Access to remote-education tools unequal in Kenya; radio best way to reach most

Afrobarometer Dispatch No. 376 | Thomas Isbell

Summary

As COVID-19 reached the shores of Africa, many governments reacted by shutting down much of economic, social, and public life in order to slow the spread of the disease. On 15 March, with only three confirmed cases of COVID-19 in the country, the government of Kenya closed all schools and imposed curfews, among other measures. On 7 July, with more than 8,000 confirmed cases, the government announced that primary and secondary schools would remain closed until 2021 and teaching would be moved to non-contact platforms (BBC, 2020; News24, 2020).

While the government and the state-run Kenya Institute of Curriculum Development have made school programs available via radio, television, and the Internet, critics have pointed to access barriers for many of Kenya's 17 million pupils (Daily Nation, 2020; Parsitau & Jepkemei, 2020).

Afrobarometer survey findings confirm substantial gaps in access to remote-learning technology in Kenya, especially for poor and rural households. While most Kenyans have mobile phones, only half can access the Internet that way, and computers are available in just one-fifth of households. Across socio-demographic groups, radio is the most widely accessible medium.

Afrobarometer survey

Afrobarometer is a pan-African, nonpartisan survey research network that provides reliable data on African experiences and evaluations of democracy, governance, and quality of life. Seven rounds of surveys were completed in up to 38 countries between 1999 and 2018, and Round 8 surveys are currently underway. Afrobarometer conducts face-to-face interviews in the language of the respondent's choice.

The Afrobarometer team in Kenya, led by the Institute for Development Studies at the University of Nairobi, interviewed a nationally representative, random, stratified probability sample of 2,400 adult Kenyans between 28 August and 1 October 2019. A sample of this size yields country-level results with a margin of error of +/-2 percentage points at a 95% confidence level. Previous surveys have been conducted in Kenya in 2003, 2005, 2008, 2011, 2014, and 2016.

Key findings

- Prior to COVID-19, two-thirds (68%) of Kenyans who had contact with a public school said they found it "easy" or "very easy" to obtain school services. And three-fourths (75%) of all respondents saw the government as doing a good job of addressing educational needs.

- In terms of communications devices that could be used for remote learning, most households had a mobile phone (95%) and a radio (87%). A majority (59%) also had a television, but only 19% had a computer.

  - Half (50%) of Kenyans had a mobile phone with Internet access. Smartphone ownership was less common in rural areas and among poor households.

- Regular use of the Internet has quadrupled over the past decade, from 11% in 2008 to 44%. But half (49%) of Kenyans still "never" went online as of 2019. Poor, rural, and less educated citizens were less likely to use the Internet.

- Only 44% of Kenyans said they receive reliable electricity from the national grid. Many others use solar panels, including almost half (46%) of rural households.

- Survey findings highlight barriers to participation in remote education, but also the importance of implementing successful e-learning strategies to avoid a "Generation COVID" that suffers economically in the future due to lack of education.

Pre-COVID assessments of public education

In 2019, before the COVID-19 pandemic, Kenyans generally held positive views of their public education system. Among those who had been in contact with a public school during the previous 12 months, two-thirds (68%) said they found it "easy" or "very easy" to obtain the services they needed from teachers or school officials (Figure 1).

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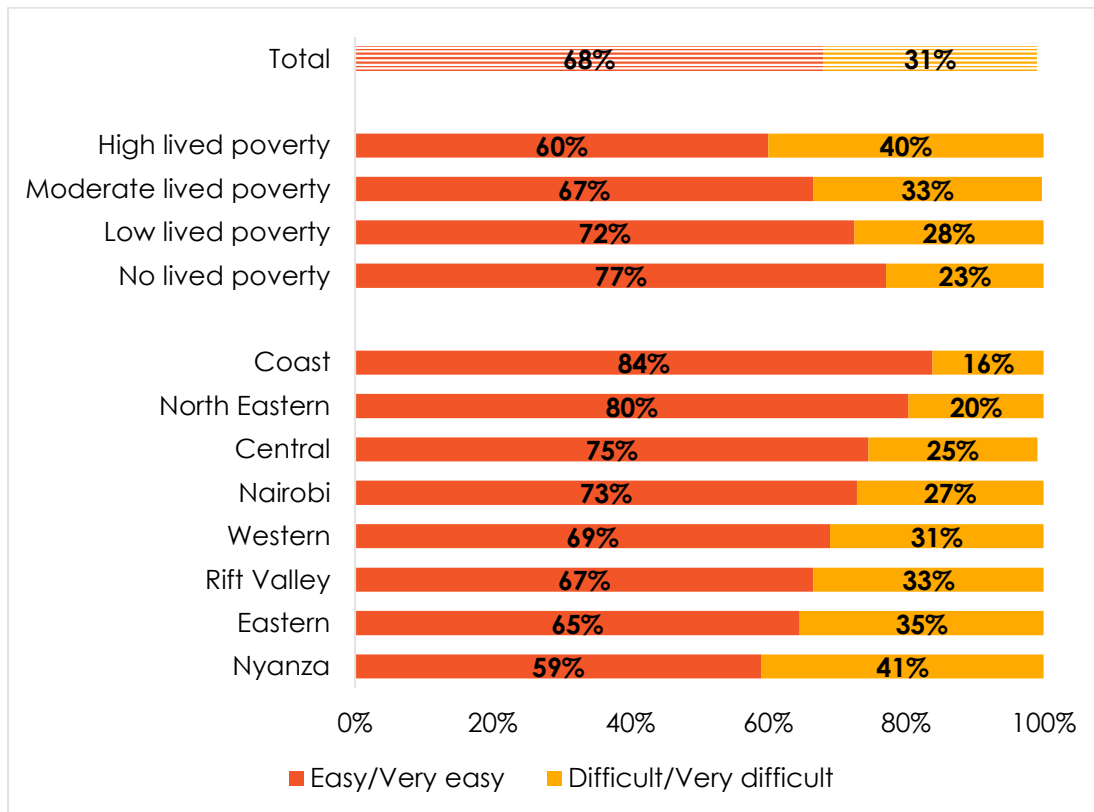
Poor Kenyans were considerably less likely to report that they found it easy to obtain services (60%) than their better-off counterparts (67%-77%).[1] Experiences also differed by region.[2] While most respondents in the Coast (84%) and North Eastern (80%) regions said they found it easy to get services, only 59% agreed in Nyanza.

