to what they were before the pandemic?*** For the whole world, one may say that it is perhaps too early to talk about the New Normal. Hong Kong has just faced three waves of the pandemic and there could be new waves forthcoming. However, the little that we know about the Coronavirus has put us on alert for future waves. Gabriel Leung<sup>8</sup> has made a point that we have to prepare for a long-term battle, which means that we have to adopt very flexible strategies in anticipation of unpredictable ups and downs of the pandemic.
12. With all the possible solutions, and innovations yet to emerge, the only one way for teachers and schools to make decisions is to place LEARNING on the centre stage. This is to make sure that (a) students are continuously learning even during the crisis, and (b) some of the measures we adopt may make continuous sense even when the pandemic is over.
13. The window for self-regulated learning, together with some self-selected learning, has created unusual experience and new understanding about allowing students to become “active learners”. Such experience and understanding should not be wasted, and should be the basis for the new normal in education.
14. For teachers and schools, there is a tension between more interesting and meaningful learning and covering the curriculum. Schools in Hong Kong have demonstrated a whole spectrum of possibilities. On the one extreme, a few schools have claimed success in almost full coverage of the planned curriculum

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<sup>8</sup> <https://www.nytimes.com/2020/04/06/opinion/coronavirus-end-social-distancing.html?smid=em-share>



schedule. On the other extreme, some schools have put aside the formal curriculum and overhauled students' learning activities. Most schools are somewhere in between, trying to achieve a balance.

15. The full curriculum coverage has attracted quite a lot of discussions. On the one hand, on-line learning is a different mode of learning, which is difficult to fulfil what would otherwise be achieved by face-to-face teaching. On the other hand, compared with more flexible modes, students seem to be deprived of very interesting but meaningful learning beyond the formal curriculum. Above all, it can be seen that students are deprived of opportunities to develop autonomy in learning.
16. A total overhaul of learning activities does not appeal to teachers as well as parents. Education after all serves a social function, and there are curriculum expectations as well as pressures from public examinations. There are learning areas which are seen as "compulsory" and students cannot skip. There are also "basic skills" that would entail uniform standards for achievement.
17. In that context, blended learning is likely to become the new normal. This is already happening in higher education, but will happen in primary and secondary school only by design.
18. In that context, the disparity revealed during the pandemic has to be handled with efforts. To start with, the hardware problem should not be taken for granted. It is associated with the new phase of development of human learning. Such hardware, personal computers and wide-bandwidth coverage, should become a normal provision by society. The development of 5G should be sped up, even if it were only for our next generation.
19. Nonetheless, the on-line mode of education has also made apparent the importance of social lives in schools. During the class suspension period, students miss the opportunities to do physical activities, group activities, hands-on experiment and plantation, and mostly social mingling and interactions. Teachers also miss meeting their students. Some teachers realised, for the first time, that teaching of knowledge is but a part of school lives. Many activities that had been taken for granted have now been felt very valuable. It is envisaged that part of

the New Normal is an enhanced level of person-to-person and face-to-face social activities in schools.

20. Hence, in sum, the likely New Normal of education will comprise at least three components. It should be noticed that these three components do not pin themselves down in particular modes. They are, rather, three dimensions of student learning in their school years.

**a) The conventional “regulated” learning.**

- i) This will remain essential because, as mentioned above, the social expectations for upward mobility within the education system, and the aspirations for credentials will remain as a continuing social norm.
- ii) This dimension refers largely to basic skills, such as in languages and mathematics, where uniform standards are to be met. Or in higher grades where higher education admission requirements reign.
- iii) However, the pedagogy has to be revised and enhanced, with the new understanding of student learning gained during the suspension of in-person classes.
- iv) In particular, public examinations, which is a cultural legacy in this part of the world, has to be reformed. This has to be support by changes in higher education admissions.

**b) Self-regulated learning.**

- i) Class suspension has created enormous space to explore all kinds of possibilities for students to learn in an autonomous state at different levels.
- ii) Such possibilities may fall under four levels, which could be seen as a ladder of learning autonomy.

One, to learn what is standard and required by the system, with self-motivation.

Two, to learn what is standard and required with choices of learning

paths given by the system.

Three, to learn among choices from given options.

Four, to create a self-defined learning area.

