

Summary

Due to advancements in technology and social development, modes of teaching and learning have entered a new era. According to “Back to the Future of Education - Four OECD Scenarios for Schooling”, a report published by the Organisation for Economic Co-operation and Development (OECD)¹ in 2020, learning is no longer limited to the school environment. School can act as a learning hub, connecting with the community by making use of the development of advanced technology (such as artificial intelligence) to deliver more diversified modes of teaching and learning.

The education sector has experienced many changes during the pandemic. Learning is no longer limited to a physical environment; hybrid learning (combining online and offline methods) is now widely used. This experience brings with it some new insights about the future development of teaching and learning in Hong Kong.

Teachers are important stakeholders in enabling and motivating students to learn. However, long working hours and increasing workloads have been an issue for a long time². In addition, teachers need to manage increasing amounts of administrative and non-teaching work, e.g. school building management. Rapid educational policies renewal and curriculum reforms in recent years have added further pressure on teachers. Now is the opportunity to review their current workload so teachers are able to meet the future challenges and spend more time on their students’ growth.

As a response to recent changes, education departments in different overseas regions have implemented measures to improve the quality of teaching. The professional teaching structure of Singapore, as an example, is divided into three sections: teaching, leadership, and specialist³. Their Ministry of Education is continually increasing the number of non-teaching staff to assist in administrative duties and student development. Non-teaching staff also have well-developed training and promotion opportunities⁴.

¹ OECD (2020), Back to the Future of Education: Four OECD Scenarios for Schooling, Educational Research and Innovation, OECD Publishing, Paris, <https://doi.org/10.1787/178ef527-en>.

² Ip Kin Yuen (30 May 2013). “Setting up reasonable teacher lesson periods, improving teacher structure” Retrieved from Legislative Council document CB(4)717/12-13(01) <https://beta.moe.gov.sg/careers/become-teachers/pri-sec-jc-ci/professional-development/>

Hong Kong Federation of Education Workers (15 December 2020). “85% teachers feel stressed under the pandemic” Retrieved from <https://www.hkfew.org.hk/listdetail.php?cid=68&aid=4317>

³ Singapore Ministry of Education. (19 February 2020). “Professional Development and Career Tracks” Retrieved from <https://www.moe.gov.sg/careers/become-teachers/pri-sec-jc-ci/professional-development>

⁴ Singapore Ministry of Education. (28 February 2020). “Allied Educators” Retrieved from

In Taiwan, the education department provides clear guidelines for the number of teachers' lesson periods per week: 16-20 lessons for primary and secondary school teachers. Those who are Class teachers or have administrative duties, their number of lessons is reduced⁵. Supporting blended learning and flexible learning courses are also major trends in Singapore and Taiwan.

To transform educational models, the key is to improve teaching effectiveness and inspiring students to learn independently; teachers play a critical role in the process. A cause for concern in Hong Kong, is that as e-learning has increased, so has the workload of teachers. The purpose of this research is to understand: the workload distribution of teachers, their views on the future changes in education, and explore how to improve teacher support. The research also references the experiences of Singapore and Taiwan in providing feasible solutions to ease the future burden of teachers.

The study gathered information from several sources, including literature reviews, a questionnaire (with 354 secondary school teacher respondents), and interviews with 16 teachers and 7 experts during February to March 2021.

Discussion

- 1. Teachers are important stakeholders in encouraging students to learn. However, increasing teaching workloads and more complex administrative duties are impacting their primary role. How is it possible to ease these burdens from teachers so they can improve their teaching effectiveness?**

The result of the questionnaire showed that the average number of lessons of the 354 secondary school teachers, was 23 lessons per week (higher than those in neighbouring regions: 10-20 lessons). 35.3% worked over 60 hours a week; 14.5% worked 71 hours or above. The data highlights that the workload of secondary school teachers in Hong Kong is significant.

Complicated administrative work is an added source of pressure for teachers. Survey results showed: 66.4% of the teachers interviewed wish to reduce administrative work; 61.3% want to spend more time on engaging with students; 57.1% for lesson preparation work. On a scale of 0-10 ("0" = strongly disagree; "10" = strongly agree), the capacity to

<https://www.moe.gov.sg/news/parliamentary-replies/20200228-allied-educators-1>

⁵ Taiwan Ministry of Education. (2016). "Primary and secondary school lesson periods guidelines" Retrieved from <https://edu.law.moe.gov.tw/LawContent.aspx?id=FL027214-1>

redesign lesson content was rated at 4.95 - indicating that there is slightly insufficient capacity for renewing lesson design.