Three-fourths (75%) of Kenyans said the government was doing "fairly well" or "very well" in addressing educational needs, an assessment that has been consistent for the past decade (Figure 2).

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[1] Afrobarometer assesses lived poverty based on responses to the following questions: *"Over the past year, how often, if ever, have you or anyone in your family gone without: Enough food to eat? Enough clean water for home use? Medicines or medical treatment? Enough fuel to cook your food? A cash income?"*
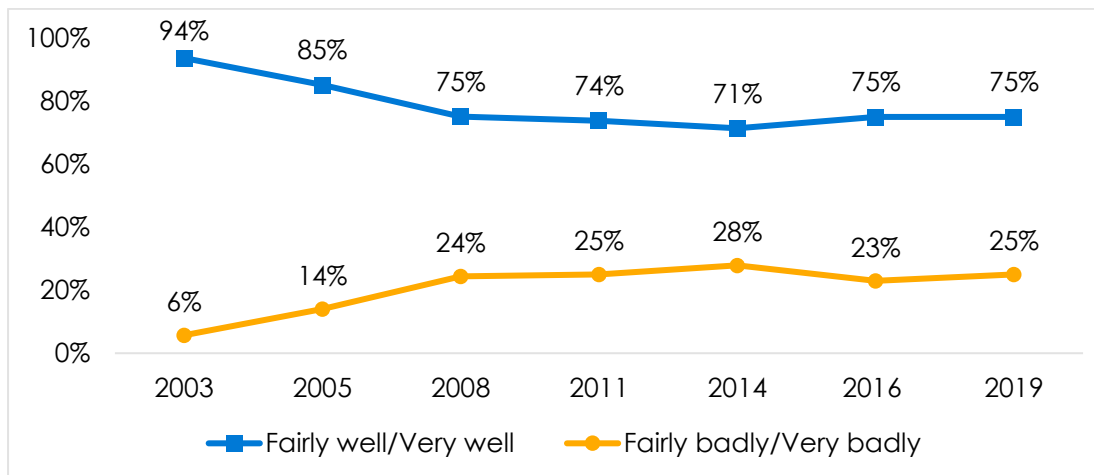
[2] For ease of reporting, this dispatch groups Kenya's counties into informal regions, as follows: Coast (Mombasa, Kwale, Kilifi, Tana River, Lamu, and Taita-Taveta counties), North Eastern (Garissa, Wajir, and Mandera counties), Central (Nyandarwa, Nyeri, Kirinyaga, Murang'a, and Kiambu counties), Eastern (Marsabit, Isiolo, Meru, Tharaka-Nithi, Embu, Kitui, Machakos, and Makueri counties), Western (Kakamega, Vihiga, Bungoma, and Busia counties), Rift Valley (Turkana, West Pokot, Samburu, Trans Nzoia, Uasin Gishu, Elgeyo-Marakwet, Nandi, Baringo, Laikipia, Nakuru, Narok, Kajiado, Kericho, and Bomet counties), Nyanza (Siaya, Kisumu, Homa Bay, Migori, and Nyamira counties), and Nairobi (Nairobi County).

Figure 1: Ease of obtaining public school services | Kenya | 2019

	Easy/Very easy	Difficult/Very difficult
Total	68%	31%
High lived poverty	60%	40%
Moderate lived poverty	67%	33%
Low lived poverty	72%	28%
No lived poverty	77%	23%
Coast	84%	16%
North Eastern	80%	20%
Central	75%	25%
Nairobi	73%	27%
Western	69%	31%
Rift Valley	67%	33%
Eastern	65%	35%
Nyanza	59%	41%

Respondents were asked: In the past 12 months, have you had contact with a public school? [If "yes":] How easy or difficult was it to obtain the services you needed from teachers or school officials?

