2018 National DQ Impact Report

Singapore

DQInstitute

Leading Digital Education, Culture, and Innovation

SINGAPORE

54%
at Cyber-Risk
(Global Average : 56%)

National Statistics
Population Size[1]: 5,535,262
GDP Per Capita (US$)[2]: 52,962.50
Fixed Broadband Subscription (2016)[3]: 25.45 (Per 100 inhabitants)
Mobile Broadband Subscription (2016)[4]: 146.92 (Per 100 inhabitants)

Key Highlights

Singapore leads the way in digital citizenship education globally by taking advantage of being a small smart city nation with high efficiency. It has developed a new model of digital citizenship eco-system linking public-private-academic-civic partnership to protect children and empower teacher and parents.

Recognising the need for a comprehensive digital intelligence programme, Singtel, Nanyang Technological University (NTU), the Inter-Ministry Cyber Wellness Steering Committee (ICSC), the Ministry of Education (MOE), the Infocomm Media Development Authority (iMDA), and the Media Literacy Council (MLC) endorsed and supported the development of DQ World in order to provide educational materials for primary school cyber wellness and character education.

Through a multi-shareholder coalition, the DQ Institute was able to empower over 15,000 students across 42 schools and organisations with DQ in 2017.

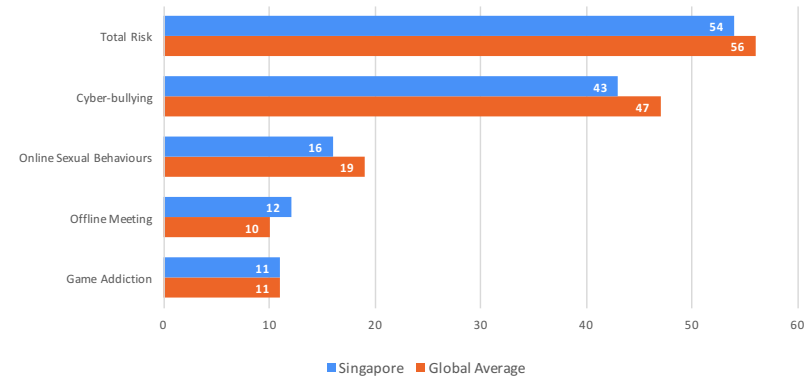|	
101 (Global Average: 100)	**Average DQ**
13% (Global Average: 10%)	**Improvement of DQ**
42	**Schools & Organisations Reached in 2017**
15,425	**Primary School Students Reached in 2017**

Cyber-Risks

At a Glance: Singaporean Children's Exposure to Cyber-Risk

- 54% of 8-12-year-olds in Singapore are exposed to at least one cyber-risk
- 43% have been victimised through cyber-bullying in the past year
- 16% have been involved in online sexual behaviours*
- 12% have chatted with and met online strangers in real life
- 11% meet the criteria for video game addiction

8-12-Year-Old Singaporean Children Involved with Cyber-Risks (%)

Category	Singapore	Global Average
Total Risk	54	56
Cyber-bullying	43	47
Online Sexual Behaviours	16	19
Offline Meeting	12	10
Game Addiction	11	11

■ Singapore ■ Global Average

*Online sexual behaviours includes having searched and/or visited websites with sexual content, having proactively downloaded/sent/received online sexual content, and/or having had sexual conversations online with strangers
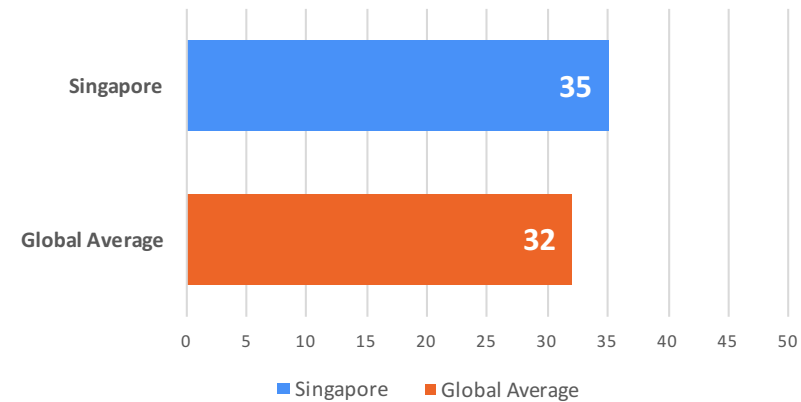
Digital Lives of 8-12-Year-Old Children

