Learning and Assessment for
DIGITAL CITIZENSHIP

eCitizen Education
數碼素養 **360** 2022

Organized by

iTC

Faculty of **Education**
The University of Hong Kong

Growth Partner and Funder

陳廷驊基金會
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Supporting Organizations

香港遊樂場協會
HONG KONG PLAYGROUND ASSOCIATION

Cyberport 數碼港 | C Academy

香港教育城
HKedCity

香港電腦教育學會
The Hong Kong Association
for Computer Education

Supporting Organizations

Hong Kong Association of
the Heads of Secondary Schools

GPSH
官立小學校長協會

BGCA
香港小童群益會
The Boys' & Girls' Clubs Association of Hong Kong

香港輔導教師協會
Hong Kong Association of Careers Masters
And Guidance Masters Limited

eCitizen Education 360 (2022):
An extension of the Learning and Assessment for Digital Citizenship Project

The Cumulative Impact of Recurring School Suspensions under the New Normal: Positive Action Insights for Students, Parents, Schools and Communities

Presented by the Centre for Information Technology in Education (CITE), Faculty of Education, The University of Hong Kong
3 November 2022

Learning and Assessment for DIGITAL CITIZENSHIP

The First Release of Research Findings

The Cumulative Impact of Recurring School Suspensions under the New Normal: Positive Action Insights for Students, Parents, Schools and Communities

Speaker：Professor Nancy LAW
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Principal Investigator：Dr. Cheng Yong TAN
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About eCitizen Education 360

- First e360 study conducted in June 2020 to understand the impact of extended school suspension (Feb – early June 2020) on students, parents, and schools

- e360 (2022) builds on the conceptual and methodological foundations of the baseline (2020) – a comprehensive 360-degree, action-oriented survey study

- To understand the impact of multiple waves of prolonged intermittent school suspensions and provide evidence-based recommendations to stakeholders

- Goal: promote equitable quality education for all

- Acknowledgement: (1) Wide support from schools, education professionals, parents, academics and community organizations; (2) The D. H. Chen Foundation as the Growth Partner and Funder of this project; (3) Support from all the participating schools.

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The University of Hong Kong

Project Team

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Co-Investigators

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Genesis of a Sequence of Four Studies

RGC TRS wave-1
(Jan-Jun 2019)

1st/2nd wave COVID
e360
(8 Jun – 12 Jul 2020)

RGC TRS wave-2
(Apr – Jul 2021)

5th Wave COVID
e360 Ver2
(Jul – Sep 2022)
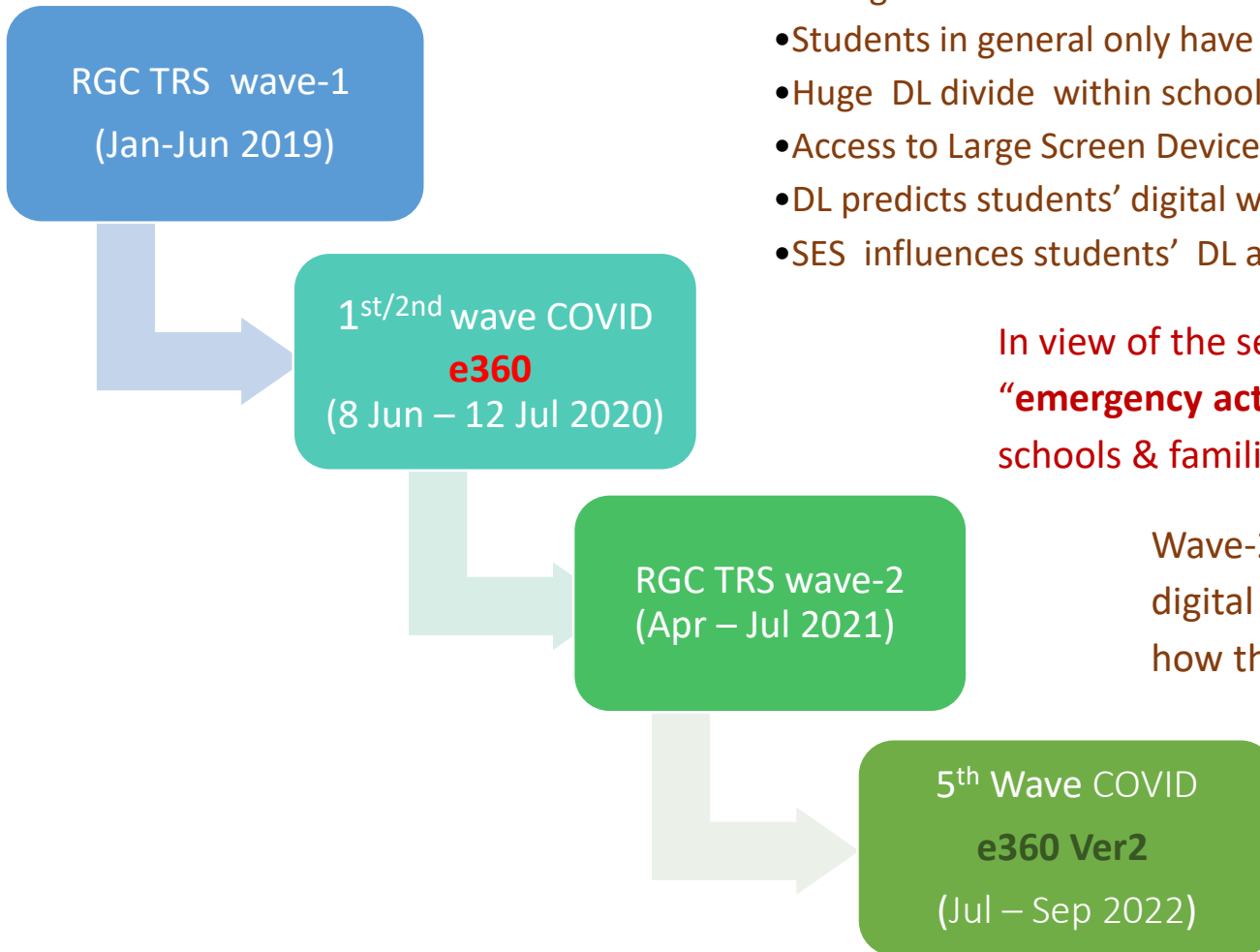
Findings:

- Students in general only have basic digital literacy (DL)
- Huge DL divide within schools and between schools
- Access to Large Screen Devices (LSDs) at home vital to DL development
- DL predicts students' digital wellbeing (internet addiction, cyberbullying exp)
- SES influences students' DL achievement

In view of the serious digital divides revealed in wave-1 findings, an "**emergency action-focused study**" to understand how students, teachers, schools & families are affected by the sudden school suspension.