Figure 2: Government performance on education | Kenya | 2003-2019

	2003	2005	2008	2011	2014	2016	2019
Fairly well/Very well	94%	85%	75%	74%	71%	75%	75%
Fairly badly/Very badly	6%	14%	24%	25%	28%	23%	25%

Respondents were asked: How well or badly would you say the current government is handling the following matters, or haven't you heard enough to say: Addressing educational needs?

Access to educational technology

Given Kenya's move to remote learning during the COVID-19 pandemic, students' access to the necessary educational technology is of critical importance. While Afrobarometer interviews only adults (aged 18 or older), its survey findings provide an overview of the resources to which school-age children might have access at the household level.

Most Kenyans said they personally own or live in a household that owns a mobile phone (95%) and a radio (87%). Six in 10 respondents (59%) own or have household access to a television, while one in five households (19%) have a computer (Figure 3).
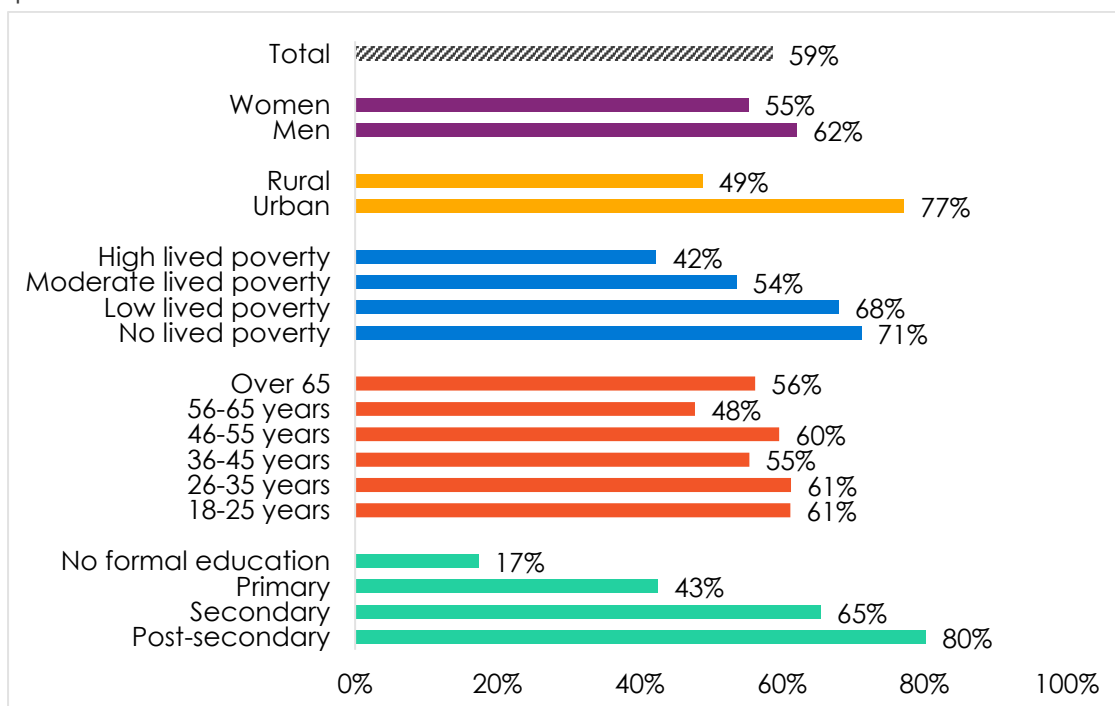
Figure 3: Household access to communications devices | Kenya | 2019
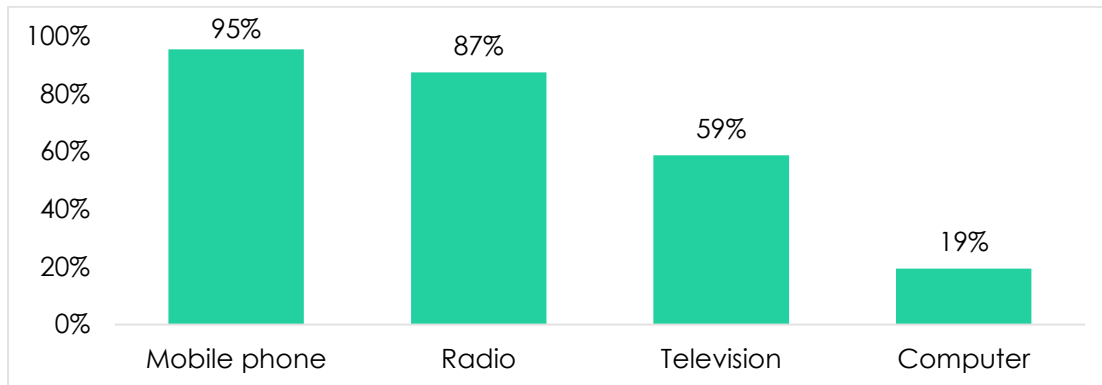
Respondents were asked: *Which of these things do you personally own? [If "no":] Does anyone else in your household own one? (% combines personal and household ownership)*

Household ownership of radios was high across key demographic groups except for respondents with no formal education, a group where only 57% said there was a radio in the home. Household ownership of televisions was more uneven (Figure 4). While more than three-fourths of urban residents (77%) and citizens with post-secondary education (80%) reported having a television set in the household, the same was true for fewer than half of rural residents (49%) and people with high lived poverty (42%) and low educational attainment (17% of those with no formal education, 43% of those with only primary schooling).