1. How much screen time do they have?

We found that 8-12-year-olds in Singapore spend an average of 35 hours in front of digital screens for entertainment alone, 3 hours more than the global average. This is the amount of time that they used their devices for watching TV shows and videos, playing video games, and using social media sites or apps. This number increases even more when we add in screen time for homework assignments.

Screen Time (Hours/Week)
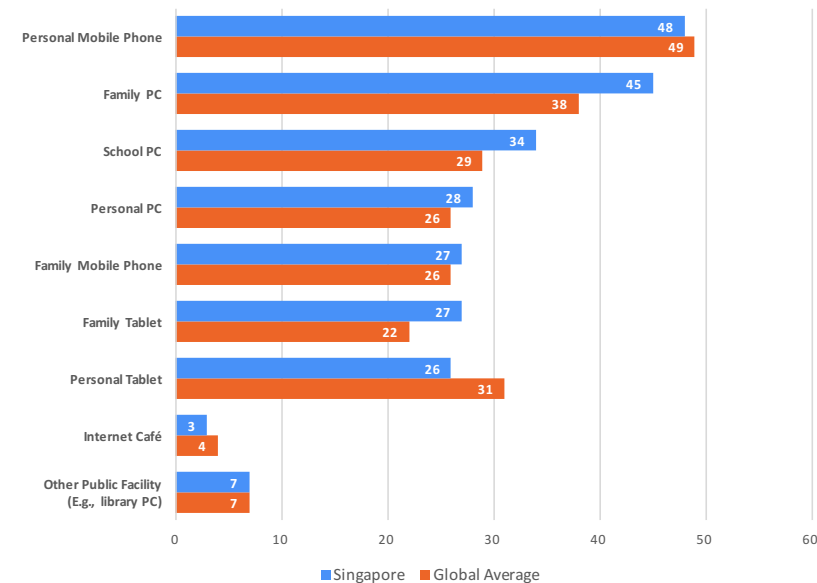

■ Singapore   ■ Global Average

Digital Lives of 8-12-Year-Old Children

2. How are they accessing the Internet?

Singaporean children have a variety of ways to access the Internet. The most common means for them to do so is through their own personal mobile phones (48%) and their family PCs (45%). Some children also access the Internet through other personal devices – such as their own PCs or tablets, and through shared devices – such as family PCs and tablets.

How 8-12-Year-Olds are accessing the Internet (%)

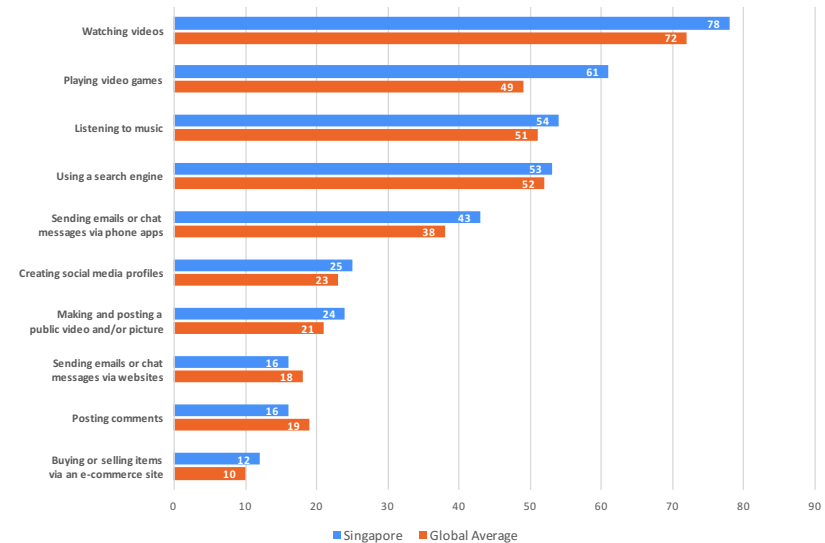| Device	Singapore	Global Average
Personal Mobile Phone	48	49
Family PC	45	38
School PC	34	29
Personal PC	28	26
Family Mobile Phone	27	26
Family Tablet	27	22
Personal Tablet	26	31
Internet Café	3	4
Other Public Facility (E.g., library PC)	7	7