Wave-2 is a longitudinal follow-up to track students' growth in digital competence & factors that influence them, as well as how these affect students' wellbeing.

How has 2.5 years of waves of school suspension impacted students' learning, and what are effective strategies to help address the learning gap?

Dates indicated are the time period for data collection

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Key findings of e-360 (2020) published in 6 bulletins

Key findings of e-360 (2020) published in 6 bulletins

Key Questions addressed in this report

1. What is the status of students' learning and well-being 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?

What insight can be gleaned to inform positive action by different stakeholders and policy makers?

Basic information about research design and data collected

Research design:

5 survey instruments distributed to each participating school

Schools Leader survey (leaders include all who contribute to school-based decision-making)

Principal, Vice Principals, Academic Masters/ Curriculum Leader, Subject/ KLA panel chairs, ICT Coordinator, STEM Coordinator, Moral/Civic Education Coordinators, Counselling and Guidance Head, Discipline Masters, Life-wide Learning/ Extra-curricular Activities Coordinators.

e-learning coordinator survey

A person identified as taking key coordinating responsibility for e-learning in a school

Teacher survey

Teachers refer to those with teaching responsibilities only, and does not have a formal decision-making role

Student survey

Students in Primary 3 – 6, Secondary 1 – 6

Parent survey

Parents whose children participated in the study

Sampling and participation

- All schools, including those that participated in the 2020 study, were invited to participate.

- Participation was on a voluntary basis. The specific grade levels and classes participating in the study was also decided by the individual schools.

- All teachers and school leaders in the participating schools are invited to respond to the respective surveys.

- Parents of all participating students are invited, with help from the participating schools, to respond to the parent survey.

- **Data collection: July – early September 2022**

School types and grade level distribution

Participating Schools
(n = 51)

Direct Subsidy Scheme
12%

Government school
4%

Government aided school
84%

Primary school students
(n = 2014)

P6 12%
P3 23%
P4 33%
P5 32%

Secondary school students
(n = 6014)

S6 0.03%
Not reported 0.17%
S5 13%
S1 28%
S4 15%
S3 21%
S2 23%
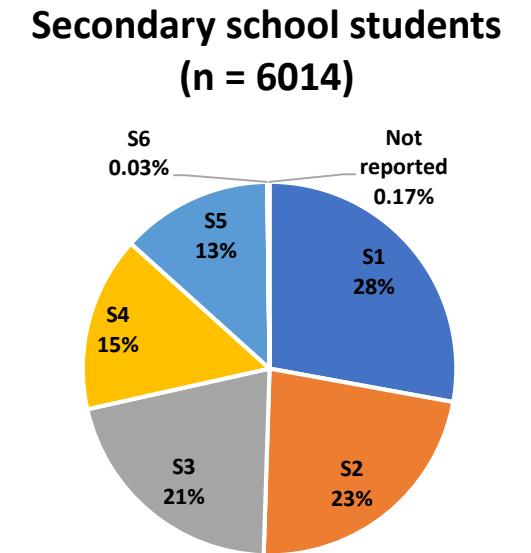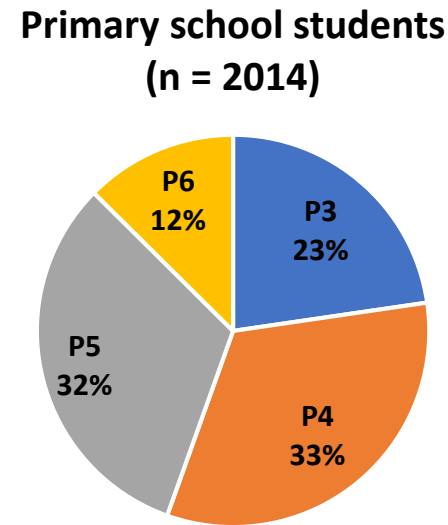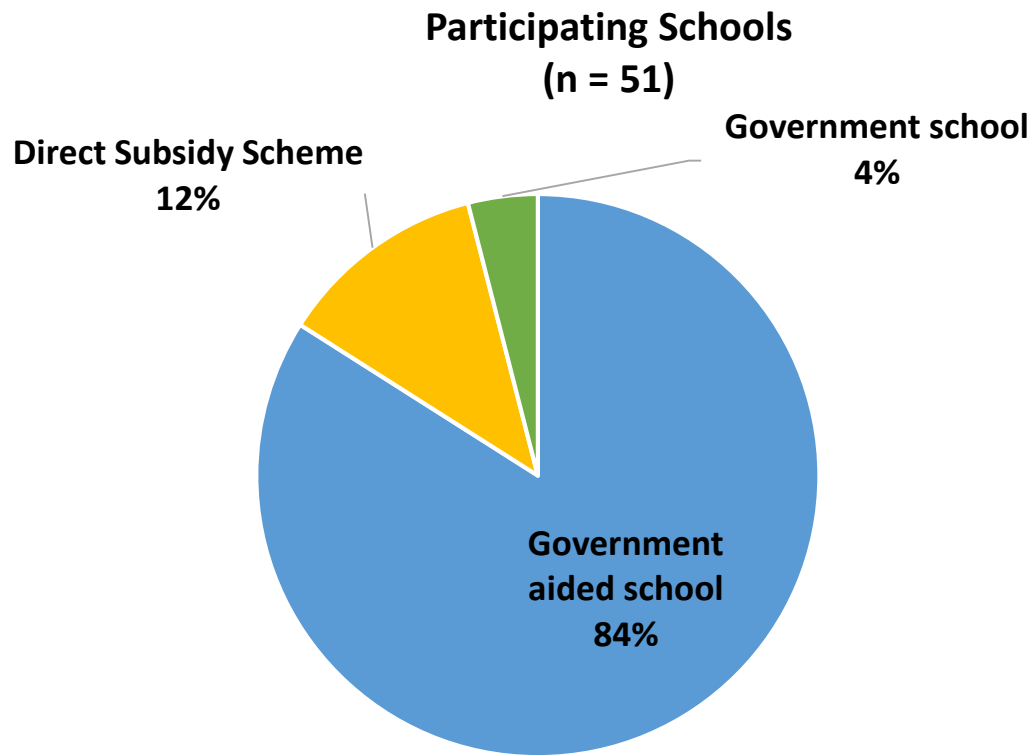
Geographic Distribution of Participating Schools

