HOW DID THE WORLD'S HIGHEST PERFORMING EDUCATION SYSTEMS APPROACH **DISTANCE LEARNING?**

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NCEE
National Center On
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For more than 30 years, the National Center on Education and the Economy (NCEE) in the U.S. has studied high-performing education systems around the world. We define high-performing education systems as those that achieve excellent results, equitably and efficiently: world-class levels of performance, for every student, at a sustainable cost. We analyze the common elements of these very geographically and culturally different systems, from Singapore to Canada. We then use that analysis to help policymakers and school and district leaders translate the lessons to the U.S. context to improve their own systems.

This year, widespread school closures due to the coronavirus pandemic have required almost all high-performing systems to implement distance learning to ensure that students continue learning. This document summarizes some initial takeaways from their experiences implementing distance learning in primary and secondary schools.

We found that top-performing jurisdictions:

- Were initially better positioned than the U.S. to quickly implement distance learning;
- Increased capacity in this area since the start of distance learning; and
- Responded rapidly to new challenges raised by distance learning.

In many of the jurisdictions highlighted here, distance learning is likely to continue in some capacity even as schools reopen because social distancing will require it. Below are our impressions to date; they will continue to evolve as the approaches in these jurisdictions evolve.

TOP PERFORMERS WERE INITIALLY BETTER POSITIONED THAN THE U.S. TO QUICKLY IMPLEMENT DISTANCE LEARNING:

Emergency Distance Learning Plans

At least some top-performing jurisdictions had plans for emergency distance learning in place prior to the coronavirus pandemic. Singapore, for example, had developed an emergency distance learning system in response to prior public health threats, including Severe Acute Respiratory Syndrome (SARS) in 2005. As part of Singapore's preparation, teachers receive training in how to organize and facilitate distance learning using the tools and resources developed, and teachers and students practice distance learning annually.

Curriculum Frameworks

Top-performing education systems have jurisdiction-level curriculum frameworks that set common expectations for the breadth of conceptual knowledge, cognitive and social skills, and values students need to develop. These goals and expectations are commonly understood by teachers and provide a clear framework around which to organize distance learning.

High-Quality Digital Resources for Teachers in All Subjects and Grade Levels

Well before the crisis this year, top-performing jurisdictions began to organize high-quality digital teaching and learning resources and make them easily accessible to teachers. The digital resources they organized are not limited to "add-on" or enrichment resources; they also include specifically designed resources to support teaching and learning of the full range of subjects and grade levels in the jurisdiction-level curriculum. In Hong Kong, the Education Bureau's One-stop Portal for Teaching and Learning Resources, launched in 2012, provides digital resources searchable not only by curriculum subject and grade level, but also by Hong Kong's four Key Tasks, which are their recommended focus areas for curriculum implementation. Singapore's Student Learning Space, developed and piloted over several years and introduced in all schools in 2018, also includes curriculum-aligned digital resources across all subjects and grade levels.

Quality Monitoring of Digital Tools and Resources

Top-performing jurisdictions have ways of monitoring the quality of the digital tools and resources that are organized and provided at the jurisdiction level. Strategies include identifying expert teachers to create tools and resources or developing quality criteria and a review process for resources submitted to central online resource repositories. In Singapore, for example, many of the digital resources included in the Student Learning Space online platform are created by a team of teachers working full-time at the Ministry of Education. In Poland, the Scholaris repository offers nearly 28,000 digital resources to support the design and teaching of interactive lessons. Educational institutions—including universities, museums, and publishers—can submit resources, and a review process ensures that all resources accepted for inclusion in the portal are aligned to the national curriculum.

