



# The Benefits of Broadband Expansion to America's Economy, Education, and Health

**A Policy Brief by Common Sense Kids Action**

[www.common sense media.org/kids-action](http://www.common sense media.org/kids-action)

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# Introduction

**High-speed Internet has transformed nearly everything about modern society, including education, industry, government, entertainment, and more, often with powerful effects.**

Our economy is stronger and educational opportunities are greater, thanks in part to high-speed Internet access. However, though broadband Internet access is no longer considered a luxury but rather a necessity in the lives of most Americans, the benefits of high-speed Internet are still not universally shared. Today, only 70 percent of Americans have broadband Internet at home.<sup>1</sup> Getting high-speed Internet to the remaining 30 percent, including some five million households with school-age children, could have a major impact on economic, educational, and health outcomes in the United States.

People without home broadband are at a disadvantage when it comes to job searches, networking, updating career skills, and communicating with potential employers. Also, many studies show a high correlation between increased broadband penetration and GDP growth, with some studies even suggesting a causal relationship. In addition, as home broadband speeds increase, a rise in household income follows. In education, most teachers (70 percent) assign homework that requires use of the Internet. Even when teachers assign homework that they don't think requires the Internet, most students still use the Internet to complete their homework. And with regard to health care, as income and education levels increase, so does the likelihood that people

will use the Internet to answer health care questions. Those without the Internet must rely on traditional medical resources, such as visiting a doctor or hospital. Lack of broadband at home for some could increase health care costs for everyone.

Greater broadband penetration is not a silver bullet, but it does provide clear benefits to our economy, education, and health. Conversely, people without access (i.e., low-income children and their families) are at further disadvantage, and taxpayers are at greater risk for higher costs related to welfare assistance, unemployment insurance, health care, social services, incarceration, and other known consequences of low educational attainment. Relative to some of the more intractable causes of economic disadvantage, lack of high-speed Internet access is easily and directly addressed through a variety of options, including by reforming existing programs to make home broadband more affordable and accessible.

As one such step to broaden access to broadband, Common Sense strongly supports modernizing and reforming the Federal Communications Commission's Lifeline program to include broadband and to make the program more efficient and accountable. Doing so will directly benefit all Americans through greater economic, educational, and health outcomes.

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<sup>1</sup> *Broadband Technology Factsheet; Pew Research Center (2013); see Chart 1, Appendix; <http://www.pewinternet.org/fact-sheets/broadband-technology-fact-sheet/>*

## Economic issues related to home broadband

- **Broadband access boosts access to jobs:** In the U.S., people with lower incomes are much less likely to have high-speed Internet.<sup>2</sup> This puts them at a disadvantage in the job market because the Internet is invaluable for job training, pursuing online degrees, researching a company or an organization, connecting with professional networks, communicating with potential employers via email, and searching for and applying for jobs. Most Americans feel that not having broadband Internet at home would be a disadvantage when it comes to finding a job or learning career skills.<sup>3</sup>
- **GDP sees growth from greater Internet penetration:** At least seven recent studies show that broadband penetration is highly correlated with GDP, and some studies indicate that increasing broadband penetration will actually cause an increase in GDP.<sup>4</sup>
- **Connectivity helps with global competitiveness:** Part of staying competitive in our global market is being connected online. However, the United States isn't first, second, or even in the top 10 for household broadband penetration. Instead it ranks 20th, behind France (fourth), the United Kingdom (10th), and Canada (12th).<sup>5</sup>
- **Discounted Internet programs help with access to information and services:** Comcast's Internet Essentials program and other similar programs have helped low-income customers get high-speed Internet at discounted rates. The majority of Internet Essentials customers report that having the Internet at home has helped them search for and apply for jobs and access government services.<sup>6</sup>
- **Having home broadband improves household income:** In developed countries, going from having no Internet at home to having a basic four-megabits-per-second connection—enough speed to reliably stream video—leads to an estimated income increase of \$2,100 per household per year. Going from 4 Mbps to 8 Mbps leads to an additional increase of \$1,400 per household per year.<sup>7</sup> Having an Internet connection, and especially a fast Internet connection, allows for more robust and flexible work arrangements and enables people to become better educated and more informed, potentially leading to better career paths.