■ Singapore ■ Global Average

Digital Lives of 8-12-Year-Old Children

3. What are children doing online?

A majority of 8-12-year-olds reported using the Internet for watching online videos (78%) as well as playing online games (61%). These activities were followed by listening to music, using a search engine, and sending emails or chat messages through phone applications.

Online Activities (%)

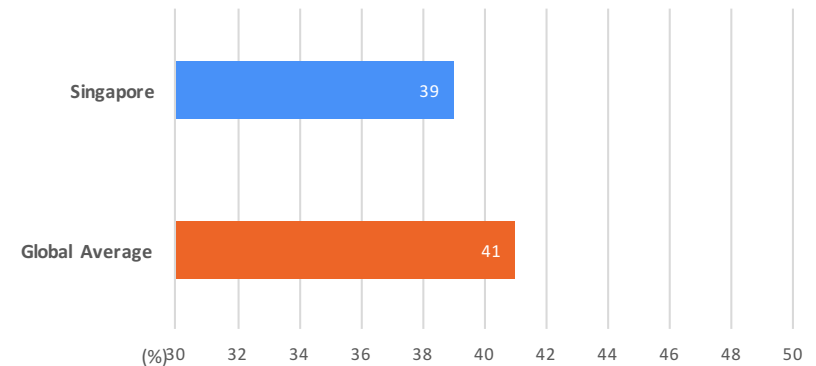| Activity	Singapore	Global Average
Watching videos	78	72
Playing video games	61	49
Listening to music	54	51
Using a search engine	53	52
Sending emails or chat messages via phone apps	43	38
Creating social media profiles	25	23
Making and posting a public video and/or picture	24	21
Sending emails or chat messages via websites	16	18
Posting comments	16	19
Buying or selling items via an e-commerce site	12	10

Digital Lives of 8-12-Year-Old Children

4. Social media use among children

Despite the legal age that children can officially start using social media sites or apps being 13, we found that majority of 8-12-year-old children around the world are already actively using these platforms. In Singapore, 85% of children are actively on social media, with 39% being highly active on these platforms: making and posting more videos and photos, creating more online profiles, chatting more with other users, and buying and selling more physical and virtual items.

Social Media Usage (%)

Singapore	85
Global Average	87

(%) 70 75 80 85 90 95
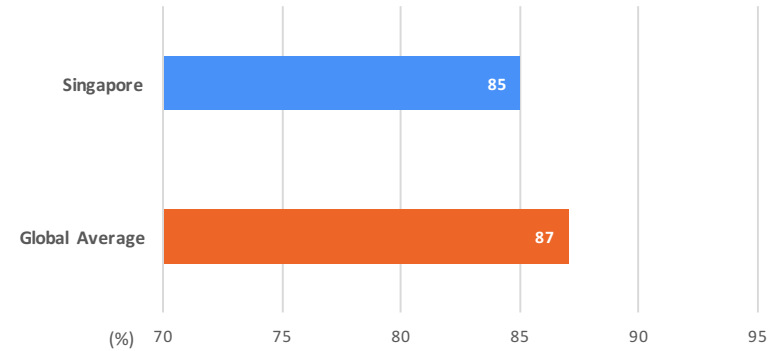
Highly Active Social Media Use (%)