Investments in Educators

Top-performing jurisdictions have made investments in educators to ensure that they use the available digital tools and resources effectively. Finland, for example, provided national-level

funding from 2015 to 2019 to prepare a network of "tutor-teachers" to serve as mentors for their peers. Tutor-teachers' responsibilities included identifying or developing new solutions for teaching and learning using technology and building their peers' skills in this area, including through one-on-one and group support. Almost all Finnish municipalities surveyed reported that they planned to continue supporting the tutor-teacher initiative at the local level even after national funding ended. Estonia's school-based educational technologist position, introduced in 2005, provides a similar structure for peer-to-peer learning focused on the innovative use of technology to enhance the curriculum.

Public Confidence in Technology

Finally, there is a high level of trust in the digital tools provided by government in many top-performing jurisdictions. This helped build public confidence in technology as a key part of daily teaching and learning—including for broader, non-instructional purposes like tracking students' progress and facilitating home-school communication—well before the pandemic. Estonia, for example, has built a comprehensive e-governance system that provides access to 99 percent of public services online. The successful use of such digital solutions to perform key government functions impacting Estonians' daily lives has helped pave the way for technology integration in education.

TOP PERFORMERS HAVE INCREASED CAPACITY IN THIS AREA SINCE THE START OF DISTANCE LEARNING:

Guidance and Supports for Teachers and Schools

Because digital teaching and learning resources had already been developed, top-performing jurisdictions quickly created guidance and supports for teachers and schools in response to specific challenges related to distance learning. The Canadian provinces of Alberta and Ontario, for example, released guidelines by grade span for the total number of hours of student work per week and the focus subjects for this work. Hong Kong and Poland created weekly calendars of suggested online activities, by grade level or grade span, for the duration of school closures. Top performers have also provided guidance for serving students with special needs and additional supports for those students. For example, Estonia's nationwide network of regional counseling centers supported schools and teachers in designing distance learning for students with special needs. Schools' strategies included identifying one educator, such as a teacher or support specialist, responsible for monitoring each student's needs and progress during

distance learning. For students requiring additional support, the counseling centers provided virtual services from support specialists.

Leveraging Expert Teachers

Top performers have used expert teachers to support distance learning beyond their individual schools and classrooms. This has taken a range of forms, but consistent across them is trust in educators as professionals. China, for example, looked to experienced, high-achieving teachers to record televised lessons for primary school students and create lesson materials for the national online learning platform for secondary school students. Teachers provided direct support for peers transitioning to distance learning in both Korea, where volunteer teachers were virtually paired with peers requesting support, and Estonia, where educational technologists helped peers at the school level and through a national educational technology advice hotline. Many top performers have also created or enhanced online tools for teachers to share resources and advice specific to distance learning. Korea, for example, launched an online portal for primary and lower secondary school teachers to share their own distance learning materials.

Student Access to Technology

As they put systems for distance learning in place for all students, top performers prioritized ensuring that students who did not have technology for distance learning could fully participate. Schools in Singapore, for example, remained open for a small number of students needing access to technology or teacher support, and schools conducted outreach to families on the basis of students' learning needs, parent requests, or input from social workers to offer this support. Schools also loaned families devices, sometimes in partnership with corporations. At the end of one full month of distance learning, Singapore reported a nearly universal student participation rate of 96 percent. In Hong Kong, schools loaned devices to families with significant support from non-governmental organizations. Community organizations, for example, worked together to provide nearly 15 percent of all primary and secondary school students with internet access. The government also increased its universal Student Grant for education expenses this year to help families pay for distance learning devices or materials.

Supports for Parents, Guardians, and Families

Top performers also quickly created resources for parents, guardians, and families to support their efforts to facilitate distance learning. British Columbia (Canada), for example, provided a set of digital teaching and learning resources specifically for families to use at home, which

included general guidelines for organizing distance learning and ideas for using everyday household activities to promote learning. Estonia's regional counseling centers offered on-demand advice for families struggling with distance learning via online chat. Top performers have maintained open lines of communication with families to promote transparency and collect feedback. Ontario (Canada), for example, revised its jurisdiction-level approach to distance learning to prioritize synchronous (live) online teaching and learning in response to feedback collected from families.