**Figure 4: Household access to a television** | by socio-demographic group | Kenya | 2019

Respondents were asked: *Which of these things do you personally own: A television? [If "no":] Does anyone else in your household own one? (% combines personal and household ownership)*

Access to personal computers was not only uncommon overall but also uneven across socio-demographic groups. Highly educated respondents were the only group in which household ownership of a computer approached half the sample (47%) – three or more times the proportions recorded among those with secondary (15%), primary (7%), or no formal education (4%) (Figure 5). Urban households were more than twice as likely to report having a computer as rural homes (31% vs. 13%), and households experiencing no lived poverty were three times as likely to have a computer as the poorest households (34% vs. 11%).

Figure 5: Household access to a computer | by socio-demographic group | Kenya | 2019
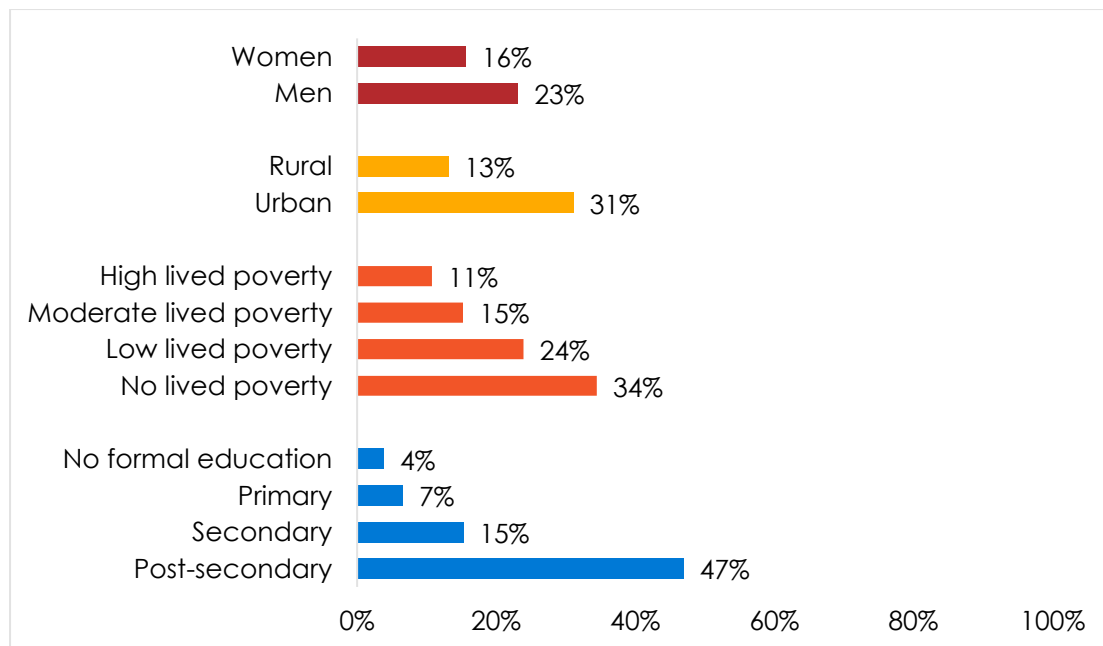
Respondents were asked: Which of these things do you personally own: A computer? [If "no":] Does anyone else in your household own one? (% combines personal and household ownership)

Internet access and use

While most Kenyans own or have access to mobile phones, being able to access the Internet via smartphone was less common: Only half (50%) of all Kenyans said they own a phone with Internet access. Smartphone ownership was more common in urban areas (65%, including 77% of Nairobi residents), among the more educated (84% of those with post-secondary education), and among those who are economically better off (59%-62% of those with low or no lived poverty) (Figure 6).

Few respondents with no formal education (9%) or only primary education (26%) said they could access the Internet via mobile phone. Only about one-third (35%) of those with high lived poverty had smartphones, as did fewer than half of residents in the Western (30%), Coast (40%), Nyanza (43%), and Eastern (44%) regions.

