Teaching 21st-Century Skills OUTSIDE the School Day
Nora Fleming
Staff writer, Education Week
Teaching 21st-Century Skills Outside the School Day

Expert Presenters:

**Barry Joseph**, director, Global Kids' Online Leadership Program

**Michael Levine**, executive director, the Joan Ganz Cooney Center at the Sesame Workshop
An on-demand archive of this webinar will be available at www.edweek.org/go/webinar in less than 24 hrs.
Afterschool in a Digital Age

Michael H. Levine
Executive Director, The Joan Ganz Cooney Center
at Sesame Workshop
Addressing the “vast wasteland”

Joan Ganz Cooney’s 1966 report to Carnegie Corporation, *The Potential Uses of Television in Preschool Education*

“How can emerging media help children learn?”
Screen revolution

1969

2011
The Cooney Center

A “Think and Do” Tank within Sesame Workshop, dedicated to fostering innovation in children’s learning through digital media

What we do

• Support and conduct research
• Build scalable models
• Convene and promote multi-sector partnerships
• Mobilize resource commitments
• Award prizes for innovation
• Work both within and independently of Sesame Workshop
New Ecology: Learning Happens Across Settings!

Sources: Bronfenbrenner, 1977; Takeuchi, 2011
School Isn’t The Only Time For Learning

Source: The LIFE Center: Stevens, R., & Bransford, J. D., 2007
## Kids in Afterschool Programs Nationwide

### By Grade Level Look at Afterschool Participation

<table>
<thead>
<tr>
<th>Level</th>
<th>% children in grade level in afterschool</th>
<th>Number of children in afterschool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades K to 5</td>
<td>17%</td>
<td>4,505,912</td>
</tr>
<tr>
<td>Grades 6 to 8</td>
<td>12%</td>
<td>1,391,495</td>
</tr>
<tr>
<td>Grades 9 to 12</td>
<td>7%</td>
<td>1,095,297</td>
</tr>
<tr>
<td>All Grades</td>
<td>15%</td>
<td>8.4 million</td>
</tr>
</tbody>
</table>
### Percent of 4th graders scoring below proficient and below basic on NAEP reading test, by family income and race/ethnicity: 2009

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Below Proficient</th>
<th>Below Basic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Students</td>
<td>Low-Income Students</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>83</td>
</tr>
<tr>
<td>White</td>
<td>58</td>
<td>76</td>
</tr>
<tr>
<td>Black</td>
<td>84</td>
<td>89</td>
</tr>
<tr>
<td>Hispanic</td>
<td>83</td>
<td>87</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>51</td>
<td>70</td>
</tr>
<tr>
<td>American Indian</td>
<td>80</td>
<td>85</td>
</tr>
</tbody>
</table>

1 Categories exclude Hispanic origin. Results are not shown for students whose race/ethnicity was unclassified.

2 Family income is measured using students’ eligibility for the National School Lunch Program, a federally assisted meal program, sometimes referred to as the free/reduced-price lunch program. Free or reduced-price lunches are offered to students with incomes below 185% of the poverty level.

**Source** Annie E. Casey Foundation analysis of data from the NAEP Data Explorer, available at http://nces.ed.gov/nationsreportcard/naepdata/
Students need strong 21st century skills in order to succeed in a global economy.

Source: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009.
Students need strong 21st century skills in order to succeed in a global economy.

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>513</td>
</tr>
<tr>
<td>Austria</td>
<td>496</td>
</tr>
<tr>
<td>Belgium</td>
<td>515</td>
</tr>
<tr>
<td>Canada</td>
<td>527</td>
</tr>
<tr>
<td>Chile</td>
<td>421</td>
</tr>
<tr>
<td>Colombia</td>
<td>483</td>
</tr>
<tr>
<td>Denmark</td>
<td>503</td>
</tr>
<tr>
<td>Estonia</td>
<td>512</td>
</tr>
<tr>
<td>Finland</td>
<td>541</td>
</tr>
<tr>
<td>France</td>
<td>497</td>
</tr>
<tr>
<td>Germany</td>
<td>513</td>
</tr>
<tr>
<td>Greece</td>
<td>466</td>
</tr>
<tr>
<td>Hungary</td>
<td>490</td>
</tr>
<tr>
<td>Iceland</td>
<td>507</td>
</tr>
<tr>
<td>Ireland</td>
<td>461</td>
</tr>
<tr>
<td>Israel</td>
<td>447</td>
</tr>
<tr>
<td>Italy</td>
<td>483</td>
</tr>
<tr>
<td>Japan</td>
<td>529</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>546</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>489</td>
</tr>
<tr>
<td>Mexico</td>
<td>419</td>
</tr>
<tr>
<td>Netherlands</td>
<td>526</td>
</tr>
<tr>
<td>New Zealand</td>
<td>519</td>
</tr>
<tr>
<td>Norway</td>
<td>498</td>
</tr>
<tr>
<td>Portugal</td>
<td>487</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>497</td>
</tr>
<tr>
<td>Slovenia</td>
<td>501</td>
</tr>
<tr>
<td>Spain</td>
<td>483</td>
</tr>
<tr>
<td>Sweden</td>
<td>494</td>
</tr>
<tr>
<td>Switzerland</td>
<td>534</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>492</td>
</tr>
<tr>
<td>United States</td>
<td>487</td>
</tr>
<tr>
<td>Vietnam</td>
<td>448</td>
</tr>
</tbody>
</table>

