وزارة المواصلات والاتصالات
Ministry of Transport & Communications

QATAR'S DIGITAL NATIVES @

A deeper look into the everyday use of technology by youth in Qatar

FORWARD

It is an empowering and remarkable feeling to think that we quite literally have the whole world at our fingertips. Smart phones, laptops, and numerous other forms of technology give us the ability to access information and media from countless sources and from all different parts of the world.

There is no escaping the fact that technology has become an ever-present feature of our everyday lives. It follows that the devices we use and the technologies we use to access information have an impact on us and the way we see and interact with the rest of the world.

It is within this context that the Ministry of Transport and Communications saw the need to conduct a study to shed some light on both the positive associations and the challenges of being born into a digitally dominant society. Qatar's youth is by far the most valuable investment for Qatar's future. Through this study, we have gained a better comprehension of the part technology plays in the lives of this important demographic.

Our study has shown that a 100% of the youth living in Qatar have full access to the Internet, and spend on average over 13 hours of their day with a variety of digital devices. This holds true for youth as young as 12 years-old, who were included in our sample. The findings at hand also highlight some online safety concerns that require our undivided attention.

The study reflects that all members of society need to play a role in supporting a healthy relationship between youth and their ICT devices. This includes opportunities for educators, school communities, and parents -- as well as institutions -- to play an active role in the digital interactions of youth.

The Ministry has initiated a range of digital literacy initiatives directed at youth. Safe Space, at the forefront, is the Ministry's website which promotes the safe and responsible use of Information and Communication Technologies. Although youth are the primary audience, Safe Space offers a plethora of information for parents, educators, and other community members. The Ministry has also led Haseen, the Cyber Safety Learning Program which integrates cyber safety learning moments into English and Arabic curriculums across all schools in Qatar.

Most recently, the Ministry has developed an online code of ethics in collaboration with youth and other community members and experts that promotes the use of Qatari values in online interactions.

The Ministry will continue to build partnerships with all community members to fulfill its mandate in support of youth's technological needs. The findings of this report will help us shape our continuing efforts to empower our youth, the digital natives, to be safe online while they grow and prosper within a digital age.

Reem Al-Mansoori
Assistant Undersecretary for Digital Society Development

EXECUTIVE SUMMARY

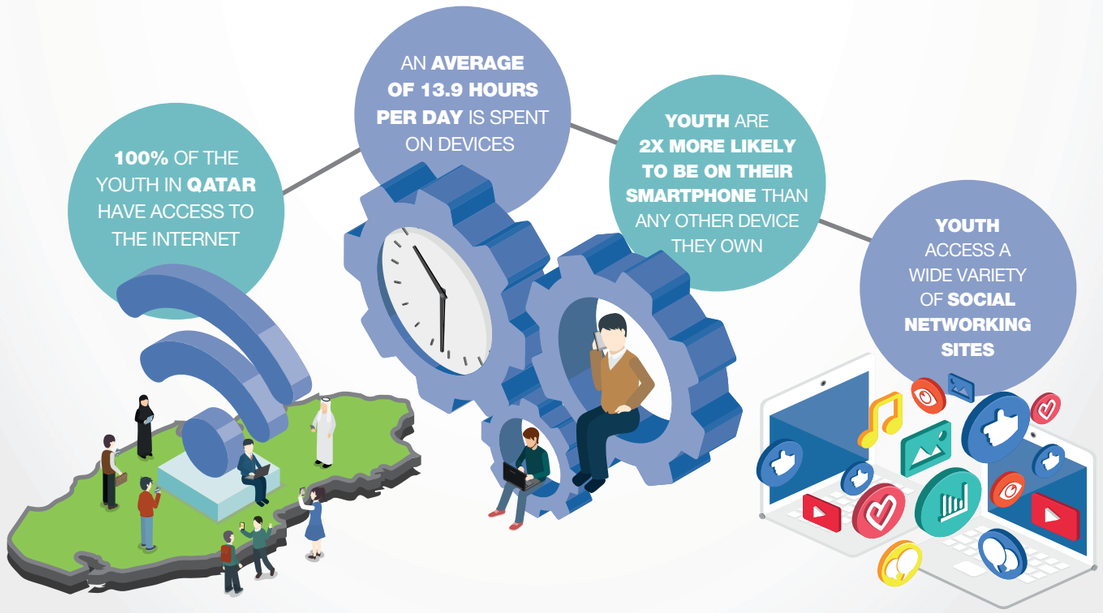
Youth throughout the developed world have been born into a digital landscape in which information and communication technology is ever-present in their lives. The Ministry of Transport and Communications undertook a wide-ranging survey of youth in Qatar to identify and appreciate the challenges and opportunities associated with growing up as a digital native.[1]

Broadly speaking, the survey results indicate that ownership rates and usage among youth in Qatar are higher than that of nearly any other developed nation. Some of the most striking findings related to preferences for Arabic-language content, especially when compared to their peers in the Arab world. Concerning risks associated with youth's online activities, the data showed similar risky behavior exhibited in developed countries and showing areas of opportunities for development of educational interventions.

Below are some of the key highlights in this report:

Access, Ownership and Uses of ICT Devices

- **100% of the youth in Qatar have access to the Internet**. 93% of youth live in homes where there is at least one broadband-connected computer, desktop or laptop, compared with 87% in U.S. and 86% in U.K. homes.
- Overall, Youth in Qatar **report spending an average of 13.9 hours per day with their devices**. This is almost 55% higher than that reported from other countries with high rates of youth ICT penetration.
- Not surprisingly, **smartphones are the most loved device, with youth twice more likely to be on their smartphone** than any other device they own.
- **Qatari youth in particular reported ownership - at a higher percentage and variety - of ICT devices** than any other demographic group in the survey.



- Qatari youth also seemed to be more connected constantly in comparison to their local peers. Nearly **90% of Qatari youth report using mobile Internet on their smartphones while on the go**, significantly higher than non-Qatari peers who only reported a rate of 55%.
- **Youth access a wide variety of social networking sites**, with Facebook being more popular among boys and Twitter among girls.
- **Qatari youth are more active on social media than their non-Qatari peers**, with the exception of Facebook which does not seem to be a favored network by them.
- **Desktops and laptops are the primary devices used in school**, while tablets and smartphones are beginning to see usage in schools, but at lower rates.
- **The preference of Arabic-language online content is strong** among Arabic-speaking youth in Qatar. When it comes to accessing content online, more than 80% prefer Arabic for educational content and roughly half prefer Arabic for entertainment content. **These rates are significantly higher than the preference of Arabic speaking youth in other regional countries**.

Safety and Responsibility in Online Behavior

- Although cyber-bullying has received much attention in mainstream media, and is a top concern among parents, **only 10% of youth in Qatar reported being bullied online**.
- Another chief concern relates to youth being exposed to inappropriate content while using ICT. Findings show up to **18% of youth report being exposed to inappropriate content** of an adult or disturbing nature.
- Youth in Qatar demonstrated some risky online behaviors with **32% of youth reporting accepting a friend request online from a complete stranger**. One-fifth of youth report meeting someone offline whom they first met online. These rates are consistent across all demographics in Qatar.
- Additional safety concerns arise around **sharing of real information online that can often be of a personal nature (50%) and relating to technical circumvention tools such as VPN (25%)**. Concerns as such are slightly higher among boys than they are among girls.

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INTRODUCTION

This report on youth ICT usage was conducted via a large-scale survey of youth along with parents and teachers. The purpose was to better understand youth ICT usage and compare these findings with results from youth of other countries. The survey was conducted with both national and expat youth within the State of Qatar. The report focuses on three main areas of youth interaction with ICT: Introduction to socialization with ICT, purposes and uses of ICT, and concerns related to youth use of ICT.