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<sup>2</sup> While 91% of households earning over \$75,000/year have broadband, only 52% of households earning less than \$30,000/year have it. *Broadband Technology Fact Sheet*; Pew Research Center (2013); see Chart 1, Appendix; <http://www.pewinternet.org/fact-sheets/broadband-technology-fact-sheet/>

<sup>3</sup> *Home Broadband 2013 Report*; Pew Research Center (2013); see Chart 2, Appendix; <http://www.pewinternet.org/2013/08/26/home-broadband-2013/>

<sup>4</sup> See, for example:

--"Last year (2010) Ericsson and Arthur D. Little concluded that for every 10 percentage point increase in broadband penetration GDP increases by 1 percent." *New study quantifies the impact of broadband speed on GDP*; <http://www.ericsson.com/news/1550083>

--"World Bank research indicates that, for high-income countries, a 10-percentage-point rise in broadband penetration adds a 1.21-percentage point rise in economic growth." *Broadband: A Platform for Progress*; UNESCO; <http://unesdoc.unesco.org/images/0021/002198/219825e.pdf>

--"About two years after the initial spike in Internet growth, we begin to also see GDP levels starting to rise. The growth of GDP nearly mirrors the curve at a two-to-three year delay." *Internet Penetration and its Correlation to Gross Domestic Product: An Analysis of the Nordic Countries*; *International Journal of Business, Humanities and Technology* (2013); [http://www.ijbhtnet.com/journals/Vol\\_3\\_No\\_2\\_February\\_2013/5.pdf](http://www.ijbhtnet.com/journals/Vol_3_No_2_February_2013/5.pdf)

--"The consensus seems to be that a 10-percent increase in broadband's household penetration delivers a boost to a country's GDP that ranges from 0.1 percent to 1.4 percent." *Mobile Broadband for the Masses: Regulatory levers to make it happen*; McKinsey & Company (2009); <http://goo.gl/NDGQjE>

<sup>5</sup> *The State of Broadband 2013: Universalizing Broadband*; The Broadband Commission; <http://www.broadbandcommission.org/Documents/bb-annualreport2013.pdf>

<sup>6</sup> *The Essentials of Connectivity: Comcast's Internet Essentials Program and a Playbook for Expanding Broadband Adoption and Use in America* (March 2014); by John B. Horigan, Ph.D.; [http://corporate.comcast.com/images/Final\\_IE\\_Research\\_Full\\_Paper.pdf](http://corporate.comcast.com/images/Final_IE_Research_Full_Paper.pdf)

<sup>7</sup> *Measuring the Impact of Broadband on Income*; Ericsson (2013); <http://www.ericsson.com/res/thecompany/docs/corporate-responsibility/2013/impact-of-broadband-speed-on-household-income.pdf>

## Education issues related to home broadband

- **The Internet is required for homework:** Today, seven in 10 teachers assign homework that requires the Internet.<sup>8</sup> However, five million households with school-age children do not have broadband at home, and a disproportionately high number of them are low-income families.<sup>9</sup> As students get older, home broadband becomes increasingly important to their schooling. Almost every high school student says that teachers regularly assign homework that requires the Internet.<sup>10</sup> The millions of students without home broadband must find alternative ways to complete their homework, such as staying late at school, visiting a nearby library during library hours, using other locations with free Wi-Fi, going to friends' houses, or using other options that are more costly, time-consuming, and disruptive than the options for students who have broadband at home. Due to these barriers, kids without home broadband may not always complete their homework and could fall behind.
- **Families without home Internet are less connected with schools:** Lack of home broadband makes it harder for kids and parents to view grades online, contact teachers, download or print assignments, and visit school and teacher websites. This gap between families with broadband and those without it becomes more pronounced as household income drops.<sup>11</sup>
- **Low-income families report that the Internet is very helpful for schoolwork:** Most low-income families with children who use Comcast Internet Essentials say that the Internet is at least somewhat useful for activities such as job searches and staying in touch with people, but a vast majority of them (84 percent) report that having home Internet helps “a lot” when it comes to doing schoolwork.<sup>12</sup>
- **Teachers are slow to use edtech in lessons when students don't have home access:** In classrooms with students who don't have Internet access at home, teachers feel constrained from incorporating digital technology into their teaching.<sup>13</sup> This could affect the education of all students regardless of whether they have home Internet access.
- **The gap is wider than teachers think:** Even when teachers assign homework that they don't think requires Internet access, most students still use the Internet to complete their homework.<sup>14</sup> This puts kids without home Internet access at a further disadvantage.