Source: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009.
The Engagement Gap

7 million students in the U.S. miss more than a month of school each year

- 75% start skipping in middle school or early high school
- 46% skip once a week or more

Why?

- 49% think school is boring
- 44% say it’s more fun to hang with friends

https://getschooled.com/attendance-research
The Modern Media Landscape
The Modern Media Landscape: Digital Media Threats & Opportunities

Kaiser Family Foundation, 2010
8- to 18-year-olds

Joan Ganz Cooney Center, 2011
0- to 11-year-olds
Digital Media Use Increases at About Age 8

Source: Gutnick, Robb, Takeuchi & Kotler, 2011
2004:
Kids were squeezing 8:33 hours of media exposure into 6:21
(Roberts, Rideout & Foehr, 2005)
2010:
Kids were squeezing 10:45 hours of media exposure into 7:38
(Rideout, Foehr & Roberts, 2010)
# Media Overload and Multitasking, Kaiser Family Foundation Research

## Media, Grades and Personal Contentment

<table>
<thead>
<tr>
<th>Media, Grades and Personal Contentment</th>
<th>Heavy Users</th>
<th>Moderate Users</th>
<th>Light Users</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Among all 8- to 18-year-olds, percent of heavy, moderate, and light media users who say they get mostly: †</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good grades (A’s and B’s)</td>
<td>51%^</td>
<td>65%^</td>
<td>66%^</td>
</tr>
<tr>
<td>Fair/poor grades (C’s or below)</td>
<td>47%^</td>
<td>31%^</td>
<td>23%^</td>
</tr>
<tr>
<td>Among all 8- to 18-year-olds, percent of heavy, moderate, and light media users who say they: ††</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have a lot of friends</td>
<td>93%</td>
<td>91%</td>
<td>91%</td>
</tr>
<tr>
<td>Get along well with their parents</td>
<td>84%^</td>
<td>90%^</td>
<td>90%^</td>
</tr>
<tr>
<td>Have been happy at school this year</td>
<td>72%^</td>
<td>81%^</td>
<td>82%^</td>
</tr>
<tr>
<td>Are often bored</td>
<td>60%^</td>
<td>53%^</td>
<td>48%^</td>
</tr>
<tr>
<td>Get into trouble a lot</td>
<td>33%^</td>
<td>21%^</td>
<td>16%^</td>
</tr>
<tr>
<td>Are often sad or unhappy</td>
<td>32%^</td>
<td>23%^</td>
<td>22%^</td>
</tr>
</tbody>
</table>

Heaviest media users struggle the most
Older Kids Spend More Time With Media Than School

**Media Use Over Time**

Among all 8- to 18-year-olds, average amount of time spent with each medium in a typical day:

<table>
<thead>
<tr>
<th>Medium</th>
<th>2009</th>
<th>2004</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV content</td>
<td>4:29(^a)</td>
<td>3:51(^b)</td>
<td>3:47(^b)</td>
</tr>
<tr>
<td>Music/audio</td>
<td>2:31(^a)</td>
<td>1:44(^b)</td>
<td>1:48(^b)</td>
</tr>
<tr>
<td>Computer</td>
<td>1:29(^a)</td>
<td>1:02(^b)</td>
<td>.27(^c)</td>
</tr>
<tr>
<td>Video games</td>
<td>1:13(^a)</td>
<td>.49(^b)</td>
<td>.26(^c)</td>
</tr>
<tr>
<td>Print</td>
<td>.38(^a)</td>
<td>.43(^ab)</td>
<td>.43(^b)</td>
</tr>
<tr>
<td>Movies</td>
<td>.25(^a)</td>
<td>.25(^ab)</td>
<td>.18(^b)</td>
</tr>
<tr>
<td>TOTAL MEDIA EXPOSURE</td>
<td>10:45(^a)</td>
<td>8:33(^b)</td>
<td>7:29(^c)</td>
</tr>
<tr>
<td>Multitasking proportion</td>
<td>29(^a)%</td>
<td>26(^a)%</td>
<td>16(^b)%</td>
</tr>
<tr>
<td>TOTAL MEDIA USE</td>
<td>7:38(^a)</td>
<td>6:21(^b)</td>
<td>6:19(^b)</td>
</tr>
</tbody>
</table>

Source: Kaiser Family Foundation, 2010
Digital Access Gaps Persist

- 77% of households have a computer and 68% have access to broadband.