Relying on the framework provided by Qatar National Vision 2030 and the National ICT Plan 2015, the Ministry commissioned a large-scale study to determine how youth aged 12-17 in Qatar are introduced to ICT and use it in their everyday lives, both at school and at home. In addition, the survey hoped to capture the perceptions of both parents and educators as a means of evaluating how ICT impacts the youth in Qatar.

It is the aim of the Ministry that this research will raise awareness among parents and educators of children's behaviors while using ICT. Knowing how the youth in Qatar use ICT is key to understanding their ICT needs and encouraging positive behaviors and uses. Additionally, this research illuminates key areas for ICT development to help fulfill the information and educational needs of youth in the country.

The Ministry would like to thank all participants, including the youth, parents and educators, for generously sharing their time to discuss their beliefs about ICT, including how it is used in their homes and schools.

BACKGROUND

In recent years, the Ministry has conducted significant research into the state of ICT in Qatar. Nearly all of this research, along with research done on a global scale, suggests that the rates of adoption of ICT in Qatar are among the highest in the world. In 2015, the World Economic Forum ranked Qatar 27th out of 143 nations studied in its Networked Readiness Index, a ranking of the importance of ICT in the international development – and global competitiveness—of a nation.

In the past decade, research has indicated a strong uptake of ICT in Qatar, including access to broadband, use of mobile devices and access to computers. In two years, between 2008 and 2010, broadband usage increased from 41 percent of households to 70 percent. The most recent data available indicate that Qatar ranked second in the world in the percentage of households with Internet access (98%). The research at hand found that 100% of the youth surveyed have access to the Internet. Previous research has suggested a high level of mobile penetration in Qatar (167%) compared to the average for developed nations (116%). Similarly, by 2010, 89% of households and 85% of individuals in Qatar had a computer.

As a result of the dramatic increase in access to ICT and the role of these technologies in our everyday lives, the Ministry commissioned this research to better understand its impact on the youth in Qatar. The ICT habits of Qatar's youth have remained largely unstudied, and this report provides key insights for the future in terms of the role of technology and the importance of teaching technology literacy. In particular, this report addresses the ways in which the youth in Qatar are introduced to ICT and how they are socialized around these technologies. It also examines how they use ICT in their everyday lives, both at home and in school. Finally, it describes the concerns and risks associated with the use of ICT by youth in Qatar.

METHODOLOGY

To foster a deeper understanding of ICT behaviors among the youth in Qatar, the Ministry conducted a large-scale study of ICT usage among youth aged 12-17. This resulting report, focuses on three key areas: how youth are introduced and socialized in regard to ICT; how youth use ICT in their everyday lives; and the concerns associated with the use of ICT by youth. The goal was to establish baseline data here in Qatar that would allow both bench-marking against global data as well as to allow longitudinal study and evaluation of youth behaviors and uses.

The research included both qualitative and quantitative phases, involving three target groups: youth aged 12-17, parents of youth aged 12-17, and classroom teachers. Phase I comprised in-depth interviews and focus groups to collect qualitative data. Phase II comprised structured, face-to-face interviews to collect quantitative data.

PHASE I

Structured, face-to-face interviews based on a questionnaire were conducted in November and December 2014 among 623 children who had lived in Qatar for at least 2 years. The sample included a mix of genders, nationalities, ages and geographic locations. Structured, face-to-face interviews were also conducted in November and December 2014 among 150 parents, representing a mix of genders, nationalities and geographic locations. Structured, face-to-face interviews of 101 teachers were conducted in July and August 2014, representing a mix of years of experience, subjects taught and school type.

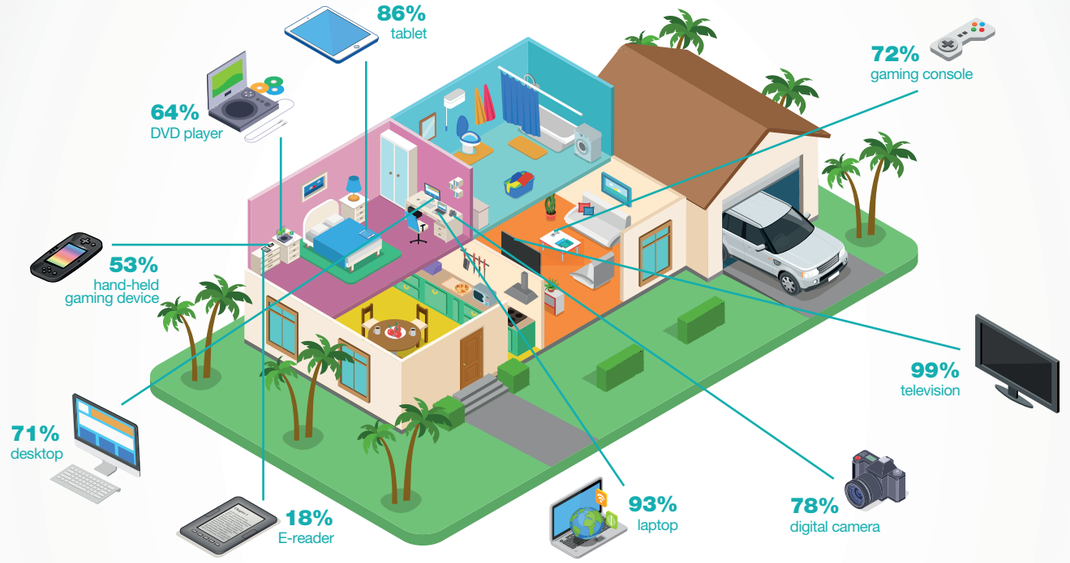
PHASE II

To gather qualitative data, nine focus groups of 6-8 youth were convened and seven in-home visits were conducted between September 2014 and April 2015. The focus groups included representation across nationalities and school type. In-depth interviews with 12 sets of parents, lasting between 90 minutes and two hours, were conducted in July and August 2014. The interviews included a mix of nationalities and socioeconomic backgrounds. In-depth interviews with 12 teachers, lasting between 90 minutes and 2 hours, were conducted in July and August 2014. The interviews included teachers from a variety of school types. Two focus groups, one representing Qatari nationals and one representing Arab Expats, were conducted in April 2015 with parents and teachers from private schools. They lasted 90 minutes to 2 hours.

1. INTRODUCTION TO ICT

Presence of Devices in the Home

Given the increasing access to broadband in Qatar, the high penetration of mobile phones among households and the availability of computers, youth in Qatar are well-acquainted with ICT. Because technology has become an integral part of the everyday lives of youth in Qatar, it is not surprising that multiple devices were present in nearly all of the youth's homes, as the graphic below demonstrates. The most commonly reported device was a television, followed by laptops and tablets. Fewer youth reported having access to digital cameras or video recorders (78%), possibly signaling the high dependence on smart phones to fulfill that purpose. Gaming consoles, desktop computers, Blu-Ray/DVD players and handheld gaming devices also registered lower presence levels. E-readers were the least likely to be found in youth's homes, with only 18% of youth reporting their presence.