Figure 6: Mobile phone has Internet access | by socio-demographic group | Kenya | 2019
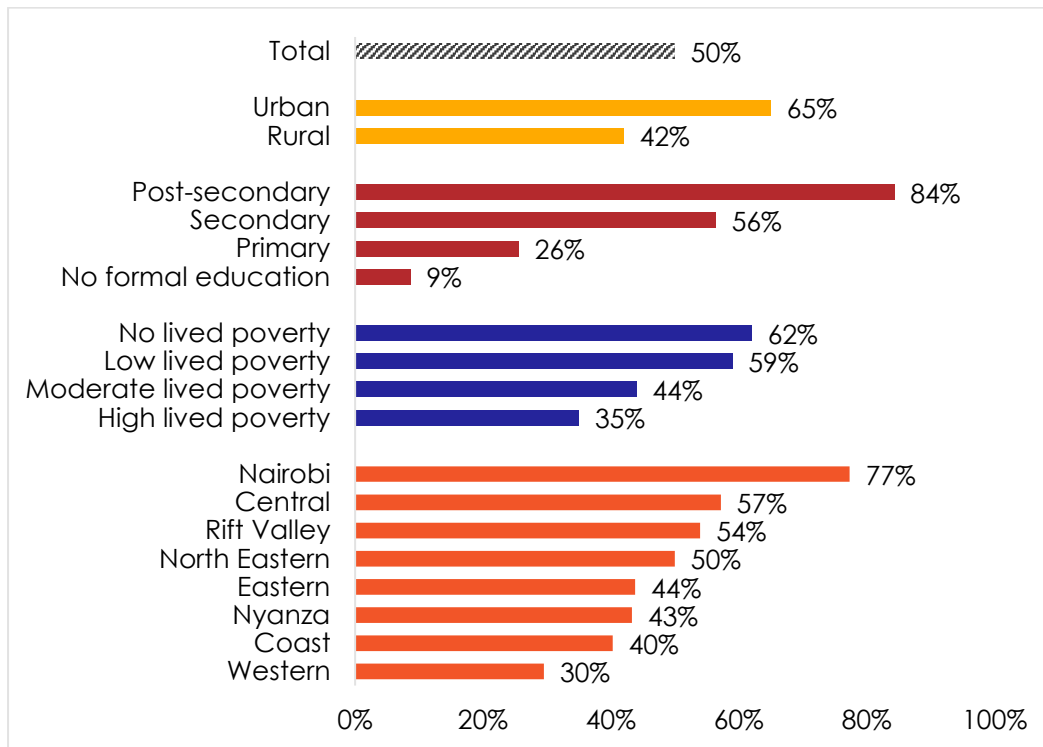
Respondents were asked: *Which of these things do you personally own: A mobile phone? [If "yes":] Does your phone have access to the Internet? (Figure shows % of all respondents who own a mobile phone with Internet access.)*

Afrobarometer data from the past decade show that Internet use has become increasingly common in Kenya. Since 2008, the proportion of Kenyans who said they go online "every day" or "a few times a week" has quadrupled, from 11% to 44%. Even so, about half (49%) of Kenyans still reported "never" using the Internet (Figure 7).

Figure 7: How often use the Internet | Kenya | 2008-2019
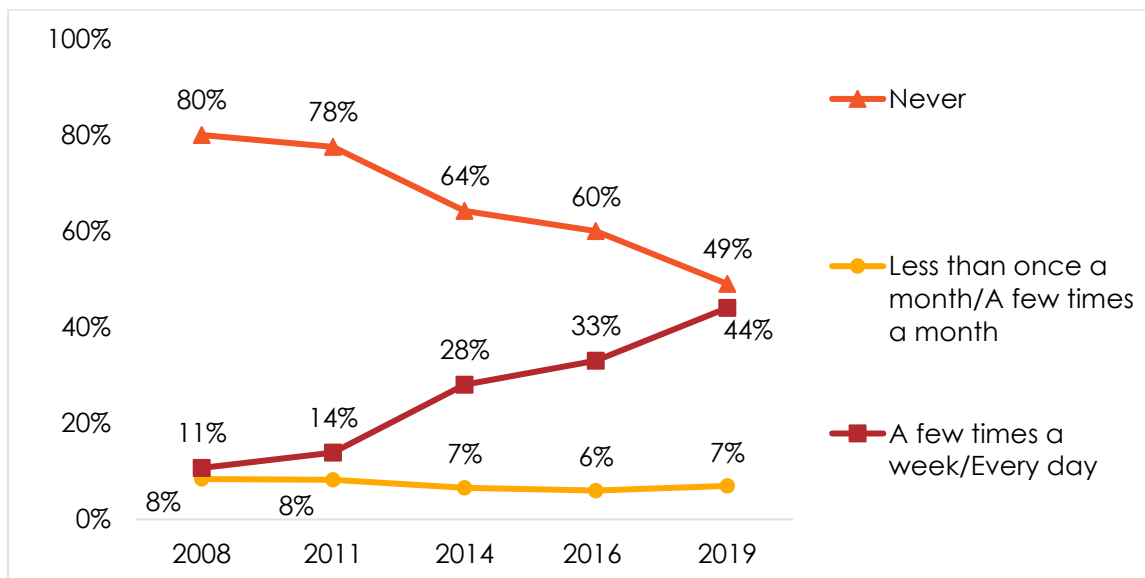
Respondents were asked: *How often do you use the Internet?*

Regular Internet use varied considerably by socio-demographic group. Men (53%), urban residents (59%), youth (61% of those aged 18-25), and more educated citizens (82% of those with post-secondary education) were far more likely to go online at least a few times a week than women (34%), rural dwellers (35%), and older and less educated Kenyans (Figure 8). And citizens with low or no lived poverty (54% and 58%, respectively) were about twice as likely to be regular Internet users as the poorest citizens (28%).