- Of those with no broadband access, 20% rely on libraries and 12% on other people’s houses.

Photo from Flickr.com by Fiona Bradley; Creative Commons license
Low-Income Families Less Likely To Have Latest Tech Or To Use Apps

- Children from low-income households use apps and mobile devices less frequently than children from high-income households.

Common Sense Media, 2011
How To Engage The Children Likely To Be Left Behind?
How are Families With Young Children Integrating Digital Media into the Rhythm of Daily Life?

Figure 3: Which of these activities do you regularly do with your child? (Check all that apply)

- Watch television: 89%
- Read books: 79%
- Play board games (non-electronic): 73%
- Play games on a TV based console: 52%
- Play games on the computer or Internet: 44%
- Surf the Internet or visit websites of interest: 36%
- Create art or other items on the computer: 28%
- Play games on a mobile device or phone: 13%
- None of these: 2%

Figure 4: Which of the following activities do you enjoy doing most with your child? (Select just one)

- Watch television: 41%
- Read books: 23%
- Play board games (non-electronic): 18%
- Play games on a TV based console: 8%
- Play games on the computer or Internet: 4%
- Surf the Internet or visit websites of interest: 2%
- Create art or other items on the computer: 2%
- Play games on a mobile device or phone: 2%
- None of these: 1%
Families Matter Open Questions

• How are kids using technology to bridge learning across settings?
  – What are the benefits/challenges of BYOD programs?

• What is the most effective way to help parents through the transition from analog to digital?
  – How can we bring more awareness to parents?

• Will parents ever catch up?
  – Are there general, platform-agnostic guidelines we can offer parents?
Expanded Learning: Some New Models

Encourage youth to pursue their own interests by exploring the subjects they want to in depth.

Reaches more than **14,000** youth and educators each year, both in person and online.

**Youth-centered** – the design and programming reflect preferences of youth. Interest driven.

**A community** of civic and cultural institutions creating opportunities for youth to explore their interests in virtual and physical spaces.
Gaming: The Next Frontier for Afterschool?

- Games are the most popular digital activity for children ages 2-14, with 85% usage among device users.
- 97% of American teens play computer or video games.
- The average child starts to play computer games at age 6, and cell phone games at age 10.
- A 9-year-old spends ~55 minutes on a portable or video game console on a typical weekday, over double the amount of time spent by 6-year-olds.
- Kids are making their own games as well as playing them. [www.stemchallenge.org](http://www.stemchallenge.org)
Next Steps

• Provide technological infrastructure that supports media design and production.

• Create a culture of sharing meaningful media creations.

• Provide skilled mentors to support and respond to youth interests.

• Create mixed-age spaces

• Design spaces to create relationships
Recommendations

- **Modernize** Places in Every Community
- Create Professional *Learning* Communities
- Build Capacity and *Awareness*
Contact

The Joan Ganz Cooney Center at Sesame Workshop

www.joanganzcooneycenter.org

cooney.center@sesame.org
Using Games-based Learning to Teach 21st-Century Skills Outside the School Day

Global Kids

Barry Joseph
barry@globalkids.org
Global Kids, Inc.
Global Kids, Inc.

Racial/Ethnic Background of GK Participants 2010-11

- Black: 54%
- Latino: 27%
- Asian: 6%
- Caucasian: 3%
- Bi-racial: 2%
- Multi-racial: 1%
- Other: 1%
Online Leadership Program
Games-Based Learning

- National STEM Video Game Challenge™
- Virtual Video Project
- NYC Haunts
- Race to the White House
Playing For Keeps

national STEM Video Game challenge™
NYC Haunts
Virtual Video Project
Race to the White House
Geocaching
Electoral Issues

- College Tuition
- Gun Control
- Net Neutrality
- Medical Marijuana
Current GOAL
This travel bug was placed by us, young people in Global Kids, Inc. and the Brooklyn Public Library in the summer of 2012. We placed a total of 48 bugs all over Queens, Manhattan and Brooklyn associated with topics we feel are important to society and should be discussed in the 2012 Presidential Election campaigns. This travel bug is racing against the other travel bugs. If you want to get your and our point across, will you help it run the race?
Race to the White House

Do you think that this issue should be discussed in the debates, campaign stops, and in ads of the 2012 Presidential Election campaign? If so, then move it closer to Washington, D.C. If not, then move it away from Washington, D.C. On Tuesday, November 6th, 2012, the final votes will be tallied.

We hope to see photos of the bug on its travels and we would love to know why you chose to move it closer to or farther from the White House.
“In favor of legalizing for the purpose of being able to tax it, so this one will be moved closer to DC.”