The penetration rate of ICT in households in Qatar is higher than in many large, developed countries. Broadband-connected computers, desktop or laptop, are present in 87% of U.S. homes[1] and 86% of U.K.[2] homes, compared with 93% of homes in Qatar. Tablet computers are also more prevalent in Qatar, available in almost 30% more households within Qatar than in the U.S. The State of Broadband 2015 report by the United Nations found Qatar had achieved 98% Internet penetration, ranking it 12th in the world.[3]

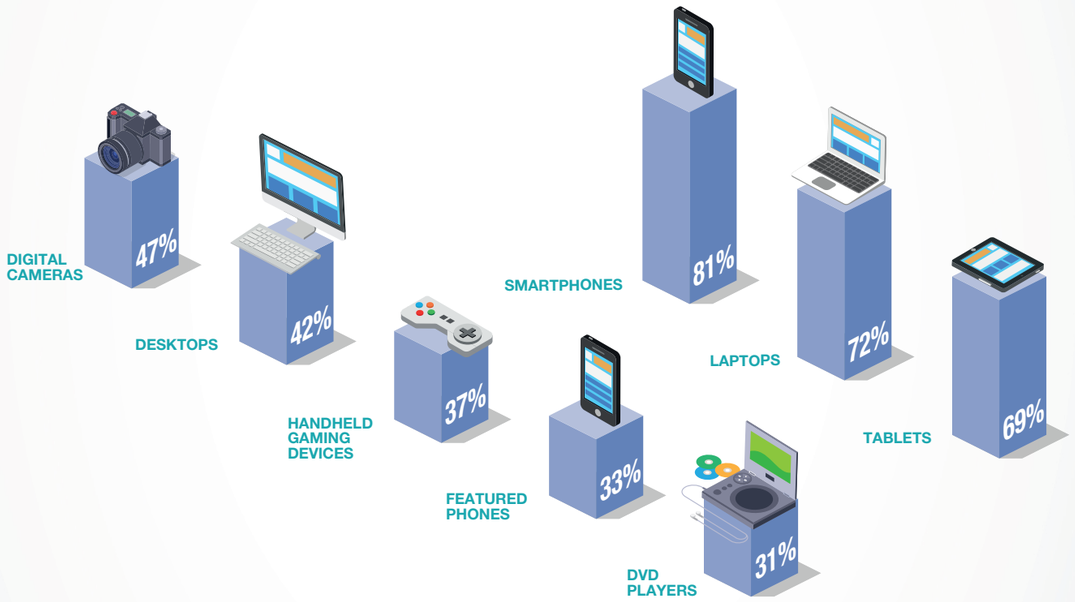
In general, Qataris reported a higher percentage and variety of devices in the home than the other groups surveyed. In particular, the divide is increasingly apparent among devices likely to be seen as non-essential, including e-readers, handheld gaming devices, Blu-Ray/DVD players and gaming consoles.

Across the board, Asian Expats reported the lowest presence of devices in the home. Although televisions, laptops and smart phones were pervasive, with all being present in at least 83% of homes, gaming consoles and handheld gaming devices were present in fewer than 40% of homes.

Some of the difference in the presence of multiple devices can likely be explained by socioeconomic background, with many Asian Expats in Qatar having less disposable income than Western Expats and Qataris. According to the *"Measuring the Standard of Living in Qatar, Household Expenditure and Income Survey 2012/2013,"* report prepared by the Ministry of Development and Planning and Statistics, Qatari annual household income stood at QAR 88,217 compared with an annual income of QAR 24,415 for expats. Although most Asian Expats have essential technologies in the home at rates similar to their peers, the decrease in non-essential technologies could suggest a prioritization of devices that can assist youth with educational success as opposed to those devices primarily dedicated to entertainment.

Personal Ownership of Devices

Perhaps more telling than whether multiple devices are present in youth's homes is whether they personally own those devices, which would suggest greater potential for access to them. Overall, personal ownership of devices among all youth nearly mirrors home ownership of devices in terms of overall popularity, with the exception being televisions, which are personally owned by just under two-thirds of respondents. Not surprisingly, smartphones (81%), laptops (72%), tablets (69%) and televisions were the most popular devices for personal ownership, suggesting the importance of youth being constantly connected in the digital age. Fewer youth owned their own digital cameras/video recorders (47%), desktops (42%), handheld gaming devices (37%), feature phones (33%) and Blu-Ray/DVD players (31%). Less than 10 percent of youth reported personally owning an e-reader. Again, many of the tasks performed by these devices have largely been incorporated into smartphones, allowing teens to use one device for a majority of their communication needs.

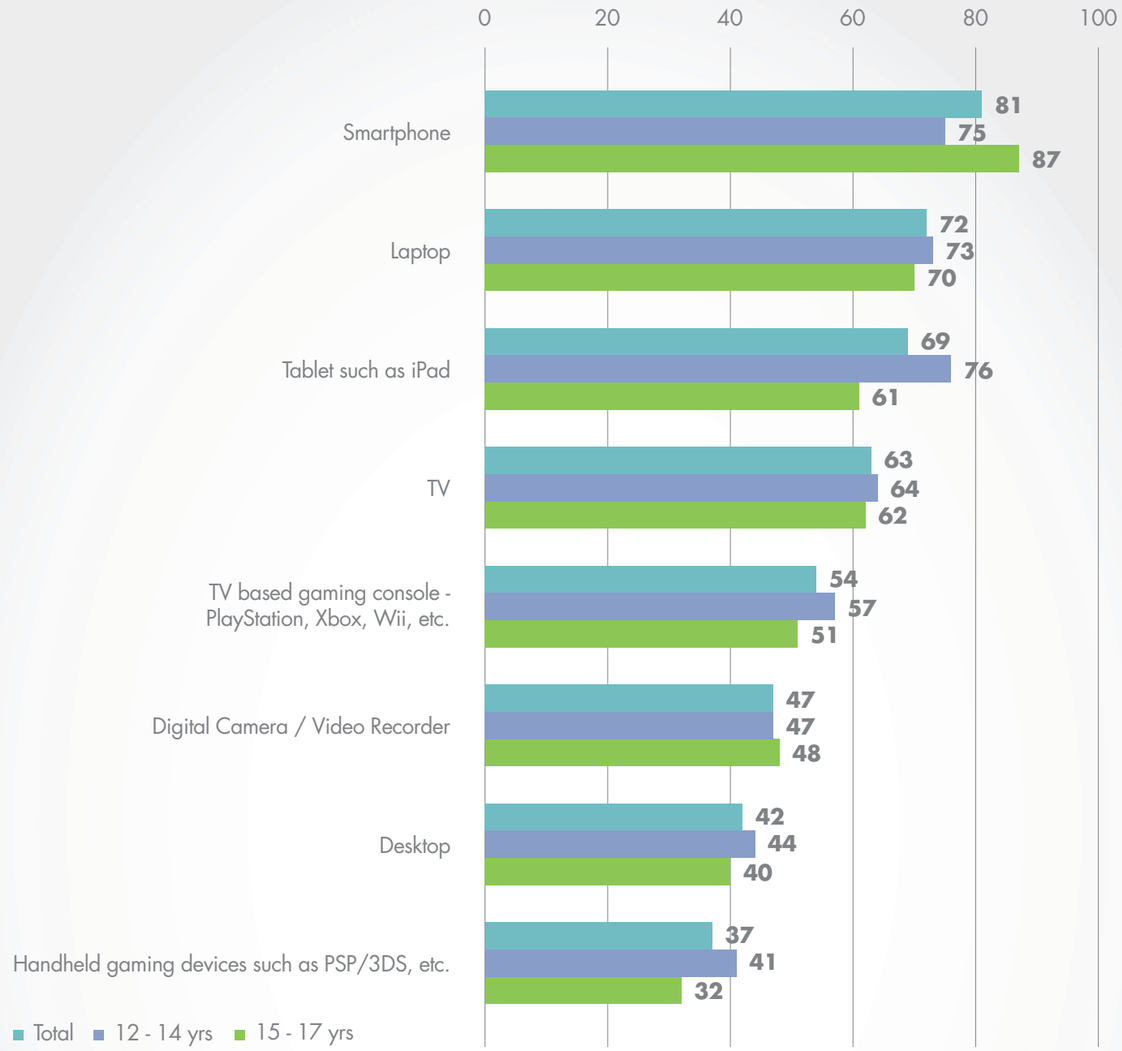


> *If I do something wrong, my parents take away my phone because they know it's my most prized possession.*
>
> ***– Western Expat Female***

Similar to household access to Internet-connected computers, **children's personal ownership of smartphones is higher in Qatar (81%) than in the U.S. (73%) and U.K. (69%).** High levels of household income certainly help offset the high cost of smartphones, and strong broadband penetration in Qatar certainly increases the likelihood the devices could be used for more than simply texting.