Primary school in 2022

Secondary school in 2022

Primary school in both 2020 and 2022

Secondary school in both 2020 and 2022

Major difficulties for schools in participating:

- Modified school calendar due to special vacation

- Schools are busy during summer

- Period clashes with exams and summer activities

Thanks to all our participating schools!

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Distribution of schools which participated in 2020 and/or 2022

	2020	2022	Both (% of 2022 also in 2020)
Primary schools	20	20	9 (45%)
Secondary schools	32	31	14 (45%)
Special school	1	0	0
Total	53	51	23 (45%)

Number of Participating Schools, Students, Parents, Teachers, School Leaders, e-learning coordinators (2022)

	Participating Schools	Students	Parents	Teachers	School Leaders	e-learning coordinators
Primary	20 (39%)	2014 (25%)	1125 (35%)	383 (43%)	125 (46%)	19 (39%)
Secondary	31 (61%)	6014 (75%)	2093 (65%)	503 (57%)	146 (54%)	30 (61%)
Total	51	8028	3218	886	271	49

Findings:
1. Students' Online Learning and Well-being

Students' Online Learning

1. Online learning activities

2. Online self-regulated learning strategies

Proportion of students reporting different online learning frequency (2020 vs 2022)

	Primary					Secondary					
	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	-	-	-	-	-	22%	17%	23%	22%	16%	2020
	18%	23%	22%	20%	17%	13%	18%	21%	28%	20%	2022
2. Participate in real-time lessons WITH teacher gives the lecture in most of the time.	8%	16%	21%	32%	23%	5%	9%	21%	33%	32%	2020
	14%	16%	17%	27%	26%	7%	11%	17%	36%	29%	2022
3. Participate in less structured lessons for social discussion	-	-	-	-	-	22%	24%	25%	17%	12%	2020
	21%	24%	23%	18%	14%	21%	24%	25%	19%	12%	2022
4. Watch teachers' pre-recorded video lessons	13%	14%	20%	24%	28%	22%	26%	29%	13%	11%	2020
	39%	24%	17%	10%	10%	47%	26%	16%	7%	4%	2022
5. Complete online assignments	3%	8%	13%	25%	51%	14%	27%	33%	15%	12%	2020
	5%	13%	17%	22%	43%	4%	8%	20%	24%	43%	2022
6. Participate in real-time assessments (quiz/exam).	26%	34%	17%	9%	14%	14%	27%	33%	15%	12%	2020
	21%	36%	19%	10%	14%	13%	33%	34%	10%	10%	2022
7. Discuss with classmates about schoolwork through social media	32%	14%	16%	11%	27%	11%	13%	27%	19%	30%	2020
	32%	16%	20%	11%	22%	12%	15%	26%	16%	30%	2022
8. Collaborate with classmates via digital tools to complete group assignment	50%	16%	14%	8%	12%	25%	20%	27%	15%	13%	2020
	38%	24%	17%	9%	13%	21%	31%	24%	12%	12%	2022

↓ increase

↓ decrease

similar for primary & secondary

↓ decrease

↓ Increase for secondary

↓ Slight increase

- These questions were not included in the 2020 survey for primary students

Students' mean levels of online learning self-efficacy (2020 vs 2022)

Group	Primary	>	Secondary
2020	3.61		3.09
2022	3.71		3.24

increase

1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree

Students' mean levels of online self-regulated learning strategies in 2022

School type	Primary	>	Secondary
Help-seeking	3.43		3.30
Self-evaluation	3.48		3.26
Time management	3.48		3.16

1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree

Students' Well-being

1. Cognitive emotional regulation strategies

2. Cyberbullying

3. Worries about study

Students' reported use of cognitive-emotional regulation strategies (2022)

Regulation strategy	Primary	Secondary
Refocus on planning	3.29	3.20
Positive reappraisal	3.28	3.16
Catastrophizing	2.77	2.76
Blaming others	2.54	2.54

1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

- Primary students tended to use positive strategies more often than secondary students, when they experienced negative events (in the past six months).
- Students were more likely to use positive strategies than negative strategies when they experienced negative events.

Students' Cyberbullying Experiences (2022)