There is no implication that the four levels are mutually exclusive. Most likely, in the foreseeable future, students will have to engage in Level One anyway. The question is whether or not the system would design for Levels Two to Four, in order to increase the degree of students self-directed learning.

- iii) Although activities during class suspension are still largely in the “knowledge” area, the inspirations about learning should be extendable to all realms of learning. That is, the element of “active learner” should infiltrate in all aspects of school lives, even in areas, for example, for examination preparation.

**c) Enhanced social lives in schools.**

- i) As mentioned above, many teachers only now realise the precious value of social lives in schools. They miss such lives very much. So do the students<sup>9</sup>. This reminds us that education is not only about “study”. It is a process of whole person development. Learning beyond academic study, sometimes reduced to “social and emotional learning” as a proxy, is a matter of “experiential learning”. That is, learning in this dimension happens only by experiencing social lives.
- ii) Although extra-curricular activities and collective activities are traditionally rather rich in Hong Kong schools, they should be given refreshed meaning in terms of learning. They are not “extra”, but form an essential part of whole-person development, character building, citizenship education or formation. All these social lives in schools should be enhanced and expanded.

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<sup>9</sup> An article that elaborates on the importance of social lives in schools can be found in [https://doi.org/10.1016/S0140-6736\(20\)30547-X](https://doi.org/10.1016/S0140-6736(20)30547-X)

21. With all the possibilities and options, how could teachers and schools choose what to do, and how could parents understand the rationale for any new approach to learning. Implicit in the above discussion is the focus on **Learning**. Learning as informed by the newly emerging and rapidly developing **Science of Learning**. This can be illustrated in the table at the end of this paper.
22. There are pessimistic as well as optimistic views about the New Normal.
- a) The pessimistic view is that when the pandemic is over, everything will return to the “old normal”. All the possibilities explored and the potentials developed during the suspension of in-person learning will be forgotten and wasted.
  - b) The optimistic view is that the experiences during class suspension will bring new light to the teaching profession and hence eventually lead to significant breakthroughs in the education system.
  - c) There is no crystal ball to foretell the future. Nonetheless, it is our observation that society has changed and education has to change. The change is far more than technology, but the use of new technologies during the pandemic has created an unplanned window to test out alternative ways of doing education. Central to the value of this window is to look at *learning* with student as active learners. This is perhaps the most essential to any education reform in order to embrace the future.
  - d) Here, the Science of Learning<sup>10</sup> comes as a valuable underpinning for all our considerations. The awareness and application of the Science of Learning will empower teachers to become autonomous and informed professionals.

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<sup>10</sup> A most recent compilation which paints a good picture of Science of Learning is P.K. Kuhl, S.S. Lim, S. Guerriero and D. van Damme (2019) *Developing minds in the digital age: Towards a Science of Learning for 21<sup>st</sup> Century education*. Paris: OECD.

Table: Elaboration of para 18.<sup>11</sup>

<b>Conventional Practices</b>	<b>Inspired Possibilities</b>	<b>Science of Learning</b>
Focus: Teaching	Focus: Learning	Learning happens in individual brains. Teaching is to facilitate learning or to design for learning. Learning happens with or without teaching.
Target: Knowledge	Target: Ability	Knowledge is constructed in individual brains. Education is about the ability to learn. Students learn to construct knowledge, learning to learn.
Emphasis: Tasks	Emphasis: Experiences	Learning tasks often assume some knowledge as an end product. It's the process of learning that is essential.
Target as end point	Beginning of a process	Learning does not end at some "knowledge". It opens up the potentials for further learning.
Controlling the activities	Leaving space for autonomy	Students learn only when they are given the space for themselves. Control does the opposite
Targeted objectives	Integrated outcomes	Learning is often integrated, with complex outcomes forming concepts. Piecemeal feeding does not lead to meaningful learning.
Expecting uniformity	Releasing individuality	Different brains learn differently. Diversity and individuality should be honoured. Uniformity may apply only to very rudimentary learning.
Outcomes measurable	Impacts observable	Not all learning outcomes are measurable, immediately measurable, or measurable with the same tools. Complex human learning entails complex observations.

<sup>11</sup> Much of the discussions here can be found in K.M. Cheng (2019) "Does the Science of Learning matter ?" Chapter 22 in P.K. Kuhl *et al.*, *op cit.*