In sharp contrast to the family ownership data, where Qatari families tended to own higher percentages and varieties of devices, personal ownership data suggest that Arab Expat youth personally own significantly more devices than their peers. Perhaps the starkest contrast comes in personal ownership of laptops and desktops, as the chart below demonstrates.

Asian Expat youth, on the other hand, report the lowest levels of personal ownership of devices. In every category except handheld gaming devices, they are less likely than all of their peers to have their own devices.



Personal ownership of devices changes with age, suggesting that youth interest in using devices or parents' belief about acceptability of devices for their children may be linked to age. The changes in patterns of personal ownership of devices could also relate to educational demands or changes in the social behaviors of youth as they enter their teen years. Although three-quarters of youth aged 12-14 report owning smartphones, that number increases to 87% among the youth aged 15-17. In part, the increase in smartphones among older youth might be connected to their increased independence from parents and greater freedom to socialize outside the home.

Other differences in personal ownership suggest that youth aged 12-14 may grow out of certain devices as they become teens. Tablet ownership drops 15% as they age. Handheld gaming device ownership decreases by 9%, and gaming consoles drop off by 6%. These changes likely stem from the availability of smartphones to older youth, which allow them to engage in the same uses that tablets and gaming systems provided when they were younger. Along the same lines, adoption and use of particular devices as teens likely portends future habits as adult ICT users.

A few differences in device ownership were present based on gender, and boys were generally more likely than girls to personally own devices. The starkest of these differences came in personal ownership of gaming consoles, with nearly two-thirds of boys personally owning them compared to fewer than half of girls (47%). Boys are also more likely than girls to own televisions (67% vs. 58%), laptops (76% vs. 67%) and smartphones (85% vs. 77%). Limits on girls' ownership of devices, particularly laptops and smartphones, may represent an attempt by parents to protect their daughters from the perceived dangers presented by ICT.

Use of Devices at Home, School and While Commuting

The predominant use of ICT seems to be occurring in the home and on the go, according to the youth surveyed. Youth are most likely to be using their devices at home, with a smaller segment using them on the go or at school.

Qatari youth are more likely to report using their devices on the go than their peers. Nearly 90% of Qatari youth report using their smartphones on the go, compared to 55% of the non-Qatari youth. Heavy device usage while on the go likely ties into users' fears of missing out (FOMO) on the happenings of their peer group and others. Being constantly connected ensures they are up to date on the topics and issues their friends will be discussing.

Although youth responses did not always identify FOMO as the reason for constant device usage, the responses to questions and quotes suggest this is a major driver for constant contact on social media. Research from other countries with high levels of youth ICT use have also suggested this trend among similarly aged youth. The 2015 Stress and Wellbeing in Australia Survey, conducted by the Australian Psychological Society, found that 56% of teens were heavy social media users and that similar levels of teens experienced stress or anxiety attributed to FOMO.

Use of devices on the go does not vary significantly in most categories based on age or gender. However, girls (30%) are more likely than boys (22%) to use their tablets while on the go. Also, smartphone use on the go increases as children get older, from 65% of youth aged 12-14 to 73% of youth aged 15-17.

Student use of ICT at school is limited, with more than one-fourth of youth reporting no use. However, the importance of ICT in education in Qatar is evident in the facilities and connectivity available within the country's schools. Nearly 100 percent of schools surveyed reported having computer labs. More than three-quarters of all schools have full Wi-Fi coverage, with International schools leading the way at 93%. Private Arabic school teachers reported the lowest Wi-Fi coverage, but more than half of those surveyed had Wi-Fi at school.

Students reported desktops and laptops as the primary devices used in school. Tablets and smartphones are beginning to see usage in schools, but at lower rates. Tablet use at Independent schools is reported by 15% of teachers versus 5% at Private Arabic schools and 2% at International schools. The low rates are offset by smartphone usage, which has gained greater traction than tablets in Private Arabic schools (15%) and International schools (16%) than in Independent schools (5%).

Although significant ICT infrastructure exists in schools, few students reported learning ICT related skills in subject classes, including computer science classes. Below are some representative student comments on school ICT instruction:

The time students in school spent on the Internet varied greatly, from 2.5 hours per day at preparatory Interdependent schools to just about an hour per day at Private Arabic schools and International schools.

However, teachers across all school types reported support for youth to use the Internet at school. The highest reported reason was to allow students to do research for schoolwork or class projects, with an average of 96% all teachers citing it.

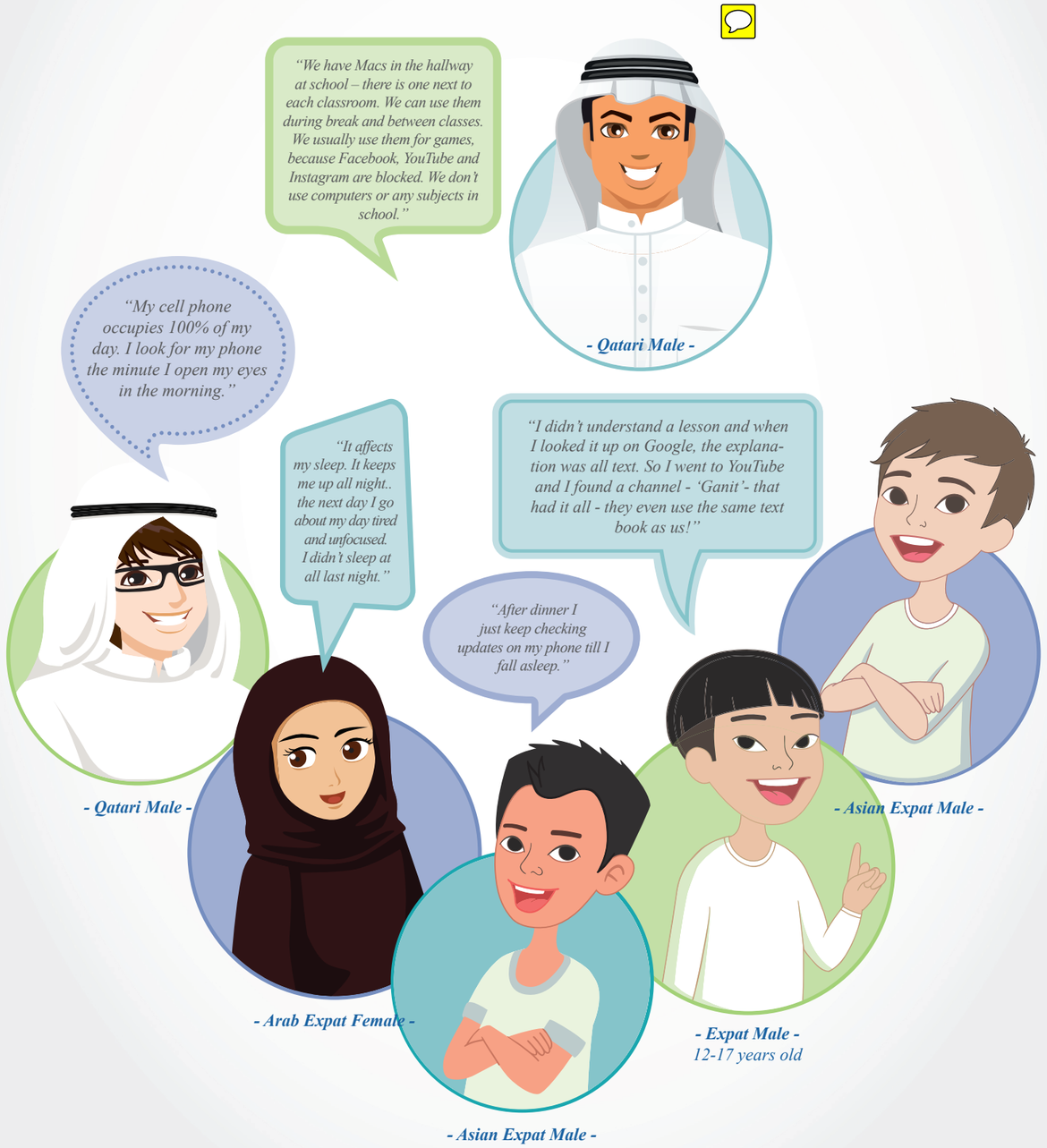
Few teachers are using ICT for educational games in schools. Use by Independent school teachers is highest, with just over half of them using ICT for gaming. Fewer than 10% of International school teachers and none of the Private Arabic school teachers reported using ICT for educational gaming.