	Primary	Secondary
cyberbullying perpetration	25%	26%
cyberbullying victimization	34%	34%
cyberbullying bystander	40%	55%
	N=1951	N=5706
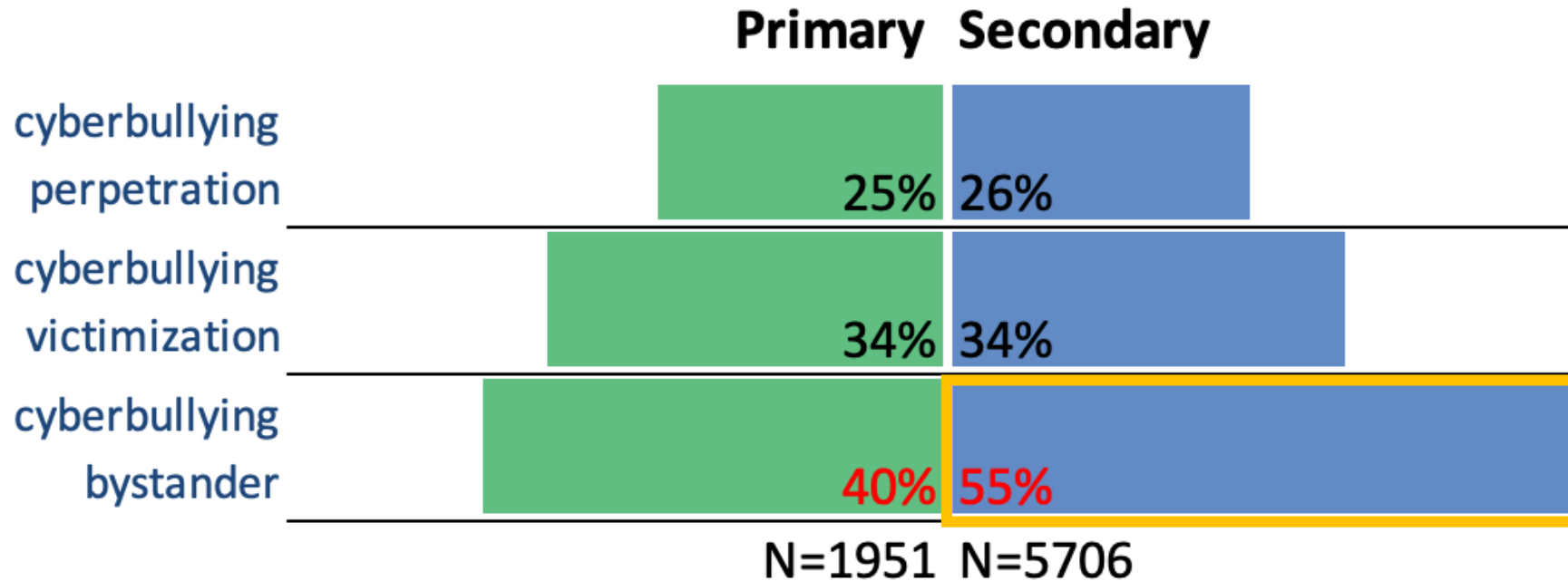
Prevalence of strategies used for cyberbullying incidents (%)
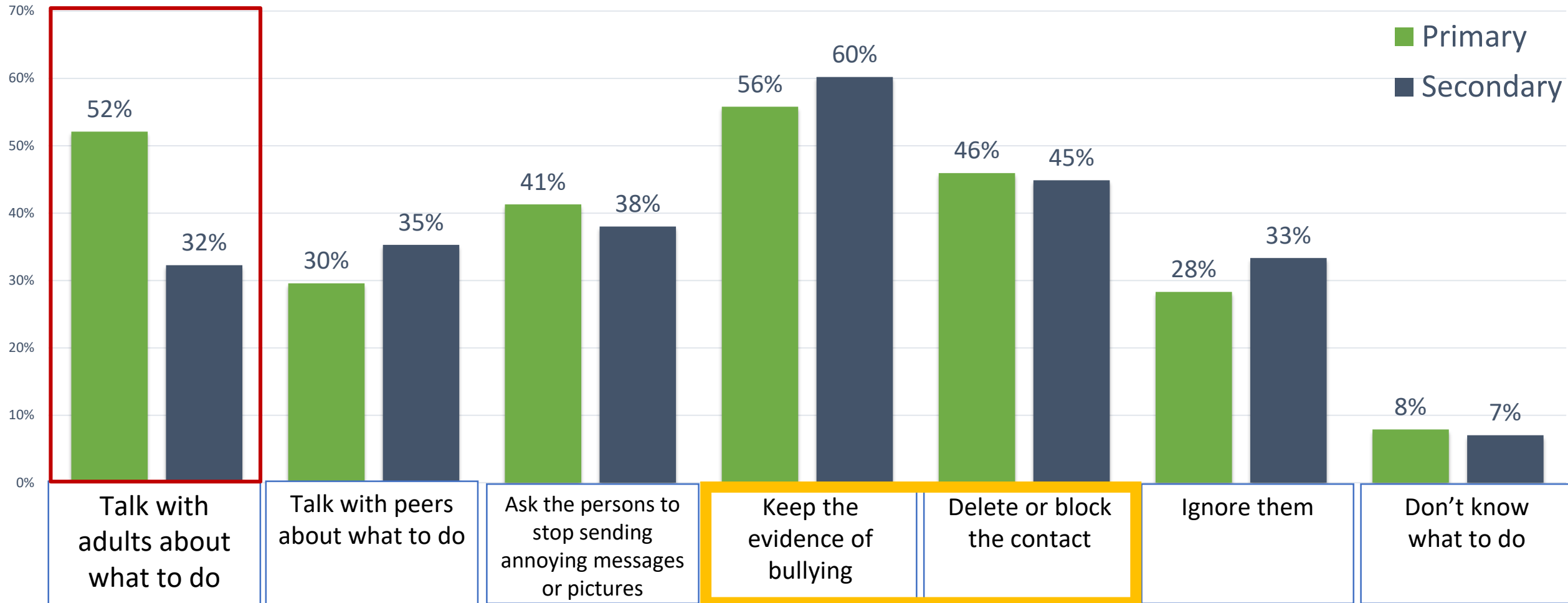
N.B. 862 primary students and 2655 secondary students responded on this question

Sources of students' worries (2020 vs 2022)

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

1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree, - : not asked in this group

In 2020, primary students were generally less stressed than secondary students

Sources of students' worries (2020 vs 2022)

	Mean (SD)			
	Primary Students		**Secondary Students**	
	2020	**2022**	**2020**	**2022**
1. Undergoing daily school routine	2.54 (1.27)	2.63 (1.35)	2.73 (1.08)	2.80 (1.04)
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4. Experiencing emotional stress	2.28 (1.17) <	2.60 (1.37)	2.90 (1.13)	2.96 (1.09)
5. Preparing for future career	-	-	3.32 (1.05)	3.15 (1.08)

1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree, - : not asked in this group

For primary students, they experience more emotional stress in 2022.

For secondary students, there was not much difference in terms of worries experienced in 2020 vs 2022.

