

# eCitizen Education 2022 數碼素養 360

Bulletin 1 (March 2023)

Cumulative Impact Under  
*New Normal*

## Insights for Positive Actions

### About eCitizen Education 360 (2022)

Since the onset of the COVID-19 pandemic in late 2019, many schools, families, and students have struggled to cope with the *New Normal* of teaching and learning. There are widespread concerns in Hong Kong society that student learning and wellbeing may have been adversely affected. It is therefore imperative to take stock of the impacts of the *New Normal* on students' learning and wellbeing.

Building on the strengths of the eCitizen Education 360 Project (2020) which has yielded valuable findings and practicable actions fruitfully used by stakeholders, this project, e360 (2022), is underpinned by the understanding that teaching and learning opportunities and outcomes during (and after) the fifth wave of school suspension are continuously influenced by different factors at the school, teacher, parent, and student levels. We aim to provide a comprehensive picture of students' learning and wellbeing after multiple waves of school suspension and to support different stakeholder communities including policy-makers in developing evidence-based action plans that build capacity and resilience to support student learning in the *New Normal*.

We are grateful to all school leaders, teachers, students, and parents for their participation in and support for this study.



An extension of the Learning and Assessment for  
Digital Citizenship project

More information is available at <https://ecitizen.hk/360>

#### Students

More adapted to online learning  
Need more support for cyberwellness, particularly for secondary students

#### Parents

Most worried about their children's learning  
Need digital parenting support

#### Schools

School-based strategies led to effective adaptation and increased parental involvement in *New Normal*  
Community support perceived as most positive external factor

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## Research purpose

The present bulletin reports the first set of findings from the eCitizen Education 360 (2022) project. This project builds on the eCitizen Education 360 (2020) (hereafter e360 (2020)) conducted in 2020. It aims to identify the cumulative impact on learning and wellbeing outcomes of students after multiple waves of school suspensions due to the COVID-19 pandemic and provide comprehensive insights on how students, parents, schools, and teachers make adaptations in teaching and learning in the *New Normal*. Specifically, this bulletin aims to (a) provide up-to-date data on students' learning and wellbeing in 2022 and track the changes in these outcomes between 2020 and 2022; (b) identify the adaptations that schools and families have developed to mitigate the adverse impact of school suspension on school operations and student learning and wellbeing; and (c) support different stakeholder communities including policymakers in developing evidence-based action plans that build capacity and resilience to support student learning in the *New Normal*. The term "*New Normal*" here refers to the period after the outbreak of COVID-19, with a clear understanding that things will not be going back to "normal" as in a return to the pre-pandemic established practices. Instead, people need to seek/construct a new pattern of normality that builds on new practices developed during the pandemic that have demonstrated the positive outcomes and/or the ability to mitigate challenges encountered under the new circumstances.

## Research questions

In this bulletin, we seek to address the following questions based on our investigation of the data:

1. What is the status of students' learning and wellbeing after multiple waves of school suspension?
2. What challenges do schools and parents in Hong Kong perceive after 2.5 years since the start of the pandemic?
3. How have schools and parents adapted to teaching and learning in the *New Normal*?

## Research design

Similar to e360 (2020), this study adopted a multi-level survey design to investigate the impact of school suspension on students' learning and socioemotional wellbeing from the perspectives of different stakeholders in Hong Kong, including school leaders, e-learning coordinators, teachers, students, and their parents in primary and secondary schools.

The student survey targeted students from Primary 3 to 6 and from Secondary 1 to 6. Parents whose children participated in the study were invited to complete the parent survey. School leaders' proactive responses and prompt decision-making are crucial in making policy and administration adjustments in order to maintain school operations by having the ability to make changes to student learning provisions between online and onsite modes during the pandemic. Hence, a school leader survey was designed to collect data from school leaders—defined as all who contributed to school-level decision-making, including principals, vice-principals, academic masters/ curriculum leaders, subject/ KLA panel chairs, ICT coordinators, STEM coordinators, moral/civic education coordinators, counselling and guidance heads, discipline masters, and life-wide, learning/ extra-curricular activities coordinators. Teachers play an important role in implementing school policies and providing feedback to students' online learning. The teacher survey collected data from those who had teaching responsibilities and did not have a formal decision-making role in schools. The e-learning coordinator survey collected data from the school personnel who was responsible for coordinating e-learning in a school. Based on the responses from different stakeholders, this bulletin provides a comprehensive 360 degree understanding of how students, parents, schools, and teachers adapt in the *New Normal*.

# Participation

All schools in Hong Kong, including those that participated in the e360(2020) study, were invited to participate in the present study. Data-collection was conducted online from July to early September 2022. A total of 271 school leaders, 49 e-learning coordinators, 886 teachers, 3,218 parents, and 8,028 students from 20 Primary schools and 31 Secondary schools participated in the study. There were 23 schools (45%), including 9 primary schools and 14 secondary schools, that participated in the e360 project in both 2020 and 2022. The participating schools comprised two government, 43 aided, and six Direct Subsidy Scheme (DSS) schools ([Figure 2](#)) from 16 districts in Hong Kong ([Figure 1](#)).

Figure 1. Map showing geographic location of primary and secondary schools in sample