International school teachers also report significantly lower rates of Internet usage to watch video clips or subscribe to other online courses.

One key area of difference developed in relation to using the Internet for interaction between teachers and students. Nearly 100% of Independent school teachers reported supporting student use of the Internet for this purpose while other school teachers reported much lower response rates (Private Arabic school teachers 67%, International school teachers 57%)

Discovery of ICT by Youth

Youth report their introduction to ICT devices to largely be a journey of self-discovery, with some introduction to devices mediated by parents, friends and siblings or cousins. Self-discovery was most significant for smartphones (62%) and tablets (41%). Parents also strongly influence the introduction to ICT as they were the largest non-self reported introducer across laptops (43%), TV (75%), smartphones (26%), tablets (25%) and feature phones (13%). Teachers played a significant role in ICT introduction only in desktop computer (42%).
Friends and siblings were less likely to be introducers to ICT except with regard to game consoles, where friends were the most likely outside influencers at 28%, followed closely by siblings at 23%. Friends were also almost as likely as parents (22% versus 25%) to be responsible for introduction of tablets to youth.



2. PURPOSES AND USES OF ICT AMONG YOUTH

Frequency of Usage

Across all ICT devices, youth in Qatar report spending an average of 13.9 hours per day. This total was similar across all demographics, except for Asian Expat youth, who averaged 11.6 hours per day.

Data from other countries with high rates of ICT penetration among youth suggest youth in Qatar spend almost 55% more time on their devices per day. For example, a 2015 study conducted by Common Sense Media found teens in the U.S. averaged of 8.9 hours per day on their devices.

Youth are nearly twice as likely to be on their smartphones than any other device, with the average user surveyed reporting 3.1 hours spent per day. In comparison, the next highest use reported was 1.7 hours per day on tablets. Daily time spent on devices varied significantly based on nationality. Overall, Western Expat youth report the most time spent using ICT daily, followed closely by Qatari and Arab Expat youth. Asian Expat youth reported the least usage. The most dramatic daily usage differences related to time spent on smartphones. Qatari and Arab Expat youth reported spending average of 3.6 and 3.7 hours per day, respectively, on their smartphones. Western Expat youth spent about an hour less per day while Asian Expat youth spent almost two hours less per day on their smartphones. Given the personal ownership data, this difference in usage time of smartphones should not be surprising. Western Expat youth reported spending twice as much time on desktop computers than their peers and 1.5 times as many hours on their laptops.

Gender plays a role in time spent on certain devices, although boys and girls both report the same amount of time spent on smartphones. Boys, on average, spent nearly twice as many hours each day using gaming consoles (2 hours) and more than 1.5 times as many hours per day on handheld gaming devices (1.3 hours) than girls. Girls are slightly more likely to spend more time on feature phones (1.6 vs. 1.2 hours per day) and tablets (1.8 vs. 1.5 hours) per day. Across all other categories, usage was quite similar among boys and girls.

> *My mobile is my most important device.*
>
> ***— Arab Expat Male***

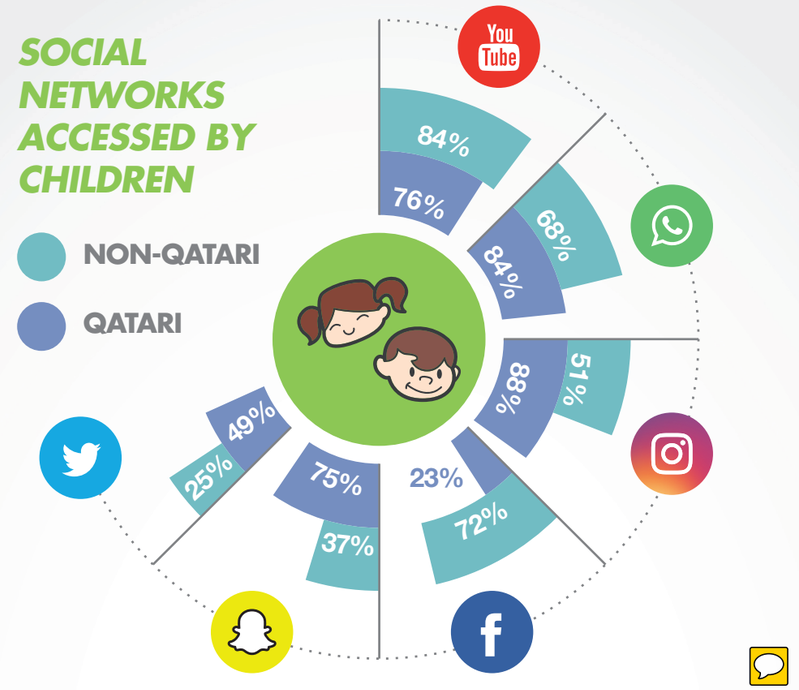
On their devices, youth spend an average of 10.8 hours per day accessing the Internet. Qatari (11.9 hours) and Arab Expat (12.1 hours) youth spend more time online than Asian Expat (8.7 hours) and Western Expat (10.1 hours) youth. This breaks down to approximately two hours each for entertainment, gaming, social networking, and chatting (text or voice) and approximately an hour gathering information/news.

> *If I do something wrong, my parents take away my phone because they know it's my prized possession… They'll take it away for the night and I hate it because I feel so out of touch.*
>
> ***— Western Expat Female***

Social Media Used by Youth

Children access a wide variety of social networking sites on their devices. Most youth have accounts on more than one social networking platform. The significant differences between boys and girls occur on Facebook, online gaming, Twitter and news sites. Facebook and online gaming sites are accessed by many more boys (61% and 57%) than girls (45% and 36%). In contrast, Twitter and news websites are frequented more by girls (40% and 39%) versus boys (30% each).

Across all forms of social media, Qatari youth are equally or more active than their non-Qatari peers. The one exception is Facebook, which parallels data from Northwestern University in Qatar's 2016 Media Use in the Middle East study suggesting that Qatari adults use of Facebook significantly less than peers throughout the MENA region.



Parents View on Children's Benefits and Impacts of Internet Use

Preliminary data suggest parents across nationalities share similar opinions about the benefits of Internet usage by their children when it comes to news, making friends and staying up to date. But significant divergence in views exists when it comes to the role that Internet plays in their children's education. Nearly three-quarters of non-Qatari parents associate better educational outcomes as a benefit of Internet usage versus fewer than 50% of Qatari parents.

Parents of girls also perceive much higher benefits of Internet usage for their education and development than parents of boys. Parents of girls are 17% more likely to report learning new things and 16% more likely development of communication skills as benefits than parents of boys. Some of this might reflect parents' desires to provide opportunities for their girls to learn while giving them less freedom outside the home than their male siblings.

But, parents are also concerned about possible negative impacts on their children's learning. More than three-quarters of parents are concerned that Internet use impacts their children's abilities to focus on their studies. Given the prominence of those types of headlines in the media, it is not surprising that it is the most cited concern among parents. Interestingly, only 37% of parents worry about the impact that device use at night has on their children's sleep, another major issue that has played prominently in the news. Although 58% of Qatari children report using ICT devices in the middle of the night (defined 10 p.m. until morning), only 22% of Qatari parents report being concerned about the effects. Non-Qatari parents' worries track more closely with their children's reported nighttime use of devices, with 47% of children reporting use and 44% of parents worried about the issue.