Section Summary

- **To some extent, students are getting more used to online learning from 2020 to 2022. They are collaborating more with classmates and completing more online assignments via digital tools.**

- **Teachers are employing more interactive and social discussion pedagogy and rely much less on one-way didactic teaching in online classes.**

- Notably, primary students reported higher levels of online learning self-efficacy and used more online self-regulated learning strategies than secondary students.

- Secondary students experienced more issues with digital well-being (i.e., when encountering cyberbullying, they are less likely to discuss with adults about what to do and more likely to experience cyberbullying as bystanders).

Findings:
2. Parents and Parenting in the New Normal

Parents and Parenting in the New Normal

1.Challenges perceived by parents

2. Parental involvement

3. Digital parenting

4. Parental self-efficacy

5. Parent-child relationship

Parents' perceived challenges in supporting children's learning in 2022
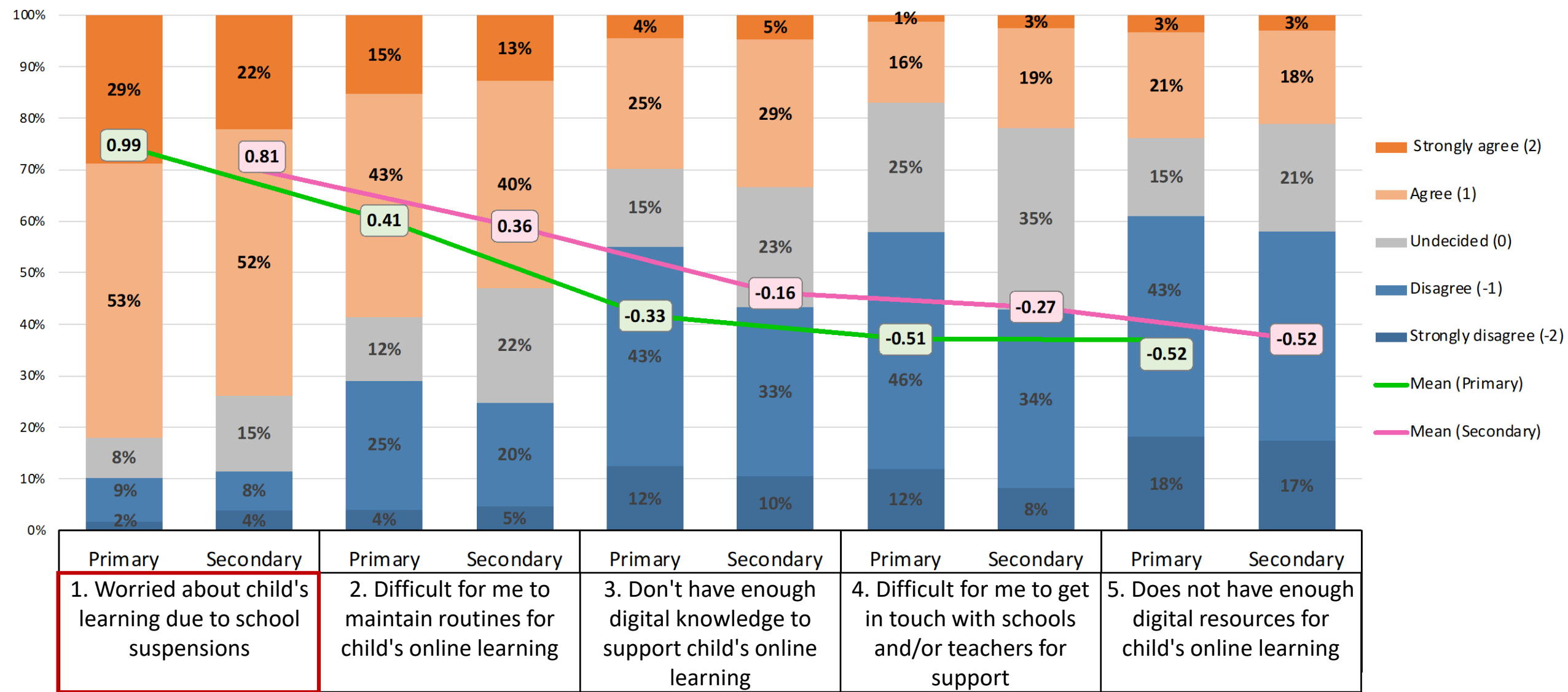
Mean levels of _home-based_ parental involvement

	2020		2022	
	Primary	Secondary	**Primary**	Secondary
Parents help with homework	3.21	2.40	3.16	2.57
Parents monitor children's online behaviors	3.51	2.46	3.40	2.42
Communication between parents and children	3.36	2.89	3.29	2.85

1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

- **No significant differences in levels of home-based involvement for primary & secondary parents between 2020 and 2022**

- **Secondary parents had significantly lower levels of home-based involvement in both 2020 & 2022**

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Mean levels of _**school-based**_ parental involvement

	2020		2022	
	Primary	Secondary	Primary	Secondary
Parents participated in school activities	1.65	1.49	1.96	1.79
Parent and teacher interaction	2.63	1.89	2.63	2.20

1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

- **Overall, levels of school-based involvement were low.**
- **Secondary parents had significantly lower levels of school-based involvement in both 2020 & 2022**
- **School-based parental involvement increased in 2022 compared to 2020 for both primary and secondary parents.**
- **There is a higher frequency of parent-teacher interaction than parents' participation in school activities.**

Mean levels of digital parenting

School type	Digital parenting
Primary	3.45
Secondary	3.19

1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree

Digital parenting measures the extent to which the parent:
(1) understands what are good digital practices such as how to use online resources productively & minimizing risks,
(2) model and set rules about the use of media in the family

● Digital parenting can empower children to be good digital citizens who can minimize risks and maximize their own potentials in the digital world.

● Primary parents are found to be more likely to use digital technologies in their parenting and to moderate their children's media use than secondary parents.

Parents' self-reported efficacy in general & digital parenting

Parenting practice type	Primary	Secondary
General parenting	3.87	3.72
Digital parenting	3.52	3.28

1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree

- Parenting self-efficacy on general parenting is higher than digital parenting.