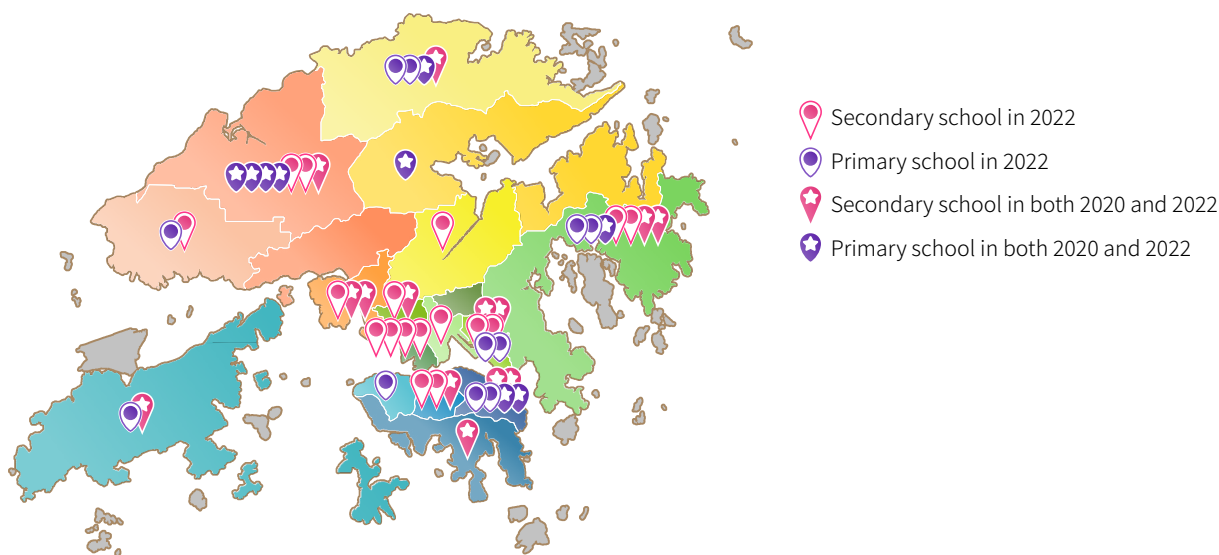


Figure 2. Distribution of school types in the participating schools

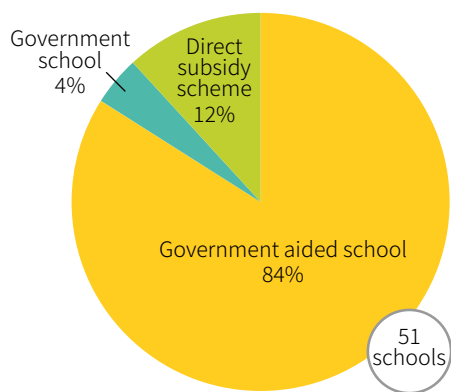
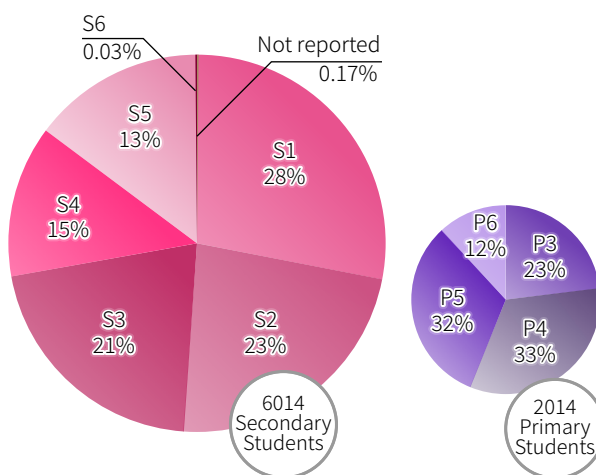


Figure 3. Grade level distribution of student respondents



This bulletin reports on three sets of findings pertaining to students' online learning and wellbeing, parents and parenting in the *New Normal*, and schools' adaptations in the *New Normal*.

# Students' Online Learning and Wellbeing

Students' online learning was measured using their online learning activities and online self-regulated learning strategies while students' wellbeing was measured using their cognitive emotional regulation strategies, experiences of cyberbullying, and worries about their own study. Our results show that compared to 2020, primary and secondary students were becoming more adapted to online learning activities in 2022. Further, primary students reported more positive online learning outcomes (experiences) than secondary students.

## 1.1 Online learning

### 1.1.1 Online learning activities

We collected data on students' online learning activities by asking students about the frequency of their participation in different online learning activities. Results show that students were getting more used to online learning from 2020 to 2022 (Figure 4). Teachers employed more interactive and social discussion pedagogies and relied less on didactic teaching in online classes. Specifically, the frequency of secondary students' participation in online structured and interactive real-time lessons increased from 2020 to 2022.

Figure 4. Proportion of students reporting different online learning frequencies (2020 vs 2022)

	Secondary					Primary					
	Not at all	About once a week	2-3 times a week	4-5 times a week	More than 5 times a week	Not at all	About once a week	2-3 times a week	4-5 times a week	More than 5 times a week	
1. Participate in structured real-time lessons WITH interactions	13%	18%	21%	28%	20%	18%	23%	22%	20%	17%	2022
	22%	17%	23%	22%	16%	-	-	-	-	-	2020
2. Participate in real-time lessons WITH teacher gives the lecture in most of the time	7%	11%	17%	36%	29%	14%	16%	17%	27%	26%	2022
	5%	9%	21%	33%	32%	8%	16%	21%	32%	23%	2020
3. Participate in less structured lessons for social discussion	21%	24%	25%	19%	12%	21%	24%	23%	18%	14%	2022
	22%	24%	25%	17%	12%	-	-	-	-	-	2020
4. Watch teachers' pre-recorded video lessons	47%	26%	16%	7%	4%	39%	24%	17%	10%	10%	2022
	22%	26%	29%	13%	11%	13%	14%	20%	24%	28%	2020
5. Complete online assignments	4%	8%	20%	24%	43%	5%	13%	17%	22%	43%	2022
	14%	27%	33%	15%	12%	3%	8%	13%	25%	51%	2020
6. Participate in real-time assessments (quiz/exam)	13%	33%	34%	10%	10%	21%	36%	19%	10%	14%	2022
	14%	27%	33%	15%	12%	26%	34%	17%	9%	14%	2020
7. Discuss with classmates about schoolwork through social media	12%	15%	26%	16%	30%	32%	16%	20%	11%	22%	2022
	11%	13%	27%	19%	30%	32%	14%	16%	11%	27%	2020
8. Collaborate with classmates via digital tools to complete group assignment	21%	31%	24%	12%	12%	38%	24%	17%	9%	13%	2022
	25%	20%	27%	15%	13%	50%	16%	14%	8%	12%	2020

The frequency of secondary students completing online assignments significantly increased, whereas that for primary students decreased between 2020 to 2022. Notably, the frequency of primary and secondary students watching teachers' pre-recorded video lessons decreased from 2020 to 2022. The frequency of primary and secondary students' participation in real-time lessons where teachers lectured most of the time, less structured lessons for social discussions, real-time assessments, and discussion of schoolwork with classmates through social media did not differ between 2020 and 2022. However, these students had more online collaboration with classmates to complete group assignments via digital tools from 2020 to 2022.

### 1.1.2. Online self-regulated learning strategies

Students' online self-regulated learning was measured using their online learning self-efficacy (i.e., confidence) and the use of different self-regulated strategies (i.e., help-seeking, self-evaluation, and time management). The results indicated that both the levels of primary and secondary students' online learning self-efficacy increased from 2020 to 2022. Primary students had higher levels of online learning self-efficacy than secondary students in both years (Table 1). Compared to secondary students, primary students tended to use more online self-regulated learning strategies in 2022 (Table 2).