<sup>8</sup> Cox Proudly Extends its Commitment to Connect2Compete; NCTA 2014; <https://www.ncta.com/platform/industry-news/cox-proudly-extends-its-commitment-to-connect2compete/>; See also 77% of Teachers Assign Internet-Required Homework: Survey; Grunwald Associates LLC (2008); <http://www.multichannel.com/news/internet-video/77-teachers-assign-internet-required-homework-survey/298980>

<sup>9</sup> About a third (31.4%) of households whose incomes fall below \$50,000 and with children ages 6 to 17 don't have broadband at home. The Numbers Behind the Broadband 'Homework Gap'; Pew Research Center (2015); see Chart 2, Appendix; <http://www.pewresearch.org/fact-tank/2015/04/20/the-numbers-behind-the-broadband-homework-gap/>

<sup>10</sup> Thirty-one percent of high school students say they are required to use the Internet for homework assignments outside of school daily; 42% are required to use it every few days, 10% are required to do so once a week, and 10% are required to every few weeks. Taking the Pulse of the High School Student Experience in America; National Research Center for College and University Admissions (2015); [https://www.fosi.org/documents/142/Taking\\_the\\_Pulse\\_Phase\\_1\\_Research\\_Findings\\_FINAL.pdf](https://www.fosi.org/documents/142/Taking_the_Pulse_Phase_1_Research_Findings_FINAL.pdf)

<sup>11</sup> In households making \$150,000 or more that have school-aged children, only three percent don't have high speed Internet at home, but the number rises to 40% in households earning less than \$25,000. The Numbers Behind the Broadband 'Homework Gap'; Pew Research Center (2015); see Chart 2, Appendix; <http://www.pewresearch.org/fact-tank/2015/04/20/the-numbers-behind-the-broadband-homework-gap/>

<sup>12</sup> The Essentials of Connectivity: Comcast's Internet Essentials Program and a Playbook for Expanding Broadband Adoption and Use in America (March 2014); by John B. Horrigan, Ph.D.; The Comcast Technology Research & Development Fund; [http://corporate.comcast.com/images/Final\\_IE\\_Research\\_Full\\_Paper.pdf](http://corporate.comcast.com/images/Final_IE_Research_Full_Paper.pdf)

<sup>13</sup> Fifty-six percent of teachers of the lowest income students say that a lack of student access to digital technologies is a “major challenge” to incorporating more digital tools into their teaching; 21% of teachers of the highest income students report that problem; How Teachers Are Using Technology at Home and in Their Classrooms; Pew Research Center (2013); <http://www.pewinternet.org/2013/02/28/how-teachers-are-using-technology-at-home-and-in-their-classrooms/>

<sup>14</sup> Project Tomorrow: Speak Up; From Chalkboards to Tablets: The Emergence of the K-12 Digital Learner (2013); <http://www.tomorrow.org/speakup/pdfs/SU12-Students.pdf>