- Parents of primary school students report higher self-efficacy in general and digital parenting (regarding behavior and learning) than secondary.

Mean levels of parent-child relationship

School level of child	Parent-child relationship
Primary	4.32
Secondary	4.02

1 = Definitely does not apply, 2 = Not really, 3 = Neutral, not sure, 4 = Applies somewhat, 5 = Definitely applies

- The parents' reported relationship (*sharing, support, & understanding*) with the child are **generally positive**.
- Parent-child relationship reported by primary parents is significantly more positive.

Section summary

Secondary parents (compared to primary parents) are generally:

- Less involved in their children's learning and lives,

- had lower parenting self-efficacy.

Results in 2022 compared to 2020,

- Parents were more concerned about the impact of school suspensions on their children's learning outcomes.

- There have been increased parent-school/parent-teacher interactions, possibly reflecting more efforts made and more use of digital interactions by both parents and schools.

Implications for the New Normal:
- Primary school parents are more self-efficacious
- Need to help parents (especially secondary school parents) improve their understanding of youth issues and their digital competence
- Need to strengthen support for digital parenting to improve parental self-efficacy

Findings:
3. Schools' Adaptations in the New Normal

Schools' Adaptation in the New Normal

1.Challenges and Impacts perceived by schools

2. Strategies to improve school operation and student learning

3. Usage of digital technologies in teaching

Critical events impacting school operation and student learning in 2022 (Teachers' perspective)
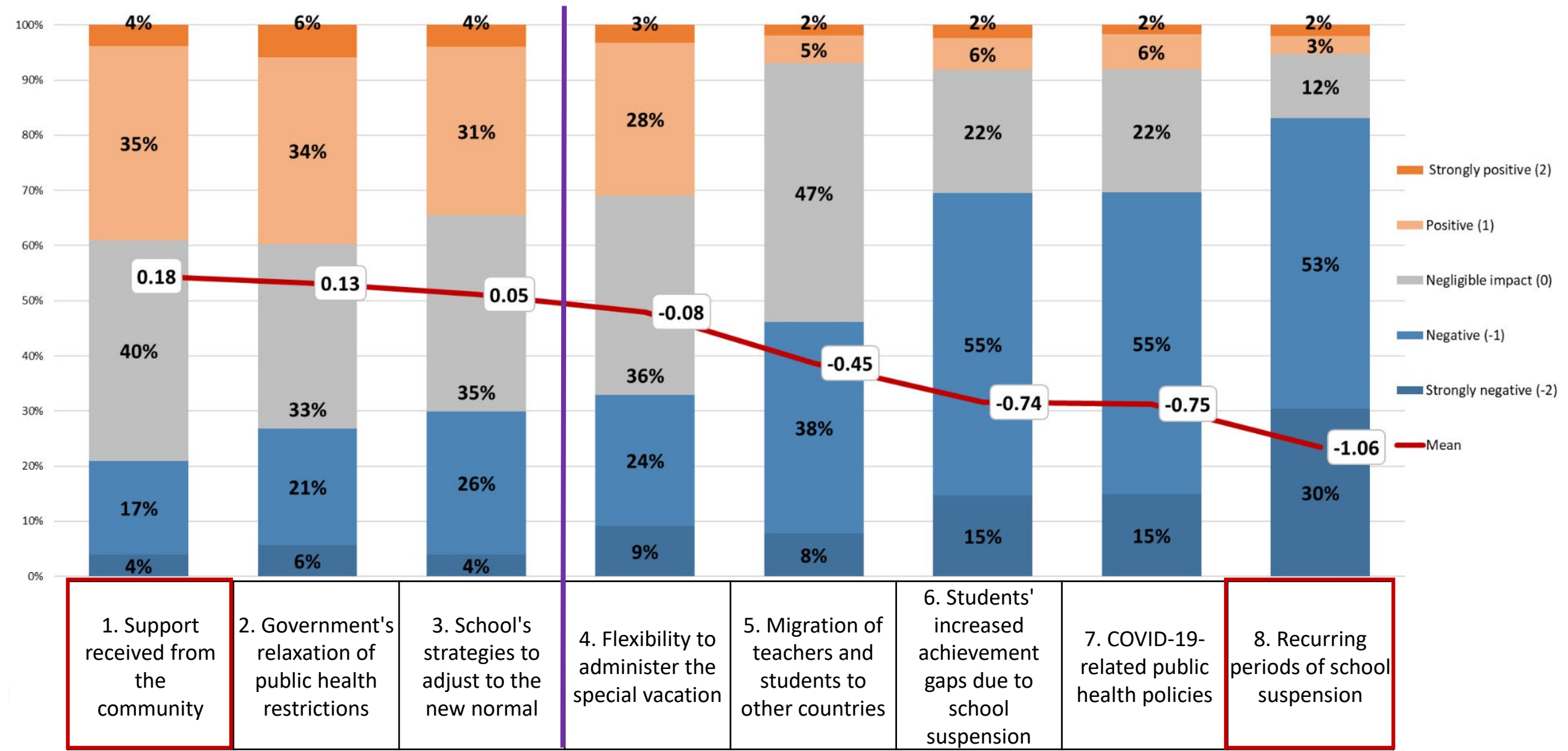
Critical events impacting school operation and student learning in 2022 (School leaders' perspective)
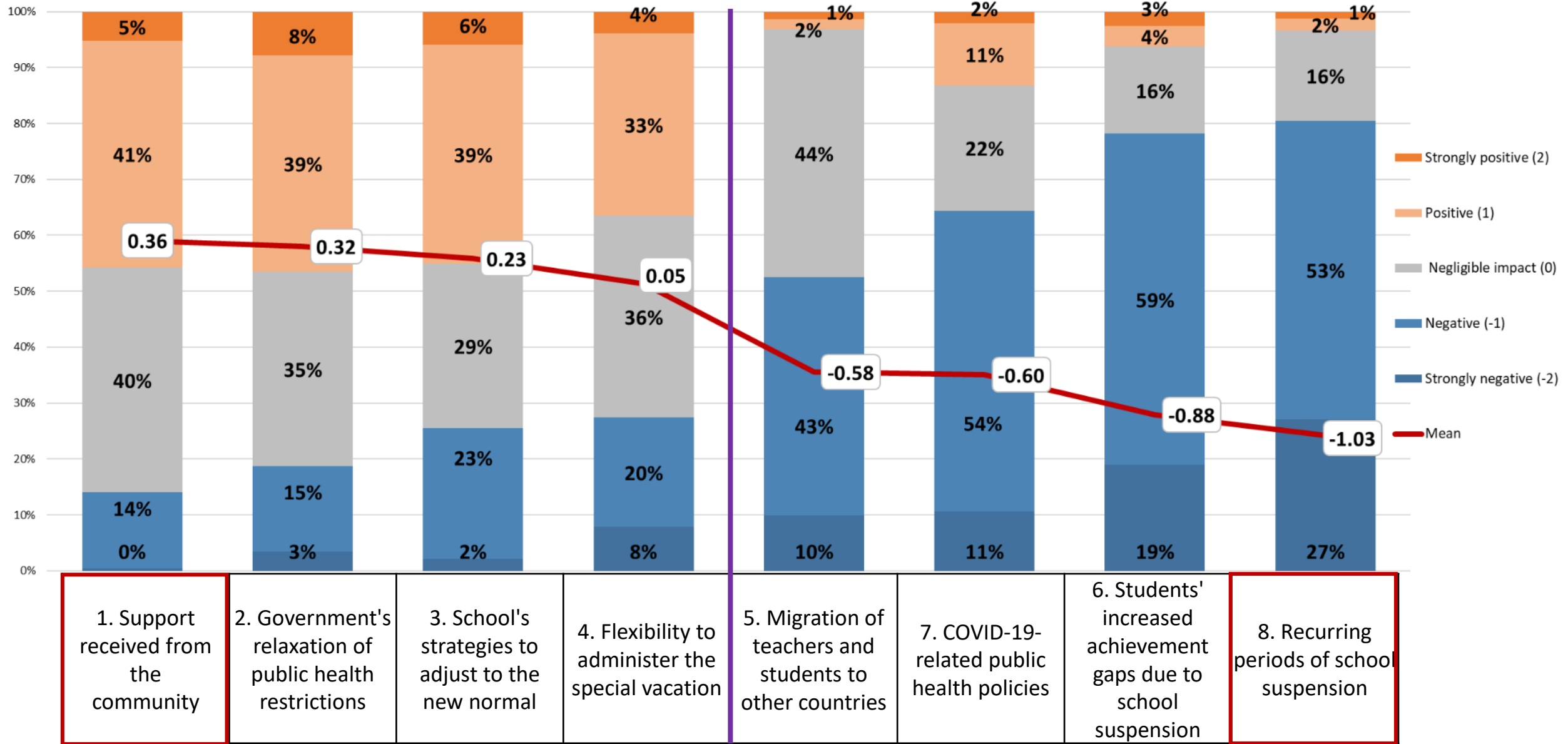
Numbers of Covid-19 disrupted classes reported by school leaders (2022)