Table 1. Students' mean levels (SD) of online learning self-efficacy (2020 vs 2022)

	Secondary Mean (SD)	Primary Mean (SD)
2020	3.09 (0.79)	3.61 (0.76)
2022	3.24 (0.76)	3.71 (0.78)

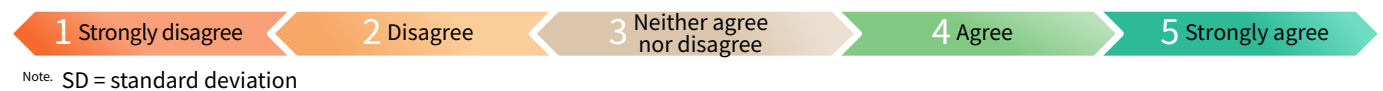
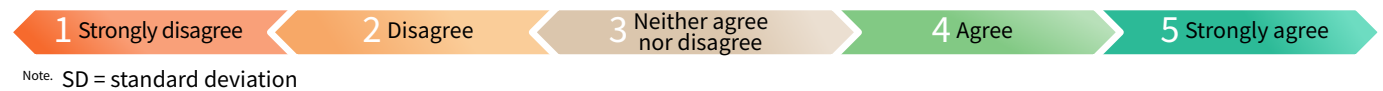


Table 2. Students' mean levels (SD) of online self-regulated learning strategies in 2022

Strategies	Secondary Mean (SD)	Primary Mean (SD)
Help-seeking	3.30 (0.77)	3.43 (0.93)
Self-evaluation	3.26 (0.78)	3.48 (0.92)
Time management	3.16 (0.80)	3.48 (0.91)



## 1.2 Wellbeing

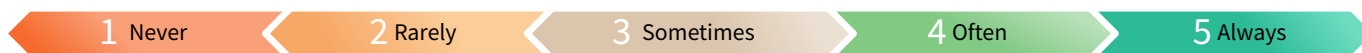
We sought to obtain a comprehensive understanding of students' wellbeing after multiple waves of school suspension by examining their cognitive-emotional regulation strategies, cyberbullying experiences, and worries about their own study.

### 1.2.1 Cognitive emotional regulation strategies

Students' cognitive emotional regulation strategies were measured using two "positive" strategies (i.e., refocus on planning and positive reappraisal) and two "negative" strategies (i.e., catastrophizing and blaming others). Overall, both primary and secondary students were more likely to use positive than negative strategies when they experienced negative events in the past six months. Additionally, primary students tended to use positive strategies more often than secondary students (Table 3).

Table 3. Students' reported use of cognitive emotional regulation strategies (2022)

Regulation strategy	Secondary Mean (SD)	Primary Mean (SD)
Refocus on planning	3.20 (0.90)	3.29 (1.04)
Positive reappraisal	3.16 (0.91)	3.28 (1.04)
Catastrophizing	2.76 (0.97)	2.77 (1.19)
Blaming others	2.54 (0.92)	2.54 (1.09)

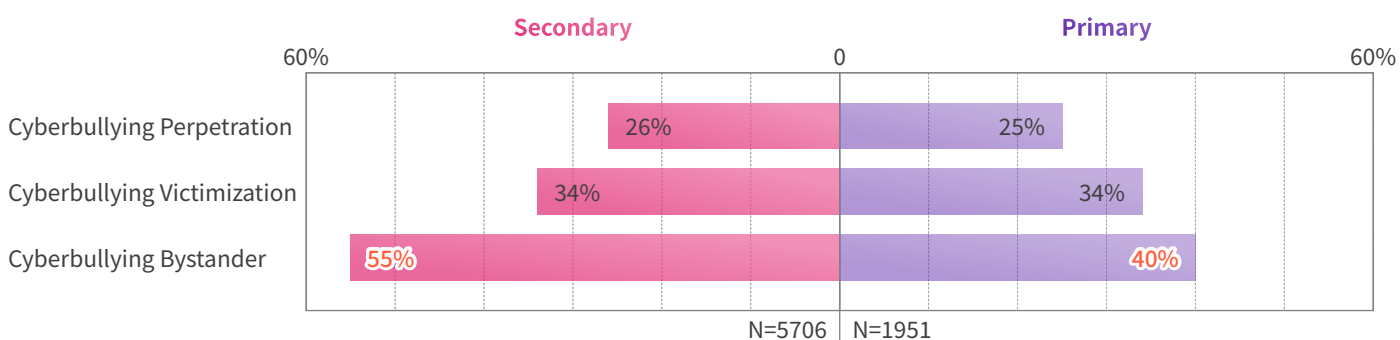


Note. SD = standard deviation

### 1.2.2 Cyberbullying

We asked students about different types of cyberbullying experiences (i.e., being a perpetrator, victim, or bystander) in the past six months (Figure 5). Primary and secondary students did not differ in their experience of cyberbullying perpetration (25% for primary and 26% for secondary) or cyberbullying victimization (34% for both primary and secondary). However, compared to primary peers (40%), a greater proportion of secondary students (55%) experienced cyberbullying as a bystander.

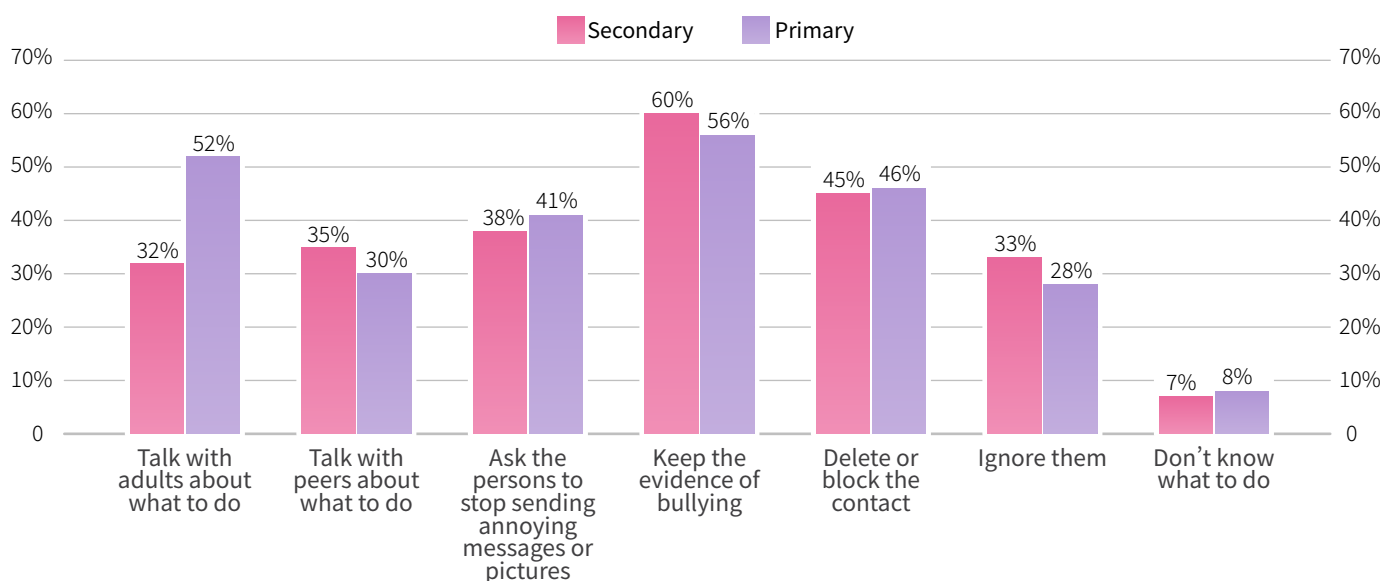
Figure 5. Students' reported cyberbullying experiences in the past six months (2022)