Language Used and Preferred for Media Content

As Qatar continues to promote Arabic language use among youth through efforts such as recent draft law from the Cabinet[1] and the organization of events such as the Renaissance of Arabic Language Forum hosted by Qatar Foundation, children's preferences for, and usage of, Arabic can inform efforts to effectively reach them.

Qatari and non-Qatari Arabic speakers report little difference in their preference for, and use of, Arabic language to access online content. Although Arabic speakers slightly prefer to access educational and entertainment content in Arabic, this preference isn't significantly higher than their reported use. This preference may be attributable to the increasing use of English language in schools. Interestingly, Arabic is reported to be used more both for social networking (74% used, 65% preferred) and gaming (54% used, 43% preferred) despite lower preferences for using it.

In her opening remarks at the forum, Her Highness Sheikha Moza bint Nasser said, "Our failure to effectively use modern communication techniques has led to an inability to preserve the Arabic language." An opportunity exists to address the oversight presented by Her Highness in communicating to children through educational content and social networking. Most Arabic-speaking youth express a preference for educational content in Arabic. In addition, properly executed campaigns to reach children on social media are likely to have significant reach. Although preference is much lower for Arabic in this medium, children's use of Arabic remains significant. In addition, social media provide a modern communication platform on which to present ideas to youth in Arabic.

> *Our teachers mostly show English videos in class, for instance, it's hard to find an Arabic video about the world war. Some of us have a hard time with English.*
>
> ***— Qatari, Male, Student***

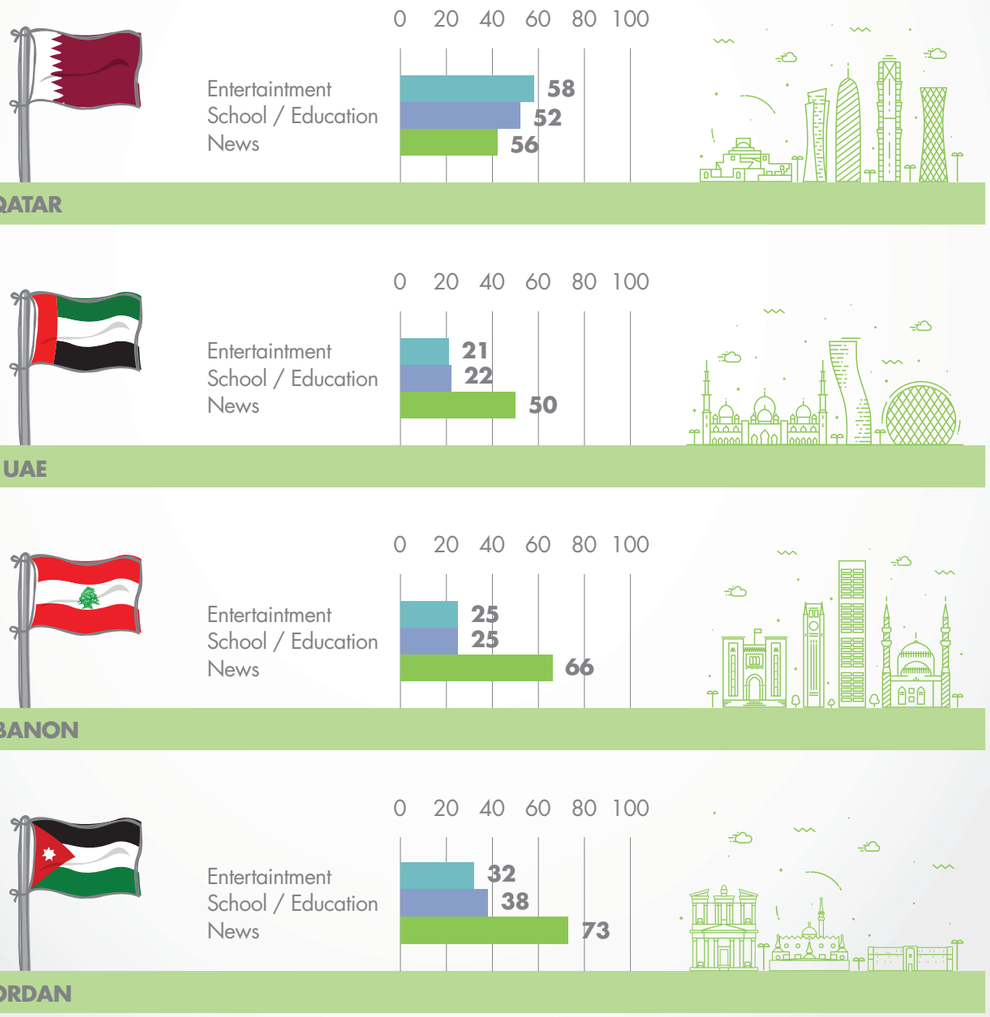
> *Some students have a hard time understanding videos played in school when they are in English so they have to be translated. I am one of those students... I find videos in Arabic on YouTube and it helps me to understand the lesson. The Supreme Council provides videos, but they are limited. We prefer YouTube videos to data shows the teachers show us because they are more detailed.*
>
> ***— Arab Expat Male***

Youth in Qatar stood out from others in the region in their use of Arabic to access different types of media. The infographic below shows Arabic use across different types of media consumption. These numbers reflect total respondents, not just those who are Arabic speakers. It stood out that the preference for Arabic in entertainment and educational content in Qatar was significantly higher than in other countries in the region. Use of Arabic in the consumption of news media was lower in Qatar than in countries in the region.

Teachers have slightly higher satisfaction levels with the availability of Arabic-language content than parents. 71% of teachers at Independent schools and 66% at Private Arabic schools were satisfied with the availability of educational content in Arabic. In part this may reflect their expertise at locating language-specific educational resources online.

> *Sometimes I search for a video in Arabic for my biology class but can't find anything until I search in English. It bothers me a little. I want to find the same quality in Arabic.*
>
> ***– Arab Expat Female***

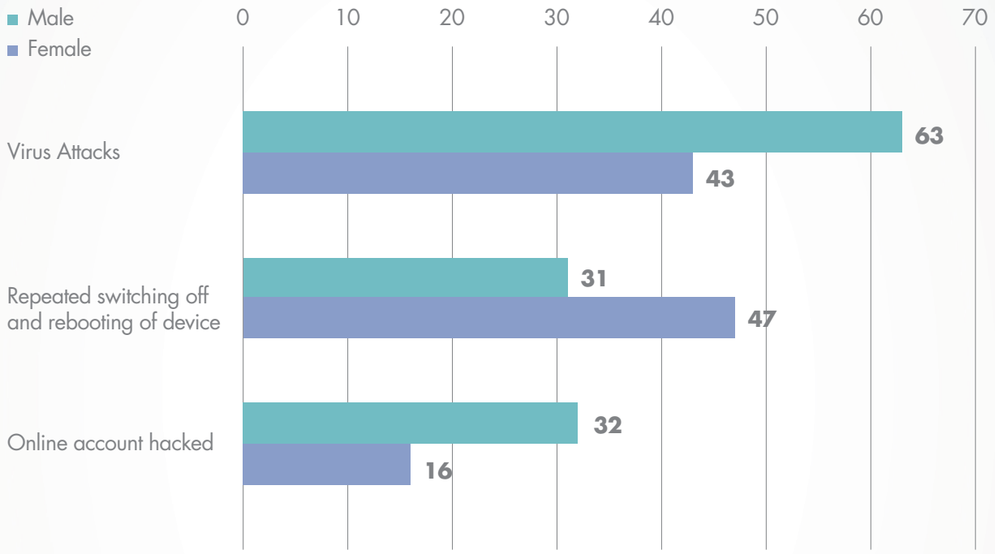
Although general satisfaction among Arabic speakers (particularly parents and teachers) seems to exist with regard to educational content in Arabic, some student comments suggest they believe they are negatively affected by the lack of availability of certain content and formats.



