

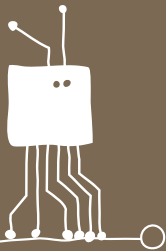
executive summary

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Getting over the slump:

June 2008

Innovation strategies to
promote children's learning



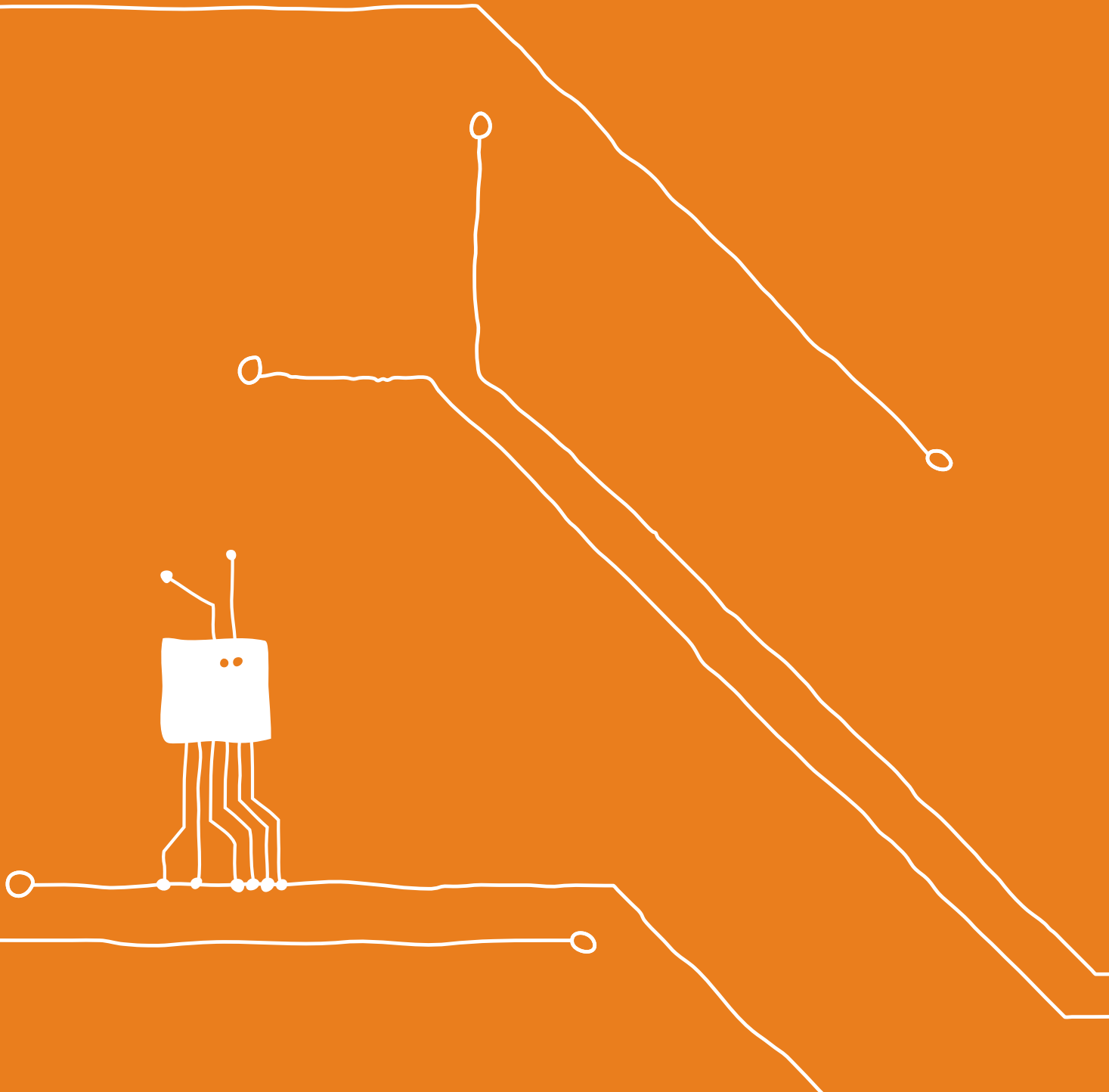
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The Joan Ganz Cooney Center at Sesame Workshop