Note. N = number of observations

The students were also asked about how they reacted when they were bullied online. Compared to secondary students (32%), primary students (52%) were more likely to discuss cyberbullying experiences with adults (parents/caregivers/teachers) when they encountered cyberbullying incidents (Figure 6).

Figure 6. Prevalence of strategies used in cyberbullying incidents (%)



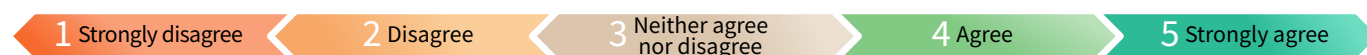
Note. 862 primary students and 2655 secondary students responded to this question.

### 1.2.3 Worries about study

In general, there was no evidence that primary and secondary students were very worried about their studies at school in 2020 and 2022 (Table 4). In both 2020 and 2022, primary students reported lower levels of stress from different sources (undergoing school routines, catching up with schoolwork, concentrating in the classroom, experiencing emotional stress) than secondary students. Compared to the situation in 2020, primary students experienced more emotional stress in 2022, whereas for secondary students the differences in levels of worries between 2020 and 2022 were not apparent.

Table 4. Mean levels (SD) of worries experienced by students (2020 vs 2022)

Sources of students' worries	Secondary Mean (SD)		Primary Mean (SD)	
	2020	2022	2020	2022
1. Undergoing daily school routine	2.73 (1.08)	2.80 (1.04)	2.54 (1.27)	2.63 (1.35)
2. Catching up with schoolwork	2.94 (1.08)	2.81 (1.00)	2.27 (1.11)	2.38 (1.24)
3. Concentrating on learning in the classroom	2.70 (0.98)	2.81 (1.00)	2.30 (1.11)	2.43 (1.25)
4. Experiencing emotional stress	2.90 (1.13)	2.96 (1.09)	2.28 (1.17)	2.60 (1.37)
5. Preparing for future career	3.32 (1.05)	3.15 (1.08)	-	-



Note. SD = standard deviation

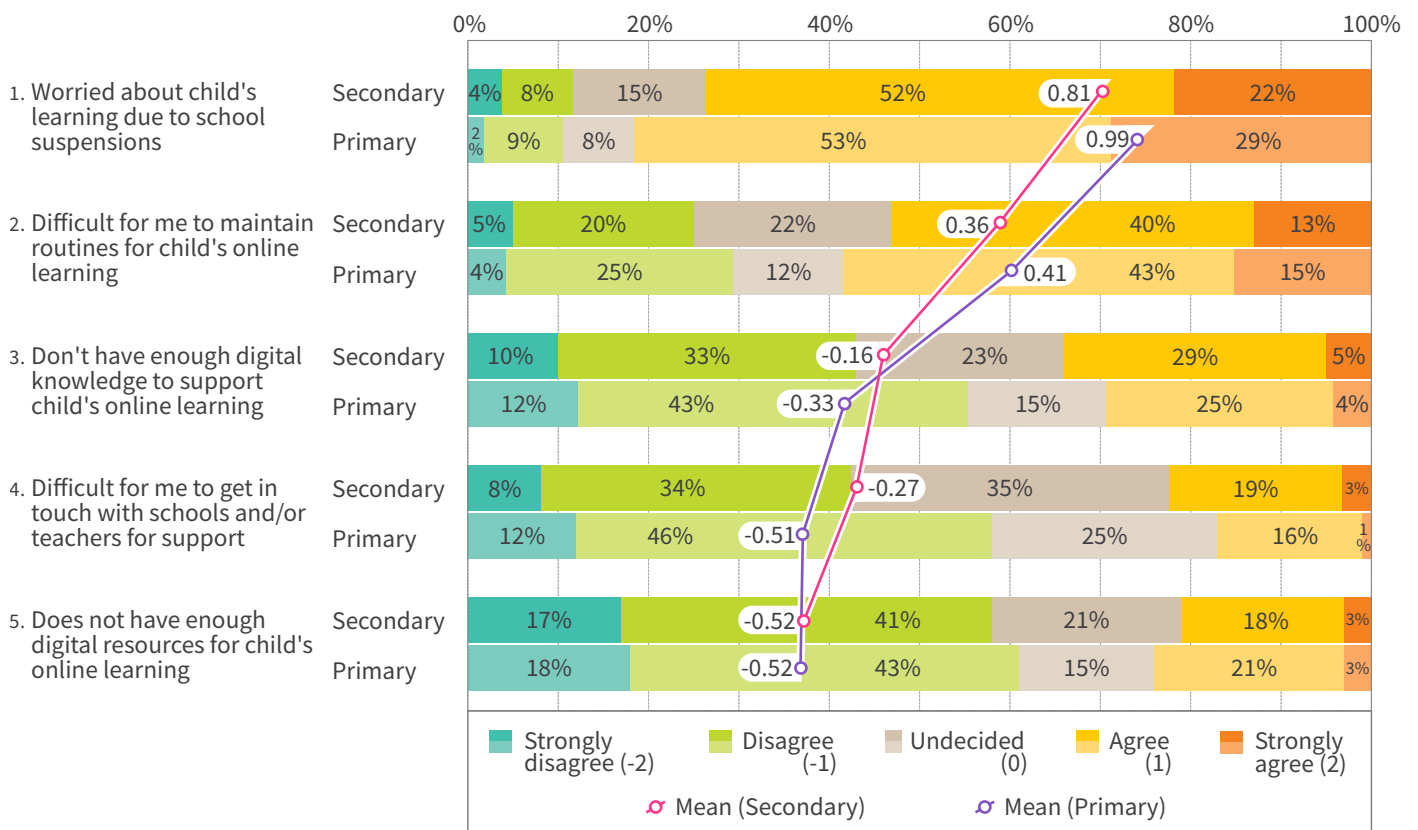
# Parents and Parenting in the *New Normal*

In this section, we report on different aspects of parenting (namely, challenges perceived by parents, parental involvement, digital parenting, parenting self-efficacy, and parent-child relationship) to provide a comprehensive picture of the state of parenting in the *New Normal*. Our results show that parents were most worried about the negative impact of school suspensions on their children’s academic outcomes. Furthermore, they increased their levels of interactions and involvement with their children’s teachers and schools in 2022.