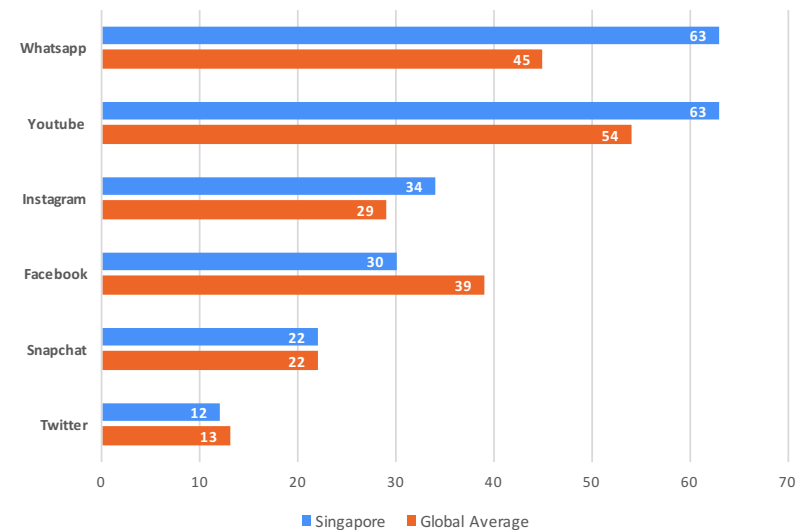|	
Singapore	39
Global Average	41

(%) 30 32 34 36 38 40 42 44 46 48 50

Digital Lives of 8-12-Year-Old Children

5. Popular social media sites/apps among children

The top 5 social media applications that 8-12-year-olds use are WhatsApp, YouTube, Instagram, Facebook, and Snapchat. We also found that Singaporean children use more social media applications than their counterparts in other countries, particularly with respect to the top three applications: WhatsApp, YouTube and Instagram.

8-12-Year-Olds Most Used Social Media Websites and Application (%)

Legend: ■ Singapore ■ Global Average

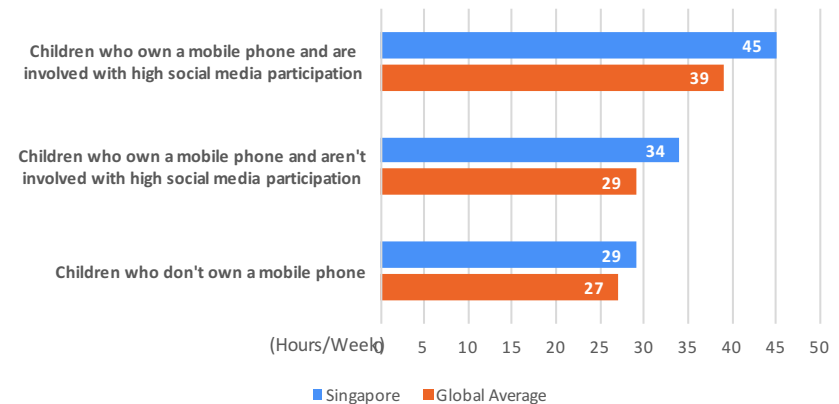| App	Singapore	Global Average
Whatsapp	63	45
Youtube	63	54
Instagram	34	29
Facebook	30	39
Snapchat	22	22
Twitter	12	13

Digital Lives of 8-12-Year-Old Children

Risky Pair: Mobile Phone + Social Media

Children who own mobile phones and are actively involved in social media spend an average of 45 hours per week online, 16 more hours per week compared to children who don't own mobile phones.
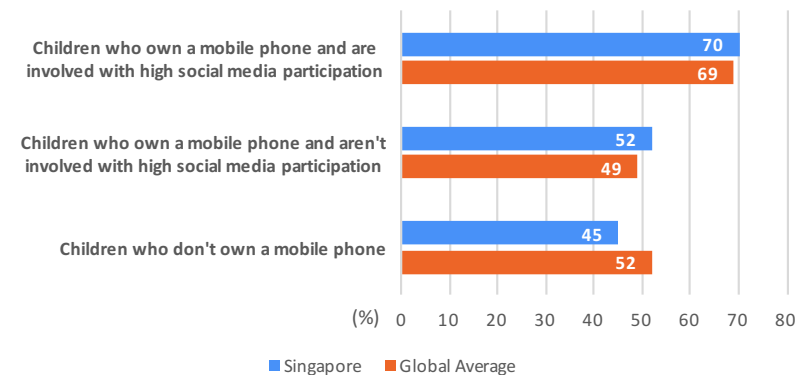
The amount of risks that children are exposed to are similar, with no significant difference between the amount of children at risk between non-mobile owners and mobile owners with low social media activities (52% and 45% respectively). However, the amount of children at risk increases to 70% when children are active social media users.