## Health care issues related to home broadband

- **Wealthier, more educated people use the Internet for health care questions:** As income and education levels increase, so does the likelihood that people will turn to the Internet to answer their health care questions.<sup>15</sup> This may be in part because people with lower incomes don't have access to the Internet but would use it if they could.
- **Shopping for health insurance can be difficult without home broadband:** Making use of the new health insurance marketplace created by the Affordable Care Act can be much more difficult without home Internet. The process of comparing and shopping may take more time than what is allowed on public computers such as those at a library, and public settings lack privacy. Those without Internet are left with options that can be more time-consuming and inconvenient, such as calling the HealthCare.gov hotline, using standard mail to gather and send materials, or traveling to visit a local representative who can assist in person.
- **The Internet could reduce health care costs:** Although telehealth is relatively new to medicine, it could significantly reduce health care costs.<sup>16</sup> Patients can receive remote checkups from home and get answers to routine questions via secure voice and video systems, reducing the number of doctor and hospital visits and the need to miss work or school for appointments. The average in-person doctor visit costs from \$136 to \$176, while the average virtual visit costs \$40 to \$50.<sup>17</sup> Ultimately, home connectivity could reduce health care costs for everyone.

- **Lower-income youth may need Internet health information the most:** Lower-income youth (from families earning less than \$25,000/year) are much more likely than higher-income youth to have faced a significant health issue in their families, but they are the least likely to have taken a health class at school compared with their higher-income peers. For these youth and their families, having a home Internet connection could be a vital source of health care information.<sup>18</sup>
- **Most teens use the Internet for health information:** Although teens get much of their health information from parents, doctors, and school health classes, almost all teens also use the Internet to find information about health concerns for themselves, their families, or their friends.<sup>19</sup>

## Conclusion

Broadband expansion is closely tied to America's economic, educational, and health outcomes. And yet 30 percent of American homes still lack high-speed Internet access, and America ranks behind many of our global economic competitors in the percentage of homes connected to broadband. Closing the gap between homes that have broadband and those that do not should be a national priority. Modernizing and reforming the Lifeline program to include a broadband option is one step that can and should be taken to help close this critical gap.

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<sup>15</sup> *Use of the Internet for Health Information: United States 2009*; Centers for Disease Control and Prevention; <http://www.cdc.gov/nchs/data/databriefs/db66.htm>

<sup>16</sup> *An estimated health care cost savings of between 10% and 20% could be achieved through the use of telemedicine delivered by broadband*. Broadband Commission for Digital Development (created by ITU and UNESCO); [http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/broadband\\_commission\\_report\\_overview.pdf](http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/broadband_commission_report_overview.pdf)

<sup>17</sup> *Assessment of the Feasibility and Cost of Replacing In-Person Care with Acute Care Telehealth Services*; Alliance for Connected Care; <http://www.connectwithcare.org/wp-content/uploads/2014/12/Medicare-Acute-Care-Telehealth-Feasibility.pdf>

<sup>18</sup> *Forty-four percent of lower-income teens have had a significant health issue in their families compared with 21 percent of those from families earning more than \$75,000 a year; 44 percent of lower-income teens have taken a health class at school compared with 60 percent of high-income teens*; *Teens, Health, and Technology*; Center on Media and Human Development, School of Communication, Northwestern University; June 2015; [http://cmhd.northwestern.edu/wp-content/uploads/2015/05/1886\\_1\\_SOC\\_ConfReport\\_TeensHealthTech\\_051115.pdf](http://cmhd.northwestern.edu/wp-content/uploads/2015/05/1886_1_SOC_ConfReport_TeensHealthTech_051115.pdf)

<sup>19</sup> *A total of 84 percent of teens have gotten health information online, including a quarter of all teens (25 percent) who say they have gotten "a lot" of health information online, 36 percent who get "some" and 22 percent who get "only a little" health information online*; *Teens, Health, and Technology*; Center on Media and Human Development, School of Communication, Northwestern University; June 2015; [http://cmhd.northwestern.edu/wp-content/uploads/2015/05/1886\\_1\\_SOC\\_ConfReport\\_TeensHealthTech\\_051115.pdf](http://cmhd.northwestern.edu/wp-content/uploads/2015/05/1886_1_SOC_ConfReport_TeensHealthTech_051115.pdf)