	Primary School	Secondary School
Not at all	28%	16%
A small number of classes (e.g., < 25%)	55%	67%
A moderate number of classes (e.g., 26-50%)	15%	15%
A large number of classes (e.g., 51-75%)	2%	2%
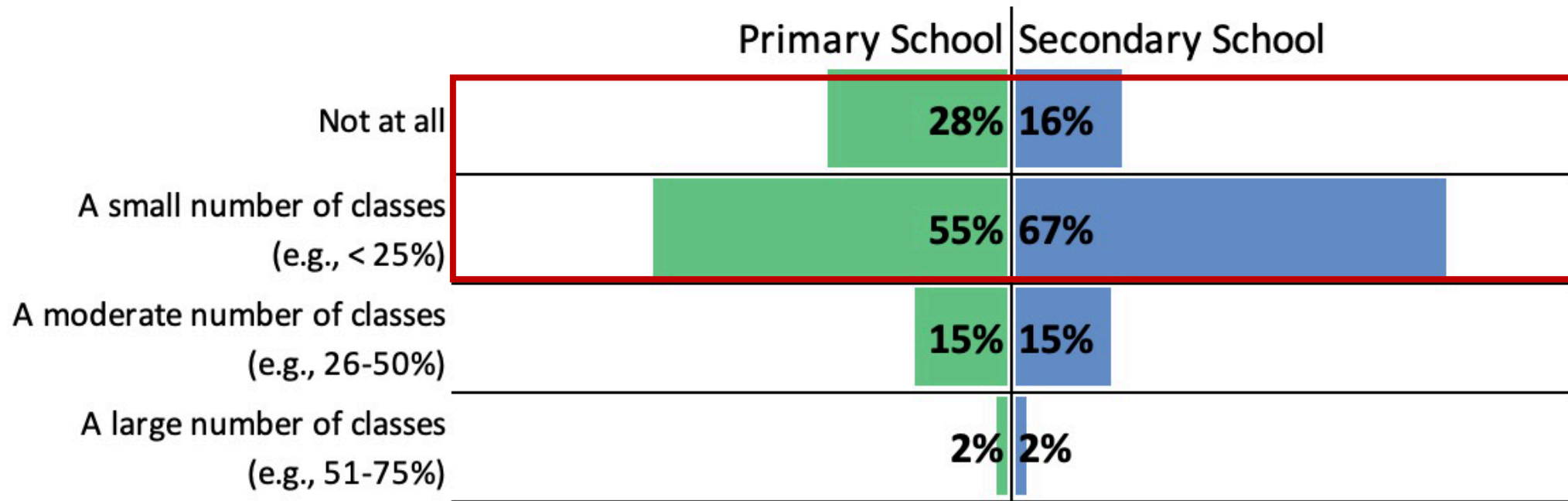
Perceived cumulative negative impacts due to extended school suspension (school leaders)

	Negative impact on students	
	Primary school	Secondary school
2020	3.26	3.43
2022	3.91	4.11