These numbers demonstrate that children everywhere are at risk, but the risk is higher when children combine a personal mobile device with active social media use.

Average Screen Time (Hours/Week)

	Singapore	Global Average
Children who own a mobile phone and are involved with high social media participation	45	39
Children who own a mobile phone and aren't involved with high social media participation	34	29
Children who don't own a mobile phone	29	27

(Hours/Week) 5 10 15 20 25 30 35 40 45 50

8-12 Year-Olds at Cyber-Risk (%)

	Singapore	Global Average
Children who own a mobile phone and are involved with high social media participation	70	69
Children who own a mobile phone and aren't involved with high social media participation	52	49
Children who don't own a mobile phone	45	52

(%) 0 10 20 30 40 50 60 70 80

DQ Score & Improvement

DQ Improvement Scores

We compared the difference between students who completed the DQ Screen Time Study and those who completed the DQ World Programme found a 13% difference between the two groups; with children who completed the programme scoring higher than those who did not participate in the programme.

How often do educators teach digital citizenship skills?

——— Students who only completed the DQ Screen Time Study (Average DQ Score of 98)

——— Students who completed the DQ World programme (Average DQ Score of 111)
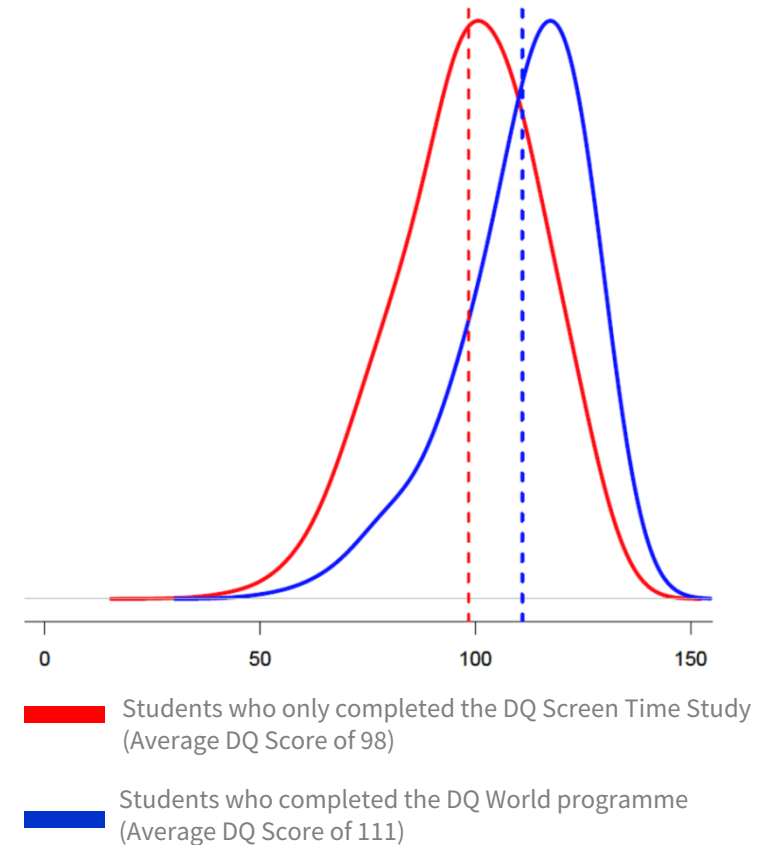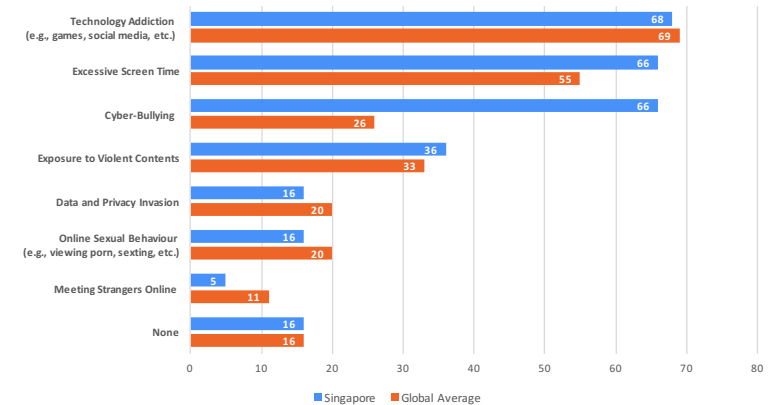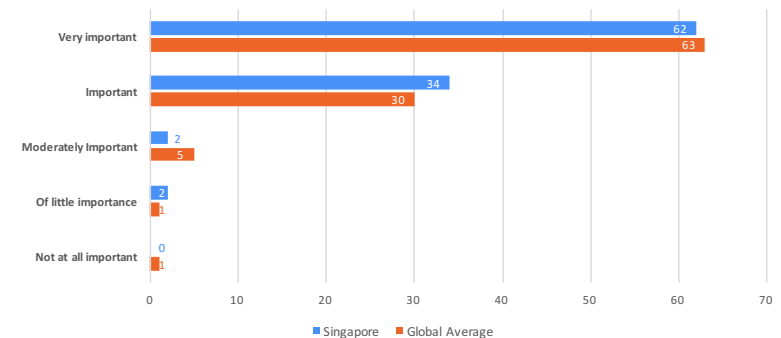
Digital Citizenship Education