“The theme of this TB hits home. My son is a Sophomore in college and I just graduated. I feel that college tuition should be much lower than it is now but not free.”

“I'm a strong believer of gun control... as a retired Police Officer I've seen, too many times to count, the harm that guns cause... thanks for the concept for this TB.”

“Lots of mileage. May be able to catch a lift to DC here. Romney announced his running mate 3 miles from this spot this morning!”

“Brought it back to a cache it had already been to. Just like a politician.... run you around in circles until you don’t know which way is up!”
“Some skills that being a part of Race to the White House have taught me are public speaking, communication skills, team work, and research. I've learned ... how to catch the audience's attention...: be loud, energetic, and informative.”

“I learned receiving help isn't always a bad thing.”

“I learned that the world we live in has a great amount of issues that are not being fixed. I enjoyed the discussion we had today about these issues and I would love to take part in making this world a better place.”

“The first thing I wanted to do when I was done geocaching was go take a shower. You're so sweaty and exhausted all you want to do is sit. One good tip is never sit or take a break while geocaching cause you will not want to get up lol.”
Race to the White House is a summer program where youth develop a digital scavenger hunt with GPS-enabled devices (geocaching) to create a public activity about the upcoming presidential election and its impact on issues of importance to our community and our country.

**Hard Skills**
- **Research**: Effectively seeks out information and evaluates its credibility.
- **Workshop Developer**: Can write a GK-style workshop.
- **Public Speaking**: Can speak with confidence in a public forum.
- **Online Writer**: Shows proficiency with the unique aspects of online writing that distinguish it from print writing.
- **Augmented**: The ability to enhance one’s experience of the world through integrating virtual data layers.
- **Geotagged**: Able to interact with physical space through a GPS-enabled tool.

**Knowledge**
- **GPS Mechanic**: Displays an understanding of how global positioning systems function.
- **Issue Expert**: Is well versed on a particular social or global issue.

**Role**
- **Civic Geocacher**

**Soft Skills**
- **GK Guidelines**: Can respect fully participate in Global Kids activities.
- **Collaboration**: Can work effectively within a group.
- **Critical Thinking**: Can critique information from a variety of perspectives and arrive at evidence-based conclusions.

**Participation**
- **Geocacher**: Possesses the knowledge and skill required to geocache, as both player and contributor.
- **PARK Explorer**: Has explored at least two new places within the NYC Park system.
- **Being There**: Attended all sessions with no unexcused absences.
- **Alum**: Have successfully completed a Global Kids program.
“Before this program I was a very independent worker. I felt that working in a group slows you down and if you want to get something done you have to do it on your own. As we say continuously in this program, "Team work makes the dream work"; and this is true. Every time we went Geocaching we needed to work together as a group to find certain caches. I learned to interact more with people and gain an understanding that at times everyone needs help, and with receiving help you learn new ideas and have a different point of view on a certain topic.”
“The parks that I'm use to attending either have basketball courts or a football field. Geocaching allowed me to travel and visit new parks and view different areas of the park.”

“You have to think about all the what ifs, ands, and buts. You think about all the good and bad causes (pros and cons)... You have to break it down. Get other peoples point of views so your not closed minded.”

"I feel I am now an issue expert because I can state an issue and have research to back [it] up. I can... explain why i think its important to me and why it should be important to... the community."
“While doing research for this project I was able to find reliable information by using the Brooklyn Public Library's articles and database. If I chose not to use the library's resource, I know that most websites that end with .edu or .org are reliable. Websites that end with .com can be anything. Blogs are not reliable for research. Most of the time blogs are made to get someone's opinion across, so it may not consist of facts. When doing research one of the main websites that pop up is wikipedia. Wikipedia is not a reliable source because anyone can change what is written to false information. When looking at a website it is easy to figure out if this is a biased website by looking at the name of the website. You can also read through the information and see if its only supporting one side of an issue or topic. If your reading an article from a newspaper it will most likely not be biased, unless it is the opinion section. If your getting information from a research project, it will most likely not be biased. If information is taken from an organization it will probably have information that supports what they stand for. After you gather all of your information you need to organize it properly to make it easy for others to read.
Games-Based Learning

National STEM Video Game Challenge™

Virtual Video Project

NYC Haunts

Race to the White House
Playing For Keeps
http://www.olpglobalkids.org/gaming/playing-4-keeps

NYC Haunts
http://www.olpglobalkids.org/gaming/nyc-haunts

Virtual Video Project
http://www.olpglobalkids.org/virtual-worlds/machinima/virtual-video-project

Race to The White House
http://www.olpglobalkids.org/gaming/geocaching

Barry Joseph
barry@globalkids.org
An on-demand archive of this webinar will be available at www.edweek.org/go/webinar in less than 24 hrs.
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