TOP PERFORMERS RESPONDED RAPIDLY TO NEW CHALLENGES RAISED BY DISTANCE LEARNING:

Identifying Learning Gaps

Top-performing jurisdictions recognized that not all students had equal opportunities to engage in the same level and quality of distance learning, or in some cases, to engage at all. Some students lacked access to educational technology, home environments conducive to studying, or other resources; others needed more face-to-face teacher support than is typically available during distance learning. Top performers are taking steps to identify students who have fallen behind during distance learning in order to plan follow-up supports. Finland, for example, resumed in-person classes for compulsory school students for the last two weeks of the school year, which provided a valuable touchpoint for teachers to observe the progress of their students. In Estonia, where schools reopened for small groups of students, teachers were encouraged to invite students who struggled during distance learning to attend so that they could gauge their progress in person or, for students who did not return to school, organize virtual conversations with the student and their parent or guardian.

Addressing Learning Gaps

Top-performing jurisdictions took very quick steps to minimize learning gaps during distance learning. They are taking additional steps to address learning gaps as schools gradually reopen. Singapore, where schools closed between semesters in May for their summer vacation, allowed students struggling with distance learning to return to school during the break to receive additional support. Ontario (Canada) is investing heavily in summer learning opportunities to help students prepare for the next school year. In Finland, student needs identified by teachers during the last two weeks of this school year will determine the additional supports students receive in the fall.

Rethinking Assessments

In lieu of suspending classroom-level assessment or canceling all national exams, many top performers have demonstrated willingness to rethink student assessment in response to the crisis. Singapore, for example, is paring back the content of national exams this year to account for reduced instructional time. And rather than administering national monitoring assessments at grade 6 this year, Estonia provided grade 6 teachers with online formative assessments of mathematics and literacy that they could use to identify student strengths and needs at the classroom level. Looking to the future, Hong Kong plans to develop an alternative approach to assessing upper secondary school graduates in case jurisdiction-level exams—which were administered successfully this year despite school closures—need to be canceled in the future.

Providing Hands-on Learning Experiences

All jurisdictions face the question of how to provide learning experiences that are not easily replicated through distance learning, such as arts education, physical education, and practical training required for vocational education and training (VET) programs. Singapore, for example, reopened schools for small groups of students during summer break to provide access to school facilities and equipment for hands-on subjects like art, home economics, and design and technology. During school closures, VET schools in Estonia worked on a case-by-case basis to identify practical training opportunities for students, including working with firms that remained open to continue to host students in workplace internships or expand internship programs. As schools in Estonia partially reopened, VET students were among the first allowed back to school. Switzerland, known for its high-performing VET system, has recognized the impact of the pandemic on apprenticeships and is providing additional funding for supports, including for firms to provide apprenticeships and for coaching or mentoring for students seeking apprenticeships.

LOOKING FORWARD:

It is fair to say that in some ways, this unplanned global distance learning experiment has renewed public appreciation for many traditional aspects of schooling. As parents have struggled to manage learning in the home, they have realized how much they rely on teachers as experts in designing and monitoring the learning experience for their students. And after months of social isolation for students, everyone is recognizing that brick-and-mortar school

buildings have value as places to build social skills and community and connect students with services to support their individual needs.

But even as parents and teachers in high-performing systems are affirming the value of traditional schooling, they recognize that at this point, it is no longer a question of whether the pandemic will create lasting, long-term changes in high-performing education systems. Change is already happening; the only question is how dramatic it will be. Most are already designing and implementing reviews, research, and discussions to distill what has been learned so far about how to best serve students and how to close equity gaps now and in the future. Investments to date in the development of digital tools and resources to support teaching and capacity-building of teachers have meant that teachers in top-performing systems have had more time, tools, and support to redesign the in-person lessons they were planning to best meet the needs of their students, and will continue to do so moving forward. The continuing emergency will likely accelerate the integration of technology into the teaching and learning process, and promote the idea of organizing learning in different settings, in and out of traditional school buildings, and in different ways for different students.

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