3. CONCERNS RELATED TO USE OF ICT BY YOUTH

Risks and Security

Two primary areas of risk were profiled in the survey: risks of a technical nature, including viruses, malware, and account hacking, and risks of a social nature, including exposure to disturbing content, unknown friend requests and cyber-bullying. Although 20% of youth reported no negative technical or social risks encountered during their use of ICT, these issues still represent a considerable concern.

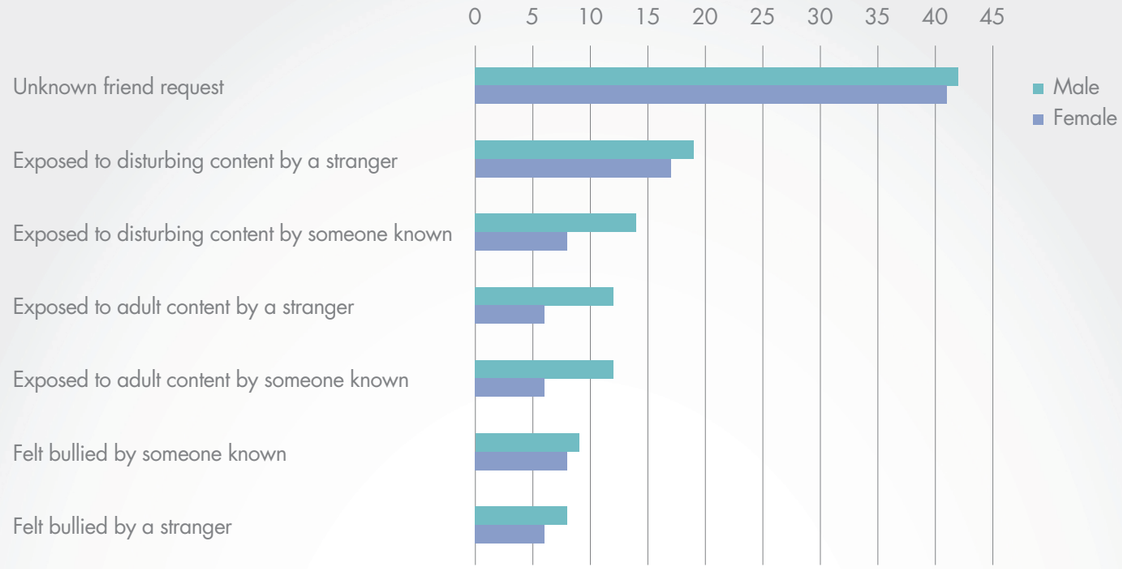


Technical Risks

On the technical front, Western Expat youth (72%) and Asian Expat youth (66%) report much higher rates of virus infection than Qataris (40%) and Arab Expat youth (54%). Although not nearly as high, this trend parallels the percentage of those who report they have had an online account hacked. Some of this exposure can be attributed to language use online given that Qataris and Arab Expat youth are more likely to access significant content in Arabic while Asian Expat and Western Expat youth are more likely to access the Internet primarily using English. Although Arabic is the fourth most common language in use by Internet users, it accounts for only 5% of Internet users while English-language users account for 25% of Internet users. Not surprisingly, those who write viruses and hack accounts often operate using the English language and not Arabic, which probably accounts for the variance in reported rates of technical risk encountered. There has been a trend for more trans-lingual attacks by cross-national cyber criminals targeting non-English languages, suggesting these developments should be closely monitored moving forward to ensure proper awareness of the changing nature of this ICT threat.

Non-Qatari youth (24%) also self-reported opening emails and email attachments with more frequency than Qataris (18%). Given that email and email attachments are one of the largest attack vectors for virus and phishing scams, this might also help explain the increased technical issues that Western and Asian Expat youth face.

Parental perception of technical risks on the Internet corresponds with the issues that youth report they have encountered. Nearly all parents (85%) across demographics are concerned about virus attacks as a result of their children's Internet usage. About half of parents perceive online accounts being hacked as a risk with children's use of the internet even though a much smaller (32%) number of youth reported this as an issue they encountered, which suggests parents' concerns may be overstated.



Social Risks

Many of the concerns related to social risks have to do with friendships formed online. Among social exposure and risky behavior, 42% of youth report receiving friend requests from unknown people. Nearly one-third of youth (32%) reported friending a stranger on a social networking site. One-fifth of youth report meeting someone offline whom they first met online. These rates are consistent across all demographics in Qatar.

Although cyber-bullying has received much attention in the mainstream media, fewer than 10% of youth in Qatar reported being bullied online, which is comparable to levels in the U.K. The attention cyber-bullying has received in the media is reflected in the percentage of all parents (41%) who perceive it to be a risk to their children when active online. Qatari parents (60%) are nearly twice as concerned about cyber-bullying than non-Qatari parents (31%). This elevated level of concern related to cyber-bulling is also seen outside Qatar, where parents' concern levels are much higher than incidents reported by children.

Half of youth responded that they posted real information about themselves on a website. This was slightly higher among boys (54%) versus girls (47%) and Qataris (56%) versus non-Qataris (47%). One reason for the gender difference likely stems from the societal emphasis on protecting girls from danger.

A strong difference among schools was present with 62% of Independent/Semi Independent students and 67% of Private Arabic school students reporting they posted real information about themselves on a website while only 42% of International school students reporting the same. This suggests students at the International schools might be receiving more training about the risks posed by ICT as a part of their curriculum.

Teacher awareness of the Ministry's safety/risk educational tools and materials is reported to be somewhat lower among Independent schools' teachers (43%) than International schools (57%). Unfortunately, awareness of these materials is virtually non-existent among teachers at Private Arabic schools (11%), which suggests further need for increased outreach.

Although parental concerns about technical risks followed reported exposure by youth, differences exist in regard to social risks. Parents' concerns about the social risks to which their their children are exposed are higher than those reported by the youth. Nearly three-quarters of parents (73%) are worried about friend requests from someone their child doesn't know.

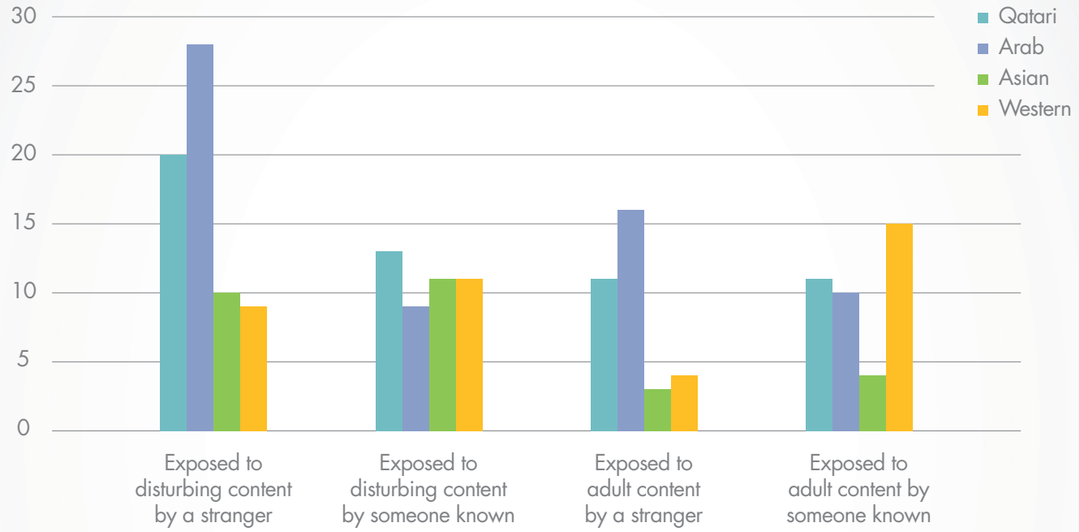
Parents of all nationalities report similar levels of concern about the risk of their children's personal information being leaked. Almost one-quarter of parents (24%) associated sharing personal information (including photographs) with strangers as a risk to their children's online activity. This level of concern for sharing of information is similar to the level of concern found among parents in the U.K. (23%). This is lower than the rate at which youth report posting personal information online. This divergence might occur because parents are unaware of their children's sharing of personal information so they do not perceive it as a risk, or they are aware of the sharing but don't believe it to be risky. Not surprisingly, parents report being more concerned about female children (35%) sharing information than male children (14%), although girls are less likely than boys to share personal information. Data suggest parents should be increasingly vigilant about monitoring information their children – particularly boys – are posting online.