The majority of Singaporean teachers who participated in our educator survey are mindful of their students' technology addiction, excessive screen time, and cyberbullying. These observations – especially the first two – have also been consistently reported by educators around the world. In comparison, globally and in Singapore we can see that educators are less attentive to cyber-risks such as children's data and privacy violations, online sexual behaviours, and meeting strangers online.

In accordance with their observations, 96% of them think it is important to have digital education in their curriculum.

Number of Teachers Who Have Observed Children Facing Cyber-Risks (%)

	Singapore	Global Average
Technology Addiction (e.g., games, social media, etc.)	68	69
Excessive Screen Time	66	55
Cyber-Bullying	66	26
Exposure to Violent Contents	36	33
Data and Privacy Invasion	16	20
Online Sexual Behaviour (e.g., viewing porn, sexting, etc.)	16	20
Meeting Strangers Online	5	11
None	16	16

Teachers' Perception of the Importance of Digital Citizenship Education (%)

	Singapore	Global Average
Very important	62	63
Important	34	30
Moderately Important	2	5
Of little importance	2	1
Not at all important	0	1

DQ Highlights

School Outreach: Piloting DQ World.net

In 2017, with support from Singtel, we were able to work with primary schools in Singapore to pilot our DQ World platform to teach children digital intelligence skills. Through school assembly talks, class workshops, and our online platform, we garnered more than 15,000 student registrations across 42 schools.

Teacher Workshops

On January 12, 2017, with the support of TOUCH Cyber Wellness, DQ held a teacher workshop at the Singtel Theatrette where more than 40 teachers including a couple from New Zealand attended. There, we shared our programme for the year and immediately had schools partake in the 2017 DQ World programme.

Throughout the year, we continued to hold multiple teacher workshops reaching out to more than 100 primary school teachers.

Singtel and iMDA Volunteer Training Programme

In addition to primary schools, the DQ Institute worked with Singtel and iMDA to help run after-school programmes. Mr. Shem Yao, lead coach at TOUCH Cyber Wellness, trained Singtel employees who volunteered their time to help implement DQ programmes for children in the local community.

The Singtel volunteers' first adventure was with the Singapore Indian Development Association (SINDA), where they ran a 4-day summer camp programme for students aged 7-11 running through the DQ World programme. The volunteers created their own slides, went through all the DQ lessons, and even got the children to sing. The children thoroughly enjoyed themselves and learned a lot, which can be seen through our SINDA video online.