## 2.1 Challenges perceived by parents

Parents were asked to rate the impact of different challenges on students’ learning outcomes. These challenges were, namely, worries about children’s learning due to school suspension, difficulty in maintaining routines for children’s online learning, lack of digital knowledge to support children’s online learning, difficulty to get in touch with schools, and the lack of digital resources for children’s online learning. Results show that compared to other challenges, parents were most concerned about the impact of school suspensions on their children’s learning outcomes. They also perceived difficulties in maintaining routines for their children’s online learning.

Figure 7. Parents’ perceived challenges in supporting children’s learning in 2022



## 2.2 Parental involvement

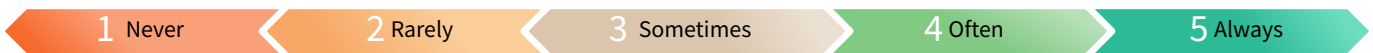
We asked questions about parents’ home- and school-based involvement. Results (Table 5 and Table 6) show that secondary parents were generally less involved in their children’s learning and daily life activities than primary parents in 2020 and 2022. The level of parents’ overall school involvement was low. However, compared to the situation in 2020, primary and secondary parents had higher levels of school-based



involvement in 2022. Our results also show that parents tended to interact more with their child’s teacher than to participate in school activities in 2020 and 2022, and that their levels of participation in parent-teacher communication and school activities increased from 2020 to 2022.

Table 5. Mean levels (SD) of home-based parental involvement

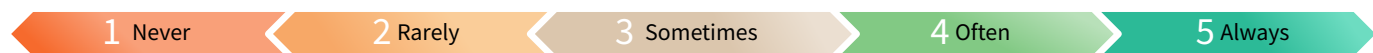
	2020		2022	
	Secondary Mean (SD)	Primary Mean (SD)	Secondary Mean (SD)	Primary Mean (SD)
Parents helped with homework	2.40 (0.80)	3.21 (0.80)	2.57 (0.79)	3.16 (0.77)
Parents monitored children's online behaviors	2.46 (0.96)	3.51 (0.86)	2.42 (0.91)	3.40 (0.86)
Communication between parents and children	2.89 (0.89)	3.36 (0.79)	2.85 (0.82)	3.29 (0.74)



Note. SD = standard deviation

Table 6. Mean levels (SD) of school-based parental involvement

	2020		2022	
	Secondary Mean (SD)	Primary Mean (SD)	Secondary Mean (SD)	Primary Mean (SD)
Parents participated in school activities	1.49 (0.69)	1.65 (0.72)	1.79 (0.70)	1.96 (0.68)
Parent and teacher interactions	1.89 (0.80)	2.63 (0.74)	2.20 (0.73)	2.63 (0.75)



Note. SD = standard deviation

### 2.3 Digital parenting

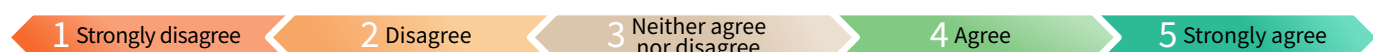
Our results show that the level of digital parenting for primary parents (Mean = 3.45, SD = 0.50) was higher than secondary parents (Mean = 3.19, SD = 0.55), which indicated that compared to secondary parents, primary parents were more likely to engage in digital parenting.

### 2.4 Parental self-efficacy

We measured parental self-efficacy to examine parents’ confidence in their ability to perform their parenting roles effectively in two contexts, namely, general parenting (i.e., guiding their children’s behavior and learning) and digital parenting (i.e., guiding and monitoring children’s activities online). Results (Table 7) show that the level of parenting self-efficacy in the general context was higher than that in the digital context. Additionally, primary school parents were more self-efficacious in both general and digital parenting than secondary school parents.

Table 7. Mean levels (SD) of Parental self-efficacy in general and digital parenting contexts

Parenting contexts	Secondary Mean (SD)	Primary Mean (SD)
General parenting	3.72 (0.63)	3.87 (0.61)
Digital parenting	3.28 (0.55)	3.52 (0.49)



Note. SD = standard deviation

## 2.5 Parent-child relationship

Our results show that parent-child relationship as reported by parents (e.g., parents provide for their child's emotional needs, child openly share personal experience with parents) were generally positive. The level of parent-child relationship for primary parents (Mean = 4.32, SD = 0.59) was higher than that for secondary parents (Mean = 4.02, SD = 0.74).

### Part 3

## Schools' Adaptations in the *New Normal*

The multiple waves of school suspensions due to the pandemic in the last 2.5 years have posed significant challenges for school leaders and teachers in adjusting to the disruptions and changing modes of teaching and learning. In this section, we report on the impact of critical events, and the effectiveness of strategies for school operations and students' learning from the perspectives of school leaders and teachers. We also investigated school leaders' and teachers' usage of digital technologies in teaching and learning. Our results show that, compared to 2020, schools implemented more online teaching and learning activities in 2022. School leaders and teachers were most worried about the impact of prolonged disruptions on children's learning outcomes. Strategies perceived as most effective to address challenges included providing teachers with professional training in online and hybrid lessons and establishing a collaborative school culture.

### 3.1 Challenges and Impact perceived by schools

We asked school leaders ([Figure 8](#)) and teachers ([Figure 9](#)) to rate the extent to which different key events impacted their school operations and student learning in 2022. These key events were: support received from the community, government's relaxation of public health restrictions, school's strategies to adjust to the New Normal, flexibility to administer the special vacation, migration of teachers and students to other countries, students' increased achievement gaps due to the school suspension, COVID-19 related public health policies, and recurring periods of school suspension. Our results show that school leaders and teachers perceived the recurring periods of school suspension as having the largest impact on school operations and students' learning. Additionally, school leaders and teachers perceived the support obtained from the community as being the most beneficial for addressing the key challenges.