Figure 8: Frequently use the Internet | by socio-demographic group | Kenya | 2019
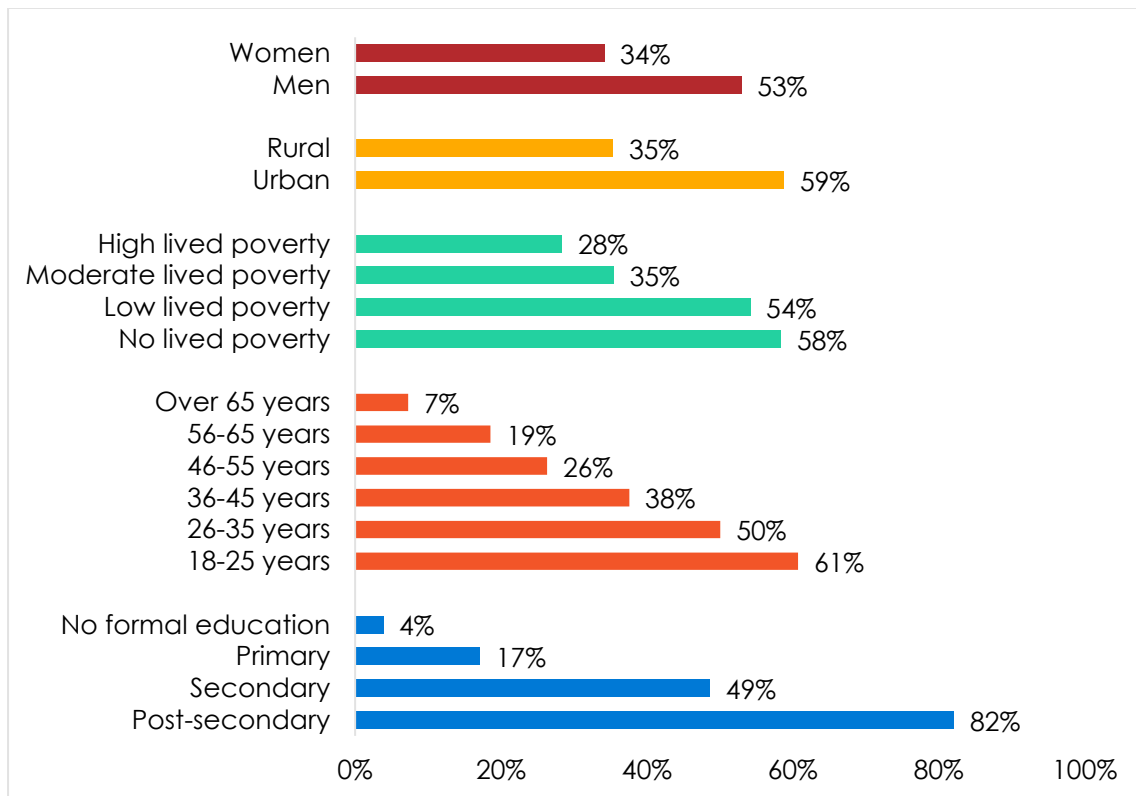
Respondents were asked: How often do you use the Internet? (% who said "every day" or "a few times a week")

Access to electricity

Regardless of which platform is chosen to distribute educational material, modern technology relies on electricity. Half (50%) of Kenyans said they have a connection to the main electric grid, and 44% of all households said they enjoy electric power "most" or "all" of the time from the grid.

Connections to the mains were far more common in cities (83%) and economically better-off households (67%) than in rural areas (33%) and households with high lived poverty (35%) (not shown).

The same patterns are clear when it comes to enjoying a reliable supply of electric power (Figure 9): While 74% of city residents and 59% of economically better-off respondents said they receive electricity that works "most" or "all" of the time from the grid, the same was true for only 28% of rural residents and 29% of poor respondents. Kenyans with post-secondary education were almost six times as likely to report reliable electricity from the grid as those with no formal education (63% vs. 11%).