Teachers at a DQ teacher workshop at Google headquarters

Singtel volunteers with students from SINDA

Singtel volunteers helping students with the DQ World programme

DQ Highlights

We Didn't Forget About Parents

On September 9, 2017, DQ and TOUCH partnered up with the Science Centre Singapore at the "I am a Young Scientist" Parents Workshop where we shared what DQ is to parents and children.

In a short amount of time, they were able to garner 24 family registrations and many enjoyed using the DQ World programme through online and offline activities. Many parents were not familiar with the DQ programme, and were amazed by what they were learning and many continued the programme at home.

DQ Screen Time Study

Despite expressing keen interest, some schools either had limited time on their hands or had only recently learned about the platform – and as a result they could not participate in the platform in 2017. Instead, they chose to take part in the 2017 DQ Screen Time Study in order to understand their student's current state of cyber-risk and digital use habits.

Schools that got over 100 student respondents will receive a DQ Screen Time Report – giving insight on how they can improve as a school, in turn, setting a starting point for the implementation of the DQ World Programme in 2018.

The First-Ever Cyber-Risk Help Reporting System

In October 2017, the DQ Institute partnered with Singtel and the National Council of Social Services (NCSS) to launch the first-ever cyber-risk reporting system in the DQ e-learning platform, further cementing the nation as a leader in cyber-wellness and DQ Education. Moving forward, the DQ Institute is working with iMDA and the Media Literacy Council in Singapore to develop parental tools to help bridge digital gaps.

Mr. Shem Yao, from TOUCH Cyber Wellness presenting at DQ's Parent/Child Workshop at Singapore Science Centre

In the International Media

New York, USA, 19 September 2017
Together in a pubic-private partnership with local government, businesses and organisations, DQ Institute launched a pilot cyber-risk reporting system for children in both Singapore and Australia; partners include Singtel Group, Singapore's National Council of Social Science, TOUCH Cyber Wellness, Feiyue, and Australia's Kids Helpline. This consortium-led partnership supposed by the World Economic Forum's Future of Information and Entertainment System Initiative is making net safety history.
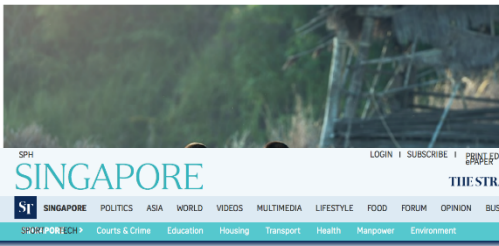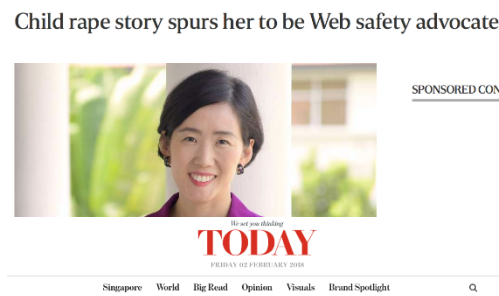
- Alem Tedeneke, Media Lead, World Economic Forum

In the Media

"Effecting change through innovation."
- The Business Times, 08/08/17

"In this digital age, digital intelligence quotient or DQ, is the new key word."
- New Straits Times, 19/03/17

"Child rape story spurs her to be Web safety advocate"
- The Straits Times, 02/04/17

"When play is serious business"
- Today, 26/05/17

From Our Partners

"The partnership between governments, private organisations and community partners will enable scale and consistency in reach and intervention."

Andrew Buay
Vice President, Group Sustainability, Singtel

About this study

The 2018 DQ Impact Report is an annual report summarizing the state of online safety and digital citizenship of 8-12 year olds children around the world and reviewing the impact of #DQEveryChild in improving digital citizenship among children.

The 2017 DQ Impact Study was conducted as part of the #DQEveryChild initiative and included 37,967 8-12 year old study participants across 29 countries. The Study is one of the first large-scale, multi-national projects investigating online behaviours, exposure to cyber-risks, and digital citizenship levels among 8-12 year old children. It was conducted by a research team from Nanyang Technological University Wee Kim Wee School of Communication and Information (PI: Dr. Yuhyun Park) in collaboration with the World Economic Forum and other coalition partners.

DQInstitute™

Leading Digital Education, Culture, and Innovation