Figure 8. Critical events impacting school operations and student learning in 2022 (Teachers' perspective)

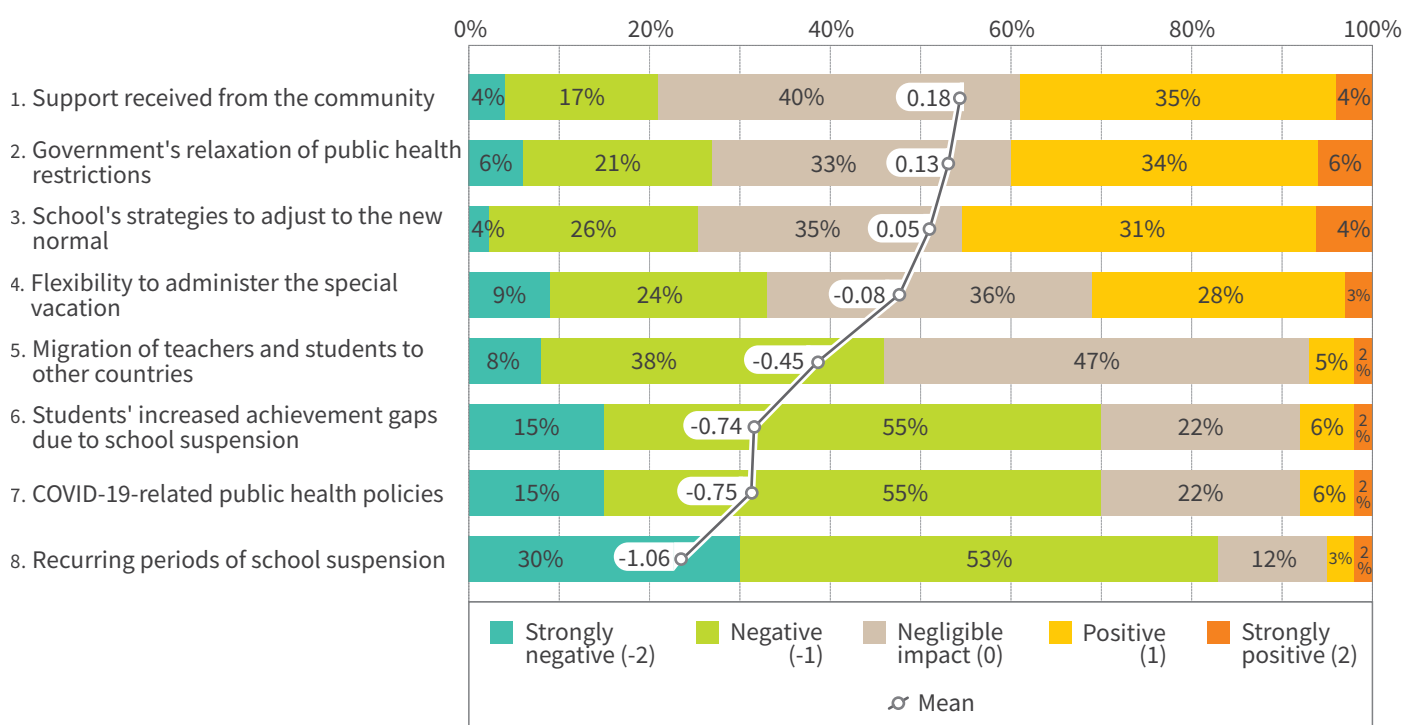
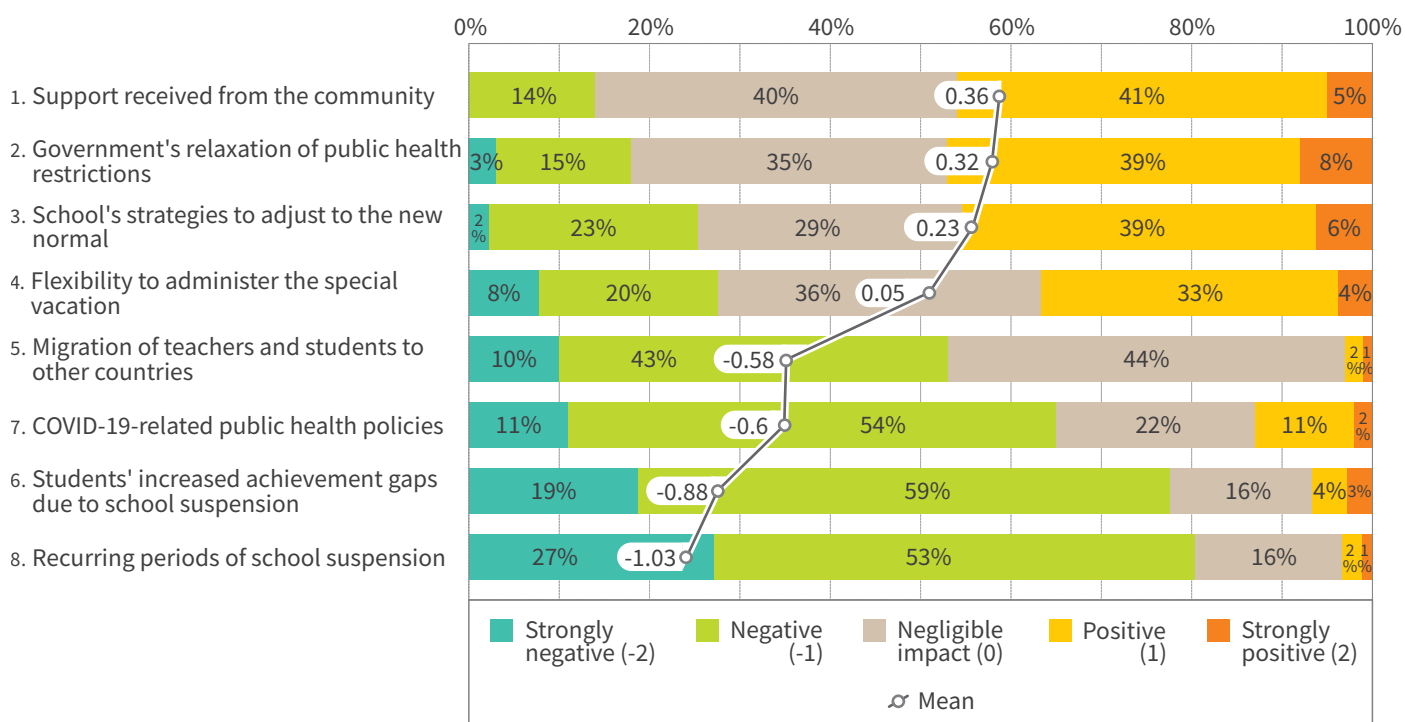