foreword:
getting over the slump



Four decades after Joan Ganz Cooney completed the landmark study that led to the creation of *Sesame Street*, a new center honoring her path breaking leadership has been established at Sesame Workshop. The Center is focusing on key new educational challenges children face today, asking the 21st-century equivalent of Mrs. Cooney's original question, "How can emerging media help children learn?" The inaugural focus of the Center is to understand how the digital media — online, video games, cell phones, and other rapidly evolving content delivery platforms — can help children develop strong literacy skills. Its focus includes the vital "foundational literacies" such as reading and writing that all children must develop as they enter school, as well as evolving competencies such as critical thinking, creativity, and intercultural skills that students now need to compete and cooperate in a global, interconnected age.

The Center's initiatives focus on research, model and partnership development, and dissemination to inform policymaking. The paper *Getting Over the Slump: Innovation Strategies to Promote Children's Learning*, by the noted learning scientist and video game expert James Paul Gee of Arizona State University, is the first in a series of policy reports to promote needed reforms to harness the potential of digital media in schools and community settings. The paper notes exciting innovations in game play that can prepare young learners to master basic and advanced literacy skills, the untapped power of interactive media to build new learning communities, and the potential of "situated learning" to transform children's educational experiences. Gee provides a fresh and urgent course of action to prevent the socially debilitating and economically disastrous "fourth-grade reading slump." He argues that by integrating naturally engaging digital media into the culture of literacy learning beginning in the primary grades, our nation can help prepare a new generation that will be more deeply knowledgeable and innovative. The paper outlines a provocative "new learning equation" and a vital action plan that all of the nation's pivotal sectors should carefully consider.

Michael Levine, Ph.D.

Executive Director

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executive summary

The United States is facing an educational crisis. U.S. students are doing poorly in literacy, math, and science compared with their peers in other industrialized countries. In addition, globalization is changing the demands of the workplace. American workers are now facing competition from skilled workers in many low-cost countries. Further, technology is in the process of automating all tasks reducible to rules. To stay ahead and sustain our standard of living, we must prepare our students for the 21st century with new skills — they must be capable, creative, innovative problem-solvers — along with the traditional core skills.

The foundation for all learning is basic literacy. This means more than the simple decoding of words; it also requires the ability to infer the meaning of unfamiliar words and, eventually, to infer meaning from patterns of information.

Elementary education in the United States has two urgent problems:

- The fourth-grade slump: Most fourth-graders can decode, but too many of them today cannot read to learn. They are unable to negotiate the “language of content” (e.g., the language of math, science, social studies), which is more abstract, complex, and precise than everyday oral language.
- The digital gap: Access to digital media is important, but perhaps more important is access to adult mentoring in the use of digital media. Students need adults to help them learn to leverage technological “know-how” to learn content, produce knowledge, and develop high-level expertise.

The fourth-grade slump consistently leads to educational failure. The digital gap leads to a failure to become confidently “tech-savvy,” a 21st-century skill crucial for success, and even for survival. The fourth-grade slump and the digital gap interact with each other: Each makes the other worse.

The most accurate predictor of school success is the size of a child’s vocabulary at age five of “book” words (words more likely to appear in written texts than in spoken language). This breadth of vocabulary is created by parents talking to children, answering their questions, reading to them, modeling their own pleasure in reading, and offering their children a wide variety of experiences in the world.

Three questions immediately arise:

- How do we help children who don’t have a sufficient vocabulary in kindergarten?
- How do we help older students who cannot read to learn?
- How do we help English Language Learners?