Chart 1

## Demographics of broadband Internet users

% of all adults who use high-speed Internet at home

	Broadband Internet users
<b>All adults</b> (n=6,010)	70%
a. <b>Men</b> (n=2,733)	70
b. <b>Women</b> (n=3,277)	70
a. <b>White, Non-Hispanic</b> (n=4,223)	74 <sup>bc</sup>
b. <b>Black, Non-Hispanic</b> (n=664)	62
c. <b>Hispanic</b> (n=682)	56
a. <b>18-29</b> (n=945)	81 <sup>bcd</sup>
b. <b>30-49</b> (n=1,590)	77 <sup>cd</sup>
c. <b>50-64</b> (n=1,842)	68 <sup>d</sup>
d. <b>65+</b> (n=1,526)	47
a. <b>No high school diploma</b> (n=454)	28
b. <b>High school grad</b> (n=1,667)	58 <sup>a</sup>
c. <b>Some college</b> (n=1,627)	80 <sup>ab</sup>
d. <b>College+</b> (n=2,225)	90 <sup>abc</sup>
a. <b>Less than \$30,000/yr.</b> (n=1,628)	52
b. <b>\$30,000-\$49,999</b> (n=1,030)	71 <sup>a</sup>
c. <b>\$50,000-\$74,999</b> (n=787)	85 <sup>ab</sup>
d. <b>\$75,000+</b> (n=1,644)	91 <sup>abc</sup>
a. <b>Urban</b> (n=1,850)	70 <sup>c</sup>
b. <b>Suburban</b> (n=2,980)	74 <sup>ac</sup>
c. <b>Rural</b> (n=1,180)	60

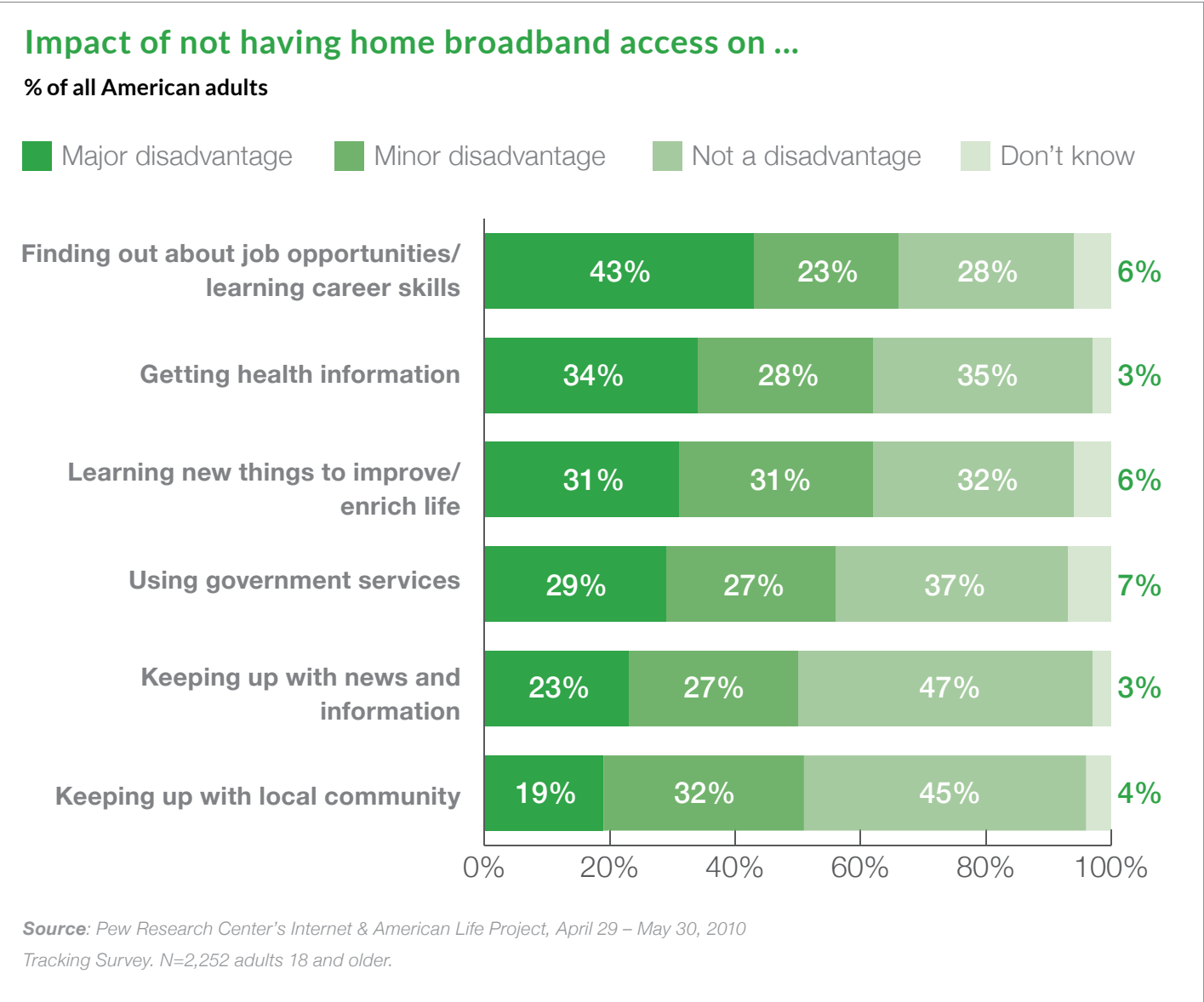
*Pew Research Center's Internet Project survey, July 18 – September 30, 2013. Note: Percentages marked with a superscript letter (e.g., <sup>a</sup>) indicate a statistically significant difference between that row and the row designated by that superscript letter, among categories of each demographic characteristic (e.g., age).*