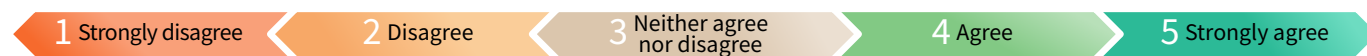
Figure 9. Critical events impacting school operations and student learning in 2022 (School leaders' perspective)



School leaders also reported the extent to which they perceived cumulative negative impact on student learning and wellbeing due to extended school suspension, including lower academic standards, more discipline problem, greater difficulties in organizing learning, and more socioemotional support needed by students. The results show an increase in the cumulative negative impact perceived by school leaders from 2020 to 2022 (Table 8). Secondary school leaders reported higher levels of the perceived negative impact than primary school leaders in both 2020 and 2022.

Table 8. Cumulative negative impacts on students due to extended school suspension perceived by school leaders

	Secondary Mean (SD)	Primary Mean (SD)
2020	3.43 (0.69)	3.23 (0.74)
2022	4.12 (0.54)	3.90 (0.51)

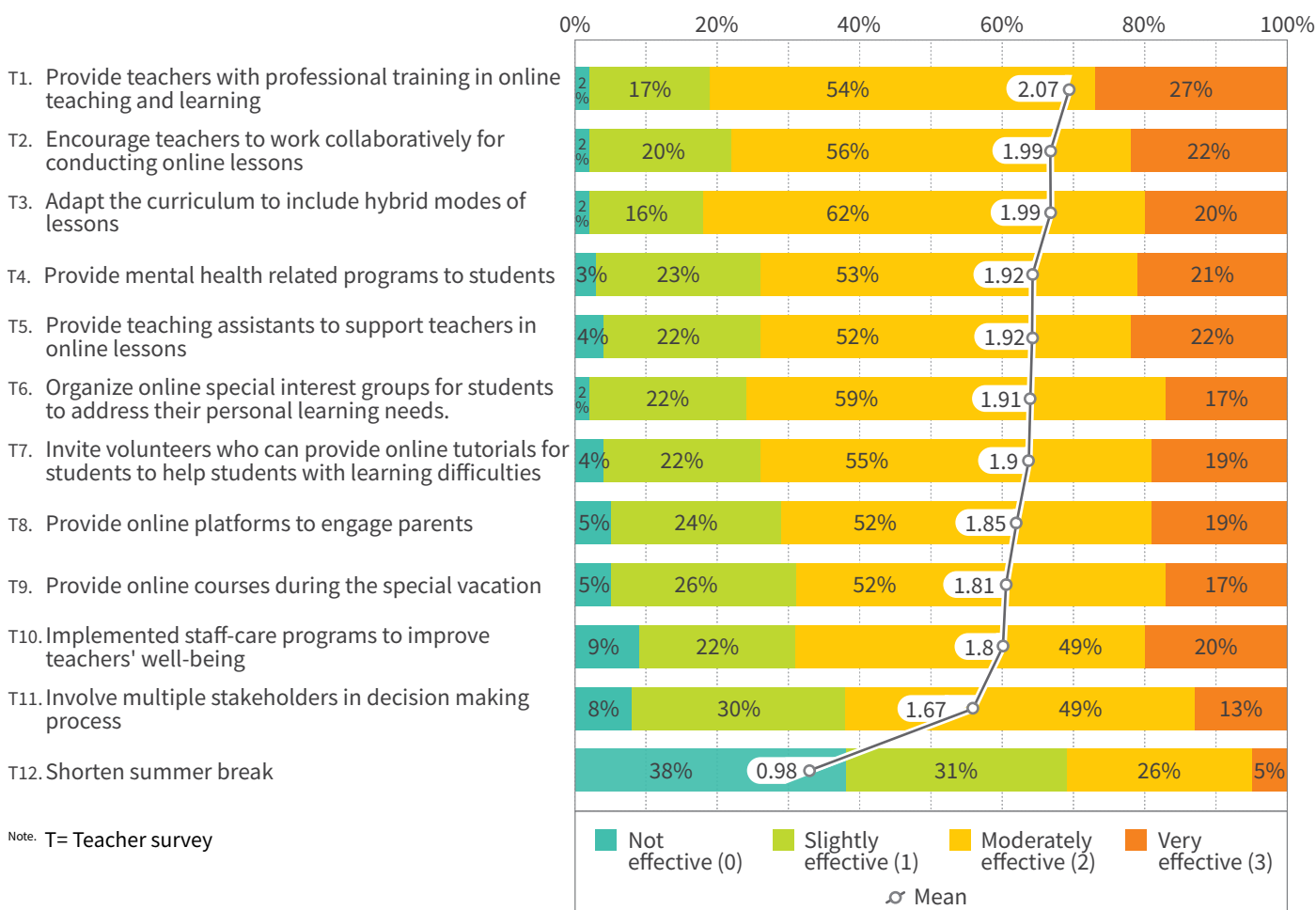


Note: SD = standard deviation

### 3.2 Strategies to improve school operations and student learning

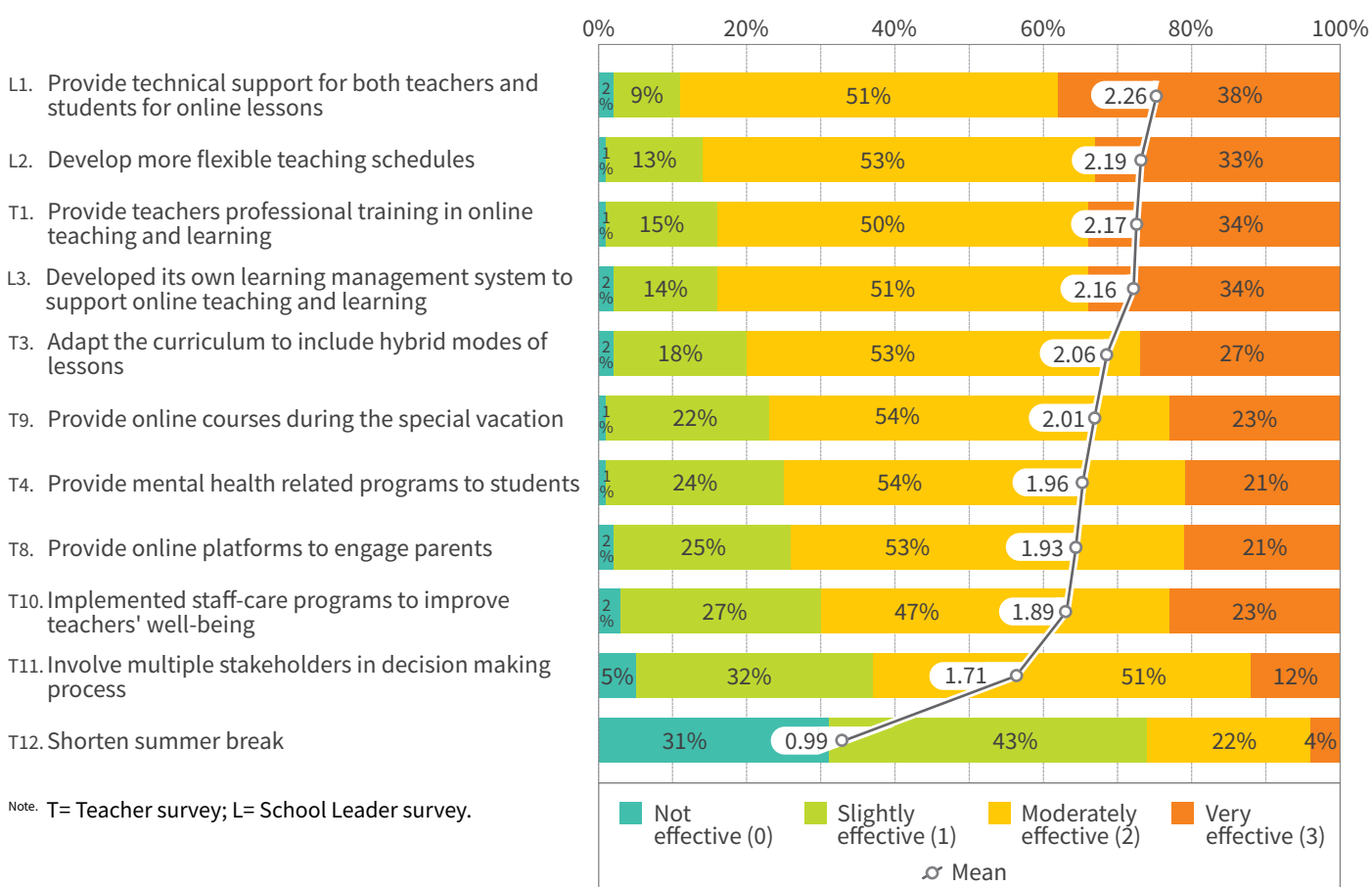
Schools had instituted a variety of strategies to support teachers and students during the school suspensions in the *New Normal*. In our study, we asked school leaders and teachers on their perceived effectiveness of different strategies (see [Figure 10](#) and [Figure 11](#)). Results show that school leaders ([Figure 11](#)) and teachers ([Figure 10](#)) perceived the provision of professional development for online teaching and learning and school-based teacher collaboration to be the most effective for improving school operations and student learning in 2022.

Figure 10. Effectiveness of strategies to improve school operations and student learning in 2022 (Teachers' perspective)



Note: T= Teacher survey

Figure 11. Effectiveness of strategies to improve school operation and student learning in 2022 (Leaders' perspective)



### 3.3 Usage of digital technologies in teaching

Our results also show that school leaders and teachers reported greater use of digital technologies in 2022 when compared to 2020 (Table 9). These results suggest that there was a wider adoption of digital practices for teaching and learning as well as school administration in the *New Normal*. Moreover, we find that teachers reported a larger increase in the usage of digital technologies when compared to school leaders.

Table 9. Mean levels (SD) of digital technology use by school leaders and teachers

	Secondary Mean (SD)		Primary Mean (SD)	
	School leaders	Teachers	School leaders	Teachers
2020	2.85 (0.82)	2.90 (0.79)	2.87 (0.73)	2.87 (0.79)
2022	3.10 (0.45)	3.29 (0.58)	3.09 (0.55)	3.27 (0.62)



Note: SD = standard deviation