- 2. The interviewed teachers were enthusiastic about teaching. They agreed that caring about students' growth was more important than teaching textbook knowledge. Witnessing the growth of students is the driving force of their passion. However, due to heavy workloads and lack of support, some teachers are physically and mentally exhausted.**

The Questionnaire result (using a scale of 0-10: "0" = strongly disagree; "10" = strongly agree) showed that the teachers are passionate about teaching (7.77). Respondents also agreed that caring about student growth is more important than instilling students with knowledge (8.00). Most of the interviewed teachers also expressed that they would like to spend more time with, and focus on, students' growth (The satisfaction of teaching comes from witnessing the growth of students and inspiring them to think).

The questionnaire results also showed that most of the teachers hope to take better care of students' learning differences (56.5%), followed by adding innovative elements into lesson content (42.1%) and nurturing students' whole-person development (41.5%) – if there is more time.

Based on the above survey data and interviews, teachers hope to provide special care and assistance according to students' different abilities and learning needs. Some teachers in the case interviews shared that they really want to do better in lesson preparation and teaching but are limited by time constraints and health. Marking students' homework late at night affects their classroom performance the following day. It is important to provide appropriate support to teachers so they can retain their original inspirations by devoting more time to teaching and caring for students. However, due to the heavy workload and lack of support, this does not always happen.

- 3. During the pandemic teachers are experiencing different teaching models and unprecedented challenges. However, the new normal also offers new insights about future teaching and learning.**

The pandemic has changed the time allocation of teachers in various job tasks. The survey results showed that the average teaching time spent in classes reduced by 3 hours per week. Conversely the average time spent on lesson preparation increased by 3.02 hours

per week. The average time for teachers to renew lesson design and marking increased by 1.65 hours and 1.61 hours per week respectively. In addition, many teacher interviews indicated that their workload has increased during the pandemic. Due to the use of e-learning, it takes more time to redesign the lesson content to enhance students' learning interest and concentration in lessons. Teachers also spent more time to communicate with students and parents to follow up on students' learning progress.

Teacher case interviews reported that the use of e-learning during the pandemic posed many challenges. Firstly, the passive response of students resulted in less interaction during lessons, which adversely impacted learning effectiveness. Secondly, the learning gap between students widened. Teachers needed to spend more time caring for students with lower learning ability and motivation. Also, survey results showed that the mean score of teachers who agreed that "I can teach students according to their individual abilities under the current teaching environment." was only 4.54 (10 = strongly agree). The survey also showed that the average teacher stress level increased from 6.40 before the pandemic, to 6.97 during the pandemic.

Though there are challenges, there are also new insights. According to the experts interviewed, schools can act as a learning hub where teachers, students and the wider community can interact, learn and share with each other to create more diversified learning methods. The survey results also showed that most teachers agreed that learning should not only take place in the classroom, with a mean score of 8.27 (10 = strongly agree).

4. Teachers agreed that students' self-directed learning is the ideal direction.

According to the survey findings, 72.9% agreed that the ideal is for students to be self-directed in their learning. Some of the interviewed teachers revealed that they play an important role in that learning method, including selecting the appropriate online materials and guiding students with lower learning abilities. The Education Bureau and schools need to devote more resources and giving sufficient time for teachers and students to implement more student self-directed learning.

In Singapore, the Ministry of Education announced that home-based learning days are to be implemented on a regular basis starting from the third semester of 2021. Through a blended learning model (combination of online and in-person teaching), the Ministry believes that students will have more opportunities to learn at their own pace and explore their interests outside of the curriculum framework. In Taiwan a flexible learning

curriculum was incorporated into the school syllabus in 2019 to enhance adaptive learning and encourage students' in their own learning interests. Some Taiwan scholars suggested that schools could work with community-based stakeholders to plan a flexible lesson blueprint. The community can help the school develop the curriculum and improve innovation while the school should provide more teacher lesson planning periods and administrative support measures.

In Hong Kong, teachers that were interviewed also believed that students have stronger interests when learning outside of the classroom. Out-of-school experiences can deepen students' impressions to learn more concrete and practical knowledge. One teacher shared her experience of universities and community organisations helping teachers to plan experimental learning. During the process, students could deepen their understanding and build closer relationships with the community.

5. Teachers agreed that improving the class-to-teacher-ratio helps with teaching effectiveness, promotes collaboration and communication; increasing the number of non-teaching support staff is also useful.