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Broadband Technology Fact sheet; Pew Research Center (2013);  
<http://www.pewinternet.org/fact-sheets/broadband-technology-fact-sheet/>



Chart 2



Home Broadband 2013 Report; Pew Research Center (2013);  
<http://www.pewinternet.org/2013/08/26/home-broadband-2013/>

Chart 3

## Households with School-Age Children That Do Not Have Broadband Access

Among households with school-age children

% <b>LACKING A HIGH-SPEED CONNECTION AT HOME</b>					
	<b>All</b>	<b>White</b>	<b>Black</b>	<b>Hispanic</b>	<b>Asian</b>
Annual income under \$50,000	31.4%	24.6%	38.6%	37.4%	15.5%
\$50,000 or greater	8.4%	6.7%	13.0%	12.8%	4.0%
% <b>WITH A HIGH-SPEED CONNECTION AT HOME</b>					
All households with school-age children	82.5%	88.0%	71.5%	72.2%	92.3%
Annual income under \$25,000	60.3	67.9	53.6	54.8	79.0
\$25,000–\$49,999	75.7	80.6	71.2	69.2	88.6
\$50,000–\$99,999	88.2	90.5	84.1	82.1	94.0
\$100,000–\$149,999	94.3	95.1	91.7	90.6	96.5
\$150,000+	96.7	97.0	93.5	93.9	97.9

**Source:** Pew Research Center analysis of 2013 American Community Survey (IPUMS) Tracking Survey. N=2,252 adults 18 and older.

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The Numbers Behind the Broadband ‘Homework Gap’; Pew Research Center (2015); <http://www.pewresearch.org/fact-tank/2015/04/20/the-numbers-behind-the-broadband-homework-gap/>

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## About Common Sense Kids Action

Common Sense Kids Action is an independent, nonpartisan, and powerful voice whose mission is to make kids and education America's top priority. We work with national and state leaders to advance policies that help ensure every child has the opportunity to succeed. Kids Action is committed to advancing a 21st-century kids and education agenda—an agenda that includes ensuring that all children age 0–5 have access to vital health and education resources, advancing 21st-century learning, reducing child poverty, and protecting children's online privacy. Learn more at [www.common sense media.org/kids-action](http://www.common sense media.org/kids-action).

For inquiries, contact [kidsaction@commonsense.org](mailto:kidsaction@commonsense.org).

## About Common Sense

Common Sense is a nonprofit, nonpartisan organization dedicated to improving the lives of kids, families, and educators by providing the trustworthy information, education, and independent voice they need to thrive in a world of media and technology.

### OUR OFFICES

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