Inappropriate Content

Another chief concern relates to youth being exposed to inappropriate content while using ICT. According to the study, 9-18% of children report being exposed to adult or disturbing content by either a stranger or someone known. Perhaps unsurprisingly, the youth aged 15-17 reported much higher exposure.

Boys report exposure to disturbing content slightly more the girls, but they are exposed to adult content at twice the rate of their female peers.

Demographically, Qatari and Arab Expat youth report exposure to disturbing content by strangers and adult content from any source more than twice as often as Western or Asian Expat youth. Some of the difference in exposure rates may be explained based on cultural norms about what content is considered disturbing or of an adult nature.



Parents rightly perceive boys are at greater risk of exposure to disturbing or adult content than girls, but likely underestimate how significant the difference is between genders.[1] Demographically, half of all parents are concerned about the risk of exposure to disturbing or adult content by strangers, while risk of exposure by known people varies significantly, with 56% of Qatari parents concerned compared with 28% of non-Qatari parents.

Youth Reporting of Negative Online Experiences

An important consideration in evaluating negative experiences of youth with ICT is their likelihood of reporting these experiences. **Data suggest youth are much more likely to report negative experiences in the category of technical risk to parents than they are to report social risks**. Youth reported viruses to parents nearly half of the time. Youth also reported nearly 25% of the time to parents if a device was misbehaving. Youth are nearly equally likely to report an online account being hacked to parents (13%), siblings/cousins (11%) or friends (15%). **Western (74%) and Asian Expat youth (73%) are much more likely to report a virus attack to their parents than Qatari youth (22%) and Arab Expat youth (30%)**.

When it comes to reporting negative online experiences of a non-technical nature, youth are far less likely to report the issue to parents. Youth who were asked to be friends online with someone they do not know in real life would report the incident to their friends twice as often as parents (22% versus 11%) or siblings/cousins (13%). No significant differences in reporting non-technical negative experiences were found across age, gender or nationality of youth surveyed.

> *I pick up her phone and go through everything on it. If I see something I don't like I talk to her about it.*
>
> *– Qatari Mother*

Parental Oversight and Control

All parents reported a high awareness of manual and social methods of controlling internet access, including blocking access to specific websites at home, discussing/informing youth of various risks, and supervising/monitoring a child's usage by having someone sit next to them while accessing the Internet. However, a large difference in awareness of automated Internet control devices exists between Qatari and non-Qatari parents. These methods include installing software such as Net Nanny, installing monitoring software to track a child's online activities, password protecting online purchase gateways/credit card accounts, and blocking access to specific websites through ISPs (Vodafone and Ooredoo).

Nearly two-thirds (65%) of youth report that their parents are aware of everything they do online. Non-Qatari youth (73%) and girls (70%) report much higher rates of parental awareness of their online activities, compared with Qatari youth (52%) and boys (59%). An additional quarter of youth (24%) report that their parents are aware of some things they do online.

Although more than half of non-Qatari parents (55%) were aware of automated methods to oversee and/or restrict their children's online activities only 28% of Qatari parents reported awareness of these options.

As with all tools, proper understanding of actual ability is important because some parents may believe the technology is 100% effective as shown by these youth's quotes ▸

> *I download a program through which I hack restricted website. You just download the program and it does everything.*

The relatively high usage of automated monitoring and control solutions among Qatari parents who are aware of these technical solutions indicates that an education campaign on these tools targeted at parents could significantly increase the number of youth protected by these solutions.

Bypassing of Content Controls

About half of all youth (47%) report not being able to access intended content or websites. A greater percent of older youth aged 15-17 than younger report encountering blocked content or websites (47% versus 39%). Boys (49%) were more likely to report encountering blocked content or websites than girls (37%). **Half of youth report that the reason they are unable to access their intended content is because it is blocked by the ISP.** Half of non-Qatari youth did report technical issues related to a weak Internet connection as the reason for not being able to access content versus only 35% of Qatari youth. This is consistent with other data collected showing greater access within Qatari households of Internet access. **About a quarter of all youth are aware of technical circumvention (password cracking or VPN) as a means to access blocked content.** Boys (32%) have a greater awareness of VPN use as a way to access blocked content than girls (11%).

Avoidance of supervision or accessing content away from home or school as a way to access blocked content was reported by only about 11-17% of youth. Avoidance of supervision was fairly consistent across demographics. Teachers reported that 57% of students at school made no attempt to bypass Internet supervision at school. Of the 43% of youth who attempted to bypass school Internet restrictions, teachers reported that 30% attempted to access content when no one was around, 15% attempted cracking passwords and 12% used a VPN to access restricted content. **A significant difference exists between International schools and Independent schools.** Teachers at International schools reported only 14% of students attempted to bypass monitoring at school, and the three methods were cited evenly by the teachers as to how the students attempted circumvention. At Independent schools, 60% of students attempted to bypass supervision, with teachers reporting 43% of students attempting to access content when no supervision was around, 25% by attempting to crack passwords and 18% by using a VPN.

CONCLUSIONS AND RECOMMENDATIONS

Youth access to, and usage of, ICT in Qatar is remarkably high, even surpassing that of their American and British peers in many instances. Recent data put broadband penetration rates in the country at nearly 100 percent. These findings suggest that the State of Qatar and the Ministry have succeeded at earlier goals of promoting access to ICT and broadband Internet throughout the country. Now, efforts must be directed toward increasing awareness of Internet resources and literacy toward ICT. Such a task requires a concerted effort by the government, teachers and parents. To that end, the following recommendations should be considered:

Given the small sample of parents interviewed for this report, **additional information should be gathered to follow up on preliminary findings that suggest parents may overestimate certain ICT risks facing their children** while underestimating others. The preliminary data suggest that parents in Qatar express similar concerns to their American and British peers, but additional research would be helpful to further develop educational materials for parents. Parental awareness and education is critical given the important role parents play in introducing youth to ICT.

The findings also suggest that some teachers, particularly those at Private Arabic schools, are not aware of the many resources the Ministry has made available. The study suggests **better promotion of these educational materials should be directed at educators.** In addition, students should also be targeted. Based on their reports, it is suggested that the Ministry use both Arabic and English via social media channels to reach students, as many youth indicated a preference for Arabic-language content.

The findings suggest that teachers and schools play an important role in students' introduction to, and ability to fully utilize, ICT. One of the key areas reported by students and teachers is a lack of Arabic-language content, which schools have the opportunity to create. In addition, the focus should be on providing this content in a manner in which students are most likely to access it (i.e., YouTube, social media, etc.). In line with the country's Arabic-language initiatives, **teachers should encourage students to search for and access content in Arabic.** Some instructional curricula may need to be developed to help students improve their search literacy as it relates to Arabic-language queries and resources.

Many resources exist to help parents monitor and minimize the risks faced by their children when using ICT. Preliminary findings suggest that parents often lack the technical knowledge to properly use these technologies or are unaware of their capabilities. As a result, it is important that parents **educate themselves about their children's ICT habits as well as the range of resources available to help monitor ICT usage.** Even with technological measures in place, however, parents should remain vigilant in their efforts to supervise children's usage, educating them in the dangers of sharing private information and encouraging them to report inappropriate interactions online.

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