One answer is to capitalize on the affordances of digital media to address three salient issues:

- The fourth-grade slump
- The digital gap
- The development of 21st-century skills

Kids are already attracted to digital games, digital environments, and other digital media. Many students — probably the ones already skilled at reading to learn — are learning content and becoming proficient at consulting and cooperating with others to advance their knowledge (i.e., participating in communities of practice).

Because digital media easily, perhaps uniquely, can combine action in relationship with environment, this technology can generate situated meaning — vocabulary used in actual situations, which makes meanings clear and easier to remember — in myriads of settings. Thus digital media, whether in a format custom-designed to be educational or, in some cases, in off-the-shelf products, have the potential to increase the “book” vocabulary, and the concepts attached to such words, for children whose families are unable to do so.

Digital media offer other advantages as well. They naturally elicit problem-solving behavior and attitudes in students, and they have the potential to create different modes of assessment. For example, they can be used to work on real-world problems so that students can thus demonstrate mastery. They can also be used to track how learners learn, moment by moment, so that, eventually, we can give students constant feedback based on our knowledge of various trajectories of learning.

Given the deficiencies in American education, we offer the following six policy recommendations for consideration by business leaders, policymakers, scholars, educators, citizens, and parents.

1. Fund digital research and development to invest in what works¹

The United States spends billions of dollars every year on remedial reading, to little avail. We need to invest in finding out what works and then amplify those practices. We should examine in depth the specific educational benefits of digital media and the impact of adult scaffolding on children’s digital experiences; and assess what works best for children from different backgrounds and with different learning profiles.

¹ For a discussion of research and development issues, see Shore, R. (2008). *The Power of Pow! Wham!: Children, Digital Media & Our Nation’s Future. Three Challenges for the Coming Decade.* New York: The Joan Ganz Cooney Center at Sesame Workshop. Available at www.joanganzcooneycenter.org.

2. Establish a Digital Teacher Corps

A Digital Teacher Corps, modeled on Teach for America and the North Carolina Teaching Fellows, should be established to work in the lowest-performing elementary schools throughout the country. The goal should be to train teachers to help students learn to transform information for discovery and problem-solving, not leave it inert in “storage.” Teachers will do this by working with digital media, in particular multiplayer games, that invite students into an environment that teaches skills, vocabulary, facts, and different ways of thinking.

3. Design and test alternative assessments and new standards

Besides measuring rote skills, assessments should be measuring the skills necessary for problem-solving, specifically, adaptive ability, lifelong learning habits, and the ability to adopt new technologies and ways of understanding from multiple cultural perspectives. Digital media have the potential to offer deep assessment of these skills across virtual worlds, and to help advance teaching by documenting learners’ moment-by-moment progress.

4. Create “a place in every community”: New literacies technology centers

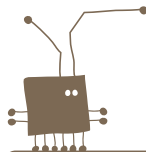
Building on models like Intel Computer Clubhouses and Club Tech of the Boys and Girls Clubs, it is time to create a place in every community where elementary-age children can go to gain confidence in their literacy and interactive technology skills. One of the most important components of these centers would be the presence of knowledgeable adults who can help children make the most of technology.

5. Governors’ digital partnership schools

Each state should establish at least one digital-partnership elementary school as a model and demonstration site. These schools should be laboratories for testing many different digital approaches to learning and assessment, as well as for testing different ways to break down the barriers between in- and out-of-school learning. They could become, as well, a hub for the professional development of digitally savvy teachers.

6. Modernize public broadcasting

Public broadcasting initiatives should expand experimentation with new formats such as games, virtual worlds, and social network communities that will engage children in both literacy and digital skills. We further recommend developing creative new business models and incentives to ensure that intellectual property is more widely distributed to schools and other learning centers. By participating in the Open Educational Resource (OER) movement, educational media companies in the U.S. could leverage the tens of millions of dollars of public investment in literacy, math, and social skills programming for children for further public benefit.



advancing
children's learning
in a digital age

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