Figure 9: Electricity available most/all the time from mains | by socio-demographic group | Kenya | 2019
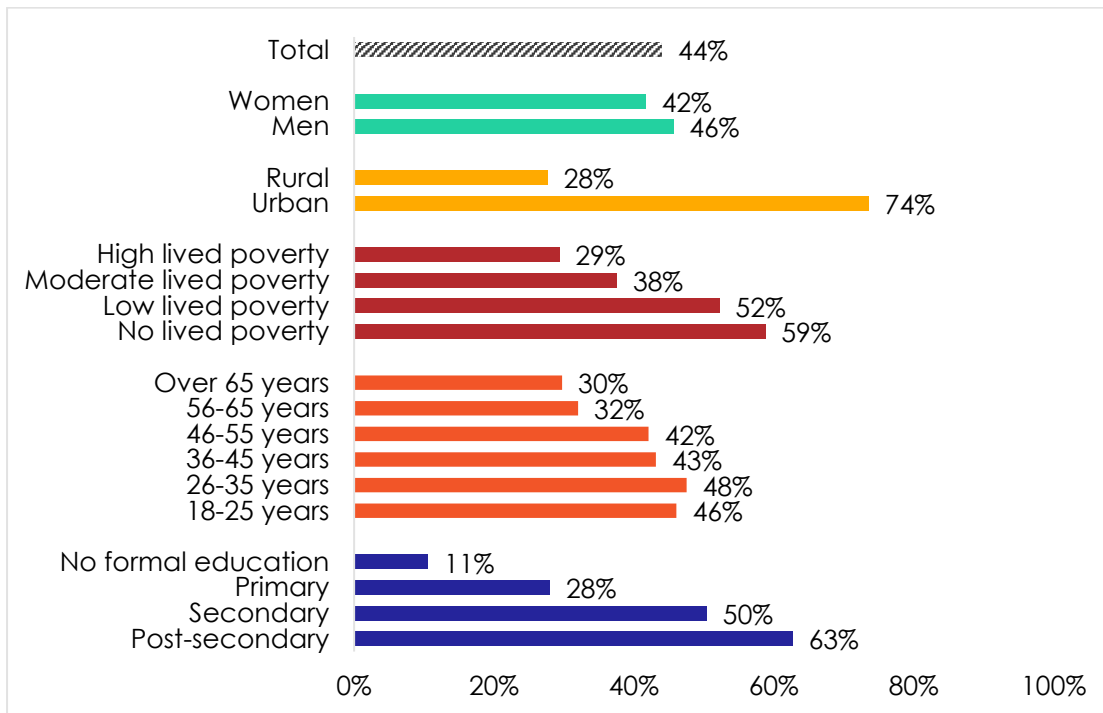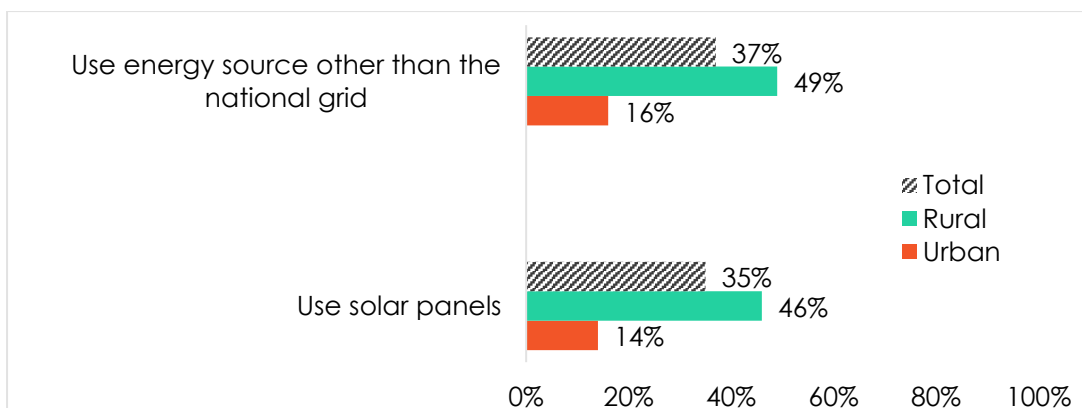

Respondents were asked: Do you have an electric connection to your home from Kenya Power? [If "yes":] How often is electricity actually available from this connection? (% who said "most of the time" or "all of the time")

While many Kenyans lack access to the main power grid, almost four in 10 (37%) said they use alternative sources of electric power. In rural areas, where access to the national grid is particularly low, just about half (49%) of all households said they use alternative power sources. Solar panels made up the overwhelming majority (93%) of these alternative sources. Overall, almost half (46%) of rural households reported using solar panels, along with 14% of urban households (Figure 10).

These numbers suggest that solar power may be a cost- and time-efficient way to support implementation of remote learning in an inclusive manner during the pandemic and beyond.

**Figure 10: Use of alternative energy sources** | by urban-rural location | Kenya | 2019

Respondents were asked: Does your house use electric power from any source other than the national power grid? [If "yes":] What is the source of the electricity for this connection?

What is at stake?

As is well documented in the literature, failing to provide adequate education to pupils and students has significant negative consequences in the long run (Harber, 2002; Bloom, Canning, & Chan, 2006; Gyimah-Brempong, Paddison, & Mitiku, 2006; Agbor, 2012; Beegle, Christiaensen, Dabalen, & Gaddis, 2016). Afrobarometer data confirm, for example, that levels of high lived poverty were considerably more common among adults without formal education (36%) or with only primary schooling (24%) than among those with secondary (14%) or post-secondary (8%) education (Figure 11).

Similarly, more educated Kenyans were more likely to have a full-time job, ranging from 20% of those without formal education to 37% of those with post-secondary qualifications (Figure 12).