According to the survey results, 68.6% of the teachers agreed that improving the class-to-teacher-ratio is the most effective way to improve teaching effectiveness, followed by small-class teaching (65.8%). Some teachers explained that increasing the number of teachers is effective in promoting student learning and coping with changes in the teaching mode. It is also the basis for implementing small-class teaching, which could better help with students' learning differences.

According to the teacher-based survey, 58.8% and 37.9% respectively believed that setting a maximum number of teacher lesson periods and specifying the ratio of teaching-administration-research work (of each teacher rank) would help to enhance teaching effectiveness. Some of the interviewed teachers also hoped that teachers with more administrative duties could have a reduction in lesson periods.

In addition, more than one-third (35.6%) of the teachers interviewed also believed that increasing the number of non-teaching support staff would help improve teaching effectiveness. There is no doubt that e-learning has helped to facilitate teaching and learning. However, it has also highlighted and exacerbated individual student's learning differences. The implication is that there is a need for additional human resources to meet the differing needs of students.

Suggestions

The following suggestions and recommendations are based on the above findings and discussion points. The aim, by improving the class-to-teacher-ratio, reviewing the career development paths, and increasing collaboration, is to free up teachers' time in the new normal.

1. Invest more in educational resources. Improve the class-to-teacher-ratio and establish an objective review mechanism in the future.

According to the study, the teachers interviewed believe that improving the class-to-teacher-ratio is the most effective method to enhance teaching effectiveness. The current class-to-teacher-ratio in Hong Kong is 1:1.8 for lower secondary; 1:2.1 for upper secondary. When compared with nearby regions⁶, Hong Kong's class-to-teacher-ratio is lower. Although the ratio in Hong Kong was slightly increased by 0.1 in 2017, the current upper secondary class-to-teacher-ratio is still similar to that of a matriculation class 50 years ago.

This study recommends: increasing the class-to-teacher-ratio; reviewing the teacher supply structure; establishing an objective mechanism to review class-to-teacher-ratios from a scientific and teaching-goal-oriented perspective. This would allow teachers to have the capacity to cope with new educational changes and improve the overall quality of teaching.

2. Review the professional career development pathways so both teaching and administration have equal promotion opportunities.

Teachers who are good at teaching may not necessarily be suitable for administrative work. Using Singapore's experience as an example, the teacher-career ladder can be developed so that those who focus on the teaching path can also be promoted to higher

⁶ Class-to-teacher-ratio in Macau: 1:3.0 "2019/2020 non-tertiary education statistics and policies" Retrieved from https://portal.dsedj.gov.mo/webdsejspace/addon/allmain/msgfunc/Msg_funclink_page.jsp?msg_id=73020

Class-to-teacher-ratio in Taiwan: 1:2.2 . One additional teacher for 9 classes each. One additional teacher if the school has less than 9 classes. "Class and staff structure guidelines for primary and secondary schools" Retrieved from <https://law.moj.gov.tw/LawClass/LawAll.aspx?pcode=H0070006>

positions. In the teaching career path, teachers who are promoted can act as teacher mentors: helping new teachers to adapt to the new environment and exchanging teaching experience. Those teachers who are interested in administration (e.g., discipline, academic scheduling, etc.) and school leadership development can advance along the administrative path. Schools can allow teachers to choose their own professional development paths (teaching/ administrative/ others) based on their preferences and strengths, allowing for a more balanced distribution of teaching and administrative work.

3. Establish Student Self-Directed Learning Days.

The study suggests that schools can set up Student Self-Directed Learning Days, which can be at least 3 days per school year. Schools can have the flexibility to determine the exact number of days and related details according to their individual circumstances. On each Self-Directed Learning Day, students can select a topic of their own to explore.

Schools acting as a learning hub (with community collaboration and making good use of community resources), means the community can support teachers in planning and implementing the Student Self-Directed Learning Days. In this way, each student can learn according to their own interests, exploring options outside both the curriculum framework and classroom environment. The Education Bureau and schools need to provide sufficient resources and support for teachers to promote and help students with their self-directed learning.

4. The Education Bureau can set up an online platform to organise teaching resources.

The study recommends the Education Bureau to set up an online platform to organise the educational resources currently available in the community.

The platform can be designed from a user-centric perspective that allows teachers to search and match various teaching resources according to their needs. These can include technology resources from universities, and other social organisations. External multi-disciplinary support can help teachers in curriculum design, planning and innovation. Encouraging intra-school sharing and collaboration among teachers can create more insights for future teaching and learning.