1 = Strongly disagree, 2 = Disagree, 3= Neither agree nor disagree, 4 = Agree, 5 = Strongly agree

Perceived negative impacts include:
- falling students' academic standards for at least the next two years,
- discipline problems due to lack of routines for prolonged periods of time,
- difficulties in organizing learning due to diversities in student achievement,
- students requiring socioemotional support

- **Perceived negative impacts have increased significantly from 2020 – 2022**
- **The level of perceived negative impacts was higher by secondary school leaders for both years**

Effectiveness of strategies to improve school operation and student learning in 2022 (Teachers' perspective)

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

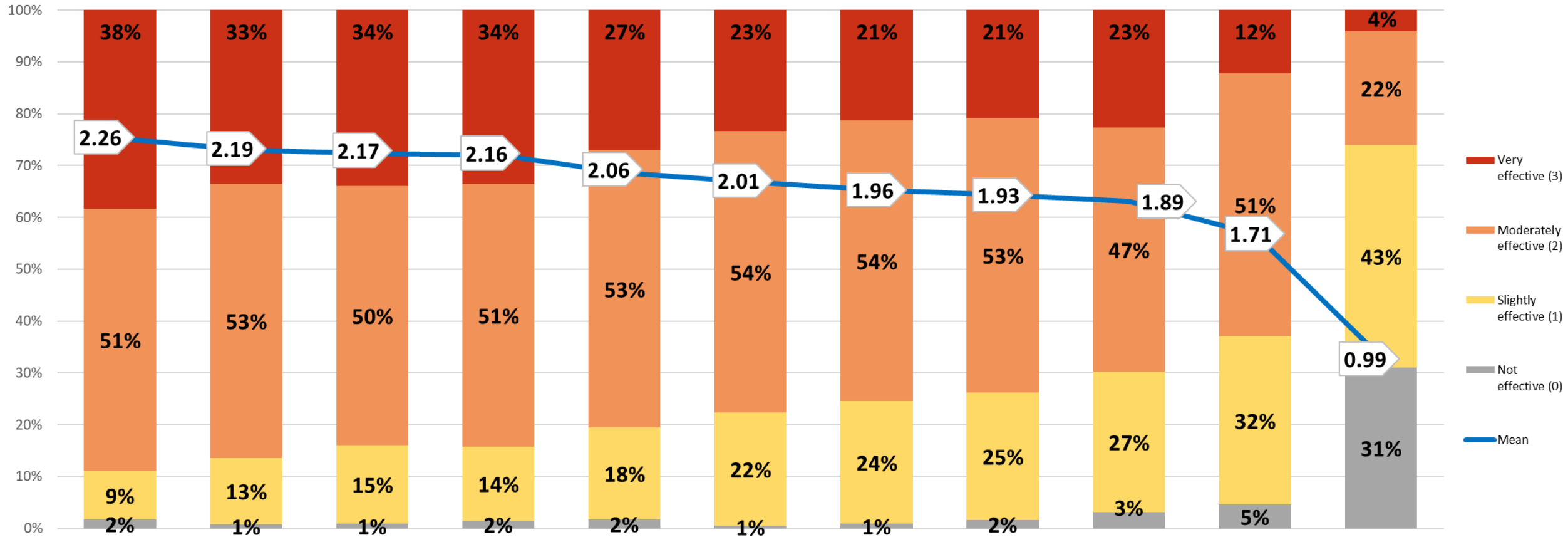| Strategy	Not effective (0)	Slightly effective (1)	Moderately effective (2)	Very effective (3)	Mean
L1. Provide technical support for both teachers and students for online lessons	2%	9%	51%	38%	2.26
L2. Develop more flexible teaching schedules	1%	13%	53%	33%	2.19
T1. Provide teachers with professional training in online teaching and learning	1%	15%	50%	34%	2.17
L3. Develop its own learning management system to support online teaching and learning	2%	14%	51%	34%	2.16
T3. Adapt the curriculum to include hybrid modes of lessons	2%	18%	53%	27%	2.06
T9. Provide online courses during the special vacation	1%	22%	54%	23%	2.01
T4. Provide mental health related programs to students	1%	24%	54%	21%	1.96
T8. Provide online platforms to engage parents	2%	25%	53%	21%	1.93
T10. Implement staff-care programs to improve teachers' well-being	3%	27%	47%	23%	1.89
T11. Involve multiple stakeholders in decision making process	5%	32%	51%	12%	1.71
T12. Shorten the summer break	31%	43%	22%	4%	0.99

Mean levels of digital technology use by school leaders and teachers

	Primary		Secondary	
	School leaders	Teachers	School leaders	Teachers
2020	2.87	2.87	2.85	2.90
2022	3.09	3.27	3.10	3.29

1 = Never, 2= Rarely, 3 = Sometimes, 4 = Always

- The levels of primary and secondary school leaders and teachers increase from 2020 to 2022, indicating that they use digital technology more frequently in 2022 than in 2020.
- Teachers' usage of digital technologies increase more than school leaders.

Section summary

- Both school leaders and teachers reported more digital technology use in 2022 compared to 2020; indicating much wider adoption of digital practices for teaching and learning as well as school administration.

- From the perspectives of schools and teachers, recurring periods of school suspension affected school operations to a large extent; and students' academic achievement might be strongly affected by school suspension.

- Schools had instituted a variety of strategies to support teachers and students during the New Normal, and teachers have found the provision of professional development for online teaching and learning and school-based teacher collaboration to be most effective.

- Support received from the community have been found to have the most positive impact by school leaders and teachers.

Preliminary recommendations

For students:
- Provide more support service to enhance student learning, cyberwellness, and socioemotional wellbeing
- More attention need to be paid to support secondary students.
- Need further research to investigate the cumulative impact on students' academic outcomes.

For parents:
- Need more parenting support, particularly on digital parenting to support children's learning & wellbeing.
- Special attention should be given to parental education and support for secondary parents.

For schools:
- More focus on the **provision of professional learning opportunities** and to **foster 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:
- The strategies and efforts of school leaders and teachers to enhance e-learning & communication with parents should be applauded and recognized.
- Current community support efforts should be continued and strengthened.

Q&A