Figure 11: Lived poverty levels | by education level | Kenya | 2019
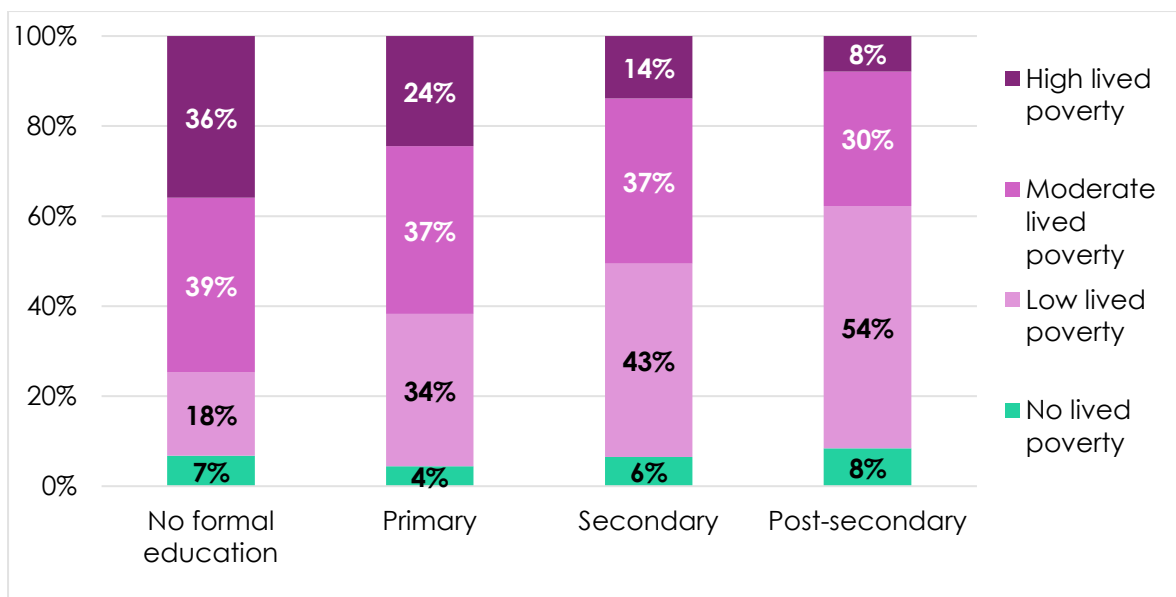
Respondents were asked:
Over the past year, how often, if ever, have you or anyone in your family gone without: Enough food to eat? Enough clean water for home use? Medicines or medical treatment? Enough fuel to cook your food? A cash income?
What is your highest level of education?

Figure 12: Full-time employment | by education level | Kenya | 2019
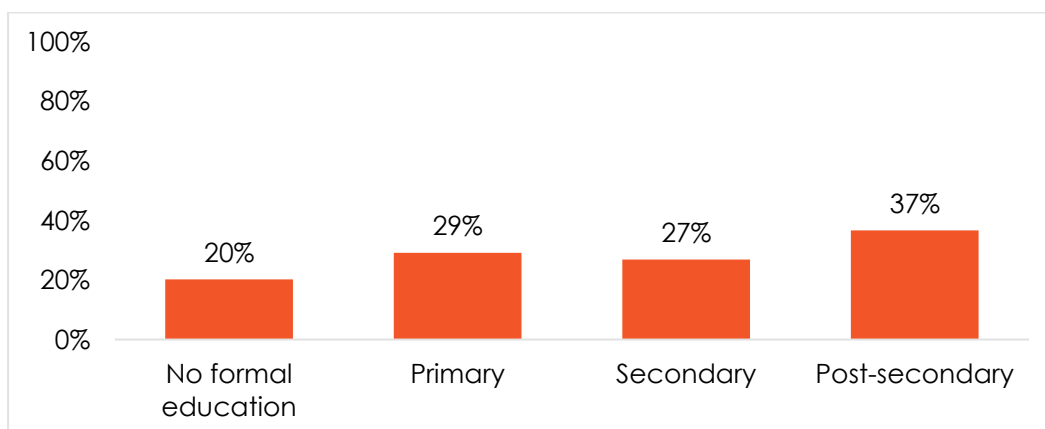
Respondents were asked: *Do you have a job that pays a cash income? [If "yes":] Is it full time or part time? (% who said they had a full-time job)*

Conclusion

As the COVID-19 pandemic continues to spread across Africa, educators, policy makers, parents, and pupils face uncertainty about the path forward. In Kenya, the government has halted all in-person teaching at the primary and secondary levels and moved to remote teaching.

Survey findings show, however, how unequal access to the necessary technology is in Kenya. While regular Internet use has grown fourfold in the past decade, half of Kenyans remain offline. This is especially common in poor, rural, and less educated families, who face the prospect of being left even further behind.

Radio caters to the broadest audience in Kenya, though teaching possibilities are no doubt more limited than online.

To ensure inclusion and participation in online learning in the medium and longer term, the government will need to activate plans and investments capable of building e-learning infrastructure that facilitates access for all students.

Given the linkages between education, unemployment, and poverty, the Kenyan government must get this right to avoid a "lost generation."

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