# Implications for Action

The e360 (2022) study builds on the conceptual and methodological foundations of the baseline e360 (2020), which was a comprehensive 360-degree, action-oriented survey study. We are most appreciative of the support from all the schools that took the time to participate in the study. Their active response and cooperation underscore their emphasis on students' learning and wellbeing. Our analysis of the multilevel data collected from the study is meant to support their prospective efforts to create a resilient future-oriented education ecosystem in the *New Normal*. Overall, our results indicate that schools have accumulated more experience in dealing with the challenges of multiple waves of school suspensions due to the pandemic. At the same time, schools also have acquired a more comprehensive understanding of the dynamic changes associated with students' online learning and wellbeing. Based on the research findings from the present study, we make the following recommendations for students, parents, schools, and the community and policymakers to support students' learning and wellbeing:

## For Students

- Provide more support services to enhance students' learning, cyber-wellness, and wellbeing
- Provide additional support to secondary students while not neglecting the learning and wellbeing needs of primary students

## For Parents

- Provide more informed parenting support, particularly digital parenting, to support children's learning and wellbeing
- Provide additional support for parents to cater to the learning and wellbeing needs of secondary students

## For Schools

- More focus on the provision of professional learning opportunities and developing a collaborative culture among teachers on effective online, blended, and hybrid teaching and learning to support student-centered learning and wellbeing.
- More efforts to leverage community resources and support for school development.

## For the community and policy-makers

- Affirm the strategies and efforts of school leaders and teachers to provide online learning and teaching support to students, and to enhance communication with parents, which have brought positive outcomes.
- Strengthen current community support to address students' learning and wellbeing needs in the *New Normal*.

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eCitizen Education 360 (2022) is supported by The D. H. Chen Foundation, the Growth Partner and Funder.

Hong Kong: Centre for Information Technology in Education (CITE), Faculty of Education, The University of Hong Kong, 2022.

Copies of this publication can be obtained from:

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How to cite this report:

Tan, C. Y., Liang, Q., Pan, Q., Law, N., Lan, M., Tao, S., Chan, K. K. Catherine., Li, W., & Li, Y. (2023). eCitizen Education 360 (2022) Project- Bulletin 1: Cumulative Impact Under New Normal Insights for Positive Actions. Hong Kong: Faculty of Education, The University of Hong Kong.  
<https://www.ecitizen.hk/360/bulletins-reports#bulletins>

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In conjunction with student research assistants in the e360 (2022) Project

Supporting Organizations

