

# *US Visionary Conference*

*Susan Kenney & Paige Johnson, Intel Corp*

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# Agenda

The Importance of 21<sup>st</sup> Century Skills and Education  
Transformation

ICT Case Study: Argentina

21<sup>st</sup> Century Assessment

# Where will the 21<sup>st</sup> century take us?

No one really knows.....

Consider My “n of 1”.....



Retirement year: **2060**

Likely number of Jobs in  
her career: **15+**

And most of those jobs  
**do not exist today.....**

# 20<sup>th</sup> century skills just won't cut it anymore

Jobs that rely on  
**repetitive tasks,**  
**basic knowledge,**  
**or physical labor**  
are **quickly** being  
**replaced**

By  
**machines**



or  
**outsourced**



# To thrive in the 21st century, citizens must be

- **Critical thinkers & problem solvers**
- **Creative innovators**
- **Communicators**
- **Collaborators**
- **Self-directed learners**
- **Information and media literate**
- **Literate in language arts & math**

*“The illiterate of the 21<sup>st</sup> Century will not be those that cannot read and write- but those who cannot learn, unlearn and re-learn”*

Alvin Toffler, American Futurist

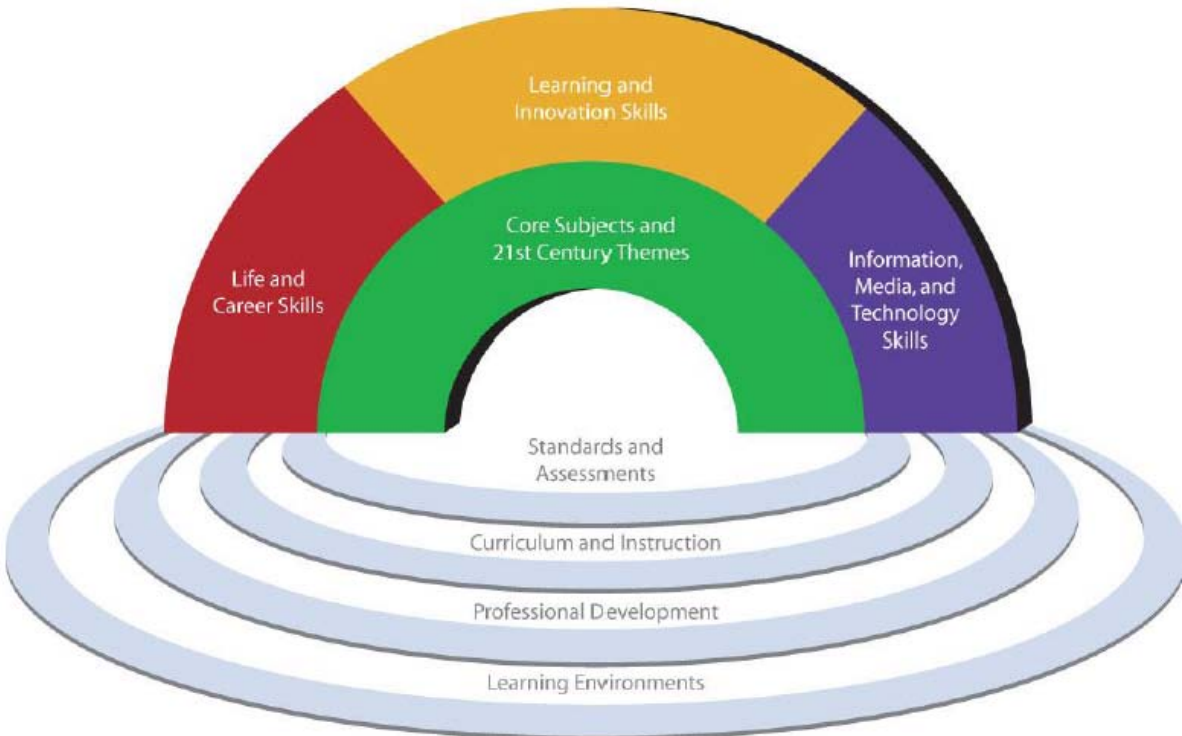
# The Cost of the Educational Achievement Gap?

*"If the United States had in recent years closed the gap between its educational achievement levels and those of better-performing nations such as Finland and Korea, GDP in 2008 could have been \$1.3 trillion to \$2.3 trillion higher. This represents 9 to 16 percent of GDP."*

*The Economic Impact of the Achievement Gap in America's Schools" McKinsey Report, 2009*

*"...there is strong evidence that the cognitive skills of the population - rather than mere school attainment - are powerfully related to individual earnings, to the distribution of income, and to economic growth."*

*- Hoover Institute, Stanford University ([http://edpro.stanford.edu/hanushek/files\\_det.asp?FileId=206](http://edpro.stanford.edu/hanushek/files_det.asp?FileId=206))*



# Examples

China

Jordan



*Programs of the Intel® Education Initiative are funded by the Intel Foundation and Intel.*

# Keeping the Ideas Flowing.....

Collaborate with peers from around the world:

<http://Engage.intel.com>

Get classroom ideas from 20 countries through an innovation odyssey:

[www.intel.com/education](http://www.intel.com/education)



# San Luis, Argentina

## The Power of Digital Inclusion

**Susan L. Kenney**  
Director, Global Education Sector  
Intel



April 2010

# San Luis, Argentina



- pop. 420,000
- Agriculture, mining, manufacturing
- Per capita income \$9,200 (USD)
- Argentina's most extensive freeways
- 20 year plan for 100% digital inclusion

# San Luis Digital



- 235 initiatives
- Comprehensive Internet access
  - Free Wi-Fi (broadband Internet) and IP telephony
- "All Kids Online:" 1:1 eLearning in primary schools
- 50% tax credit and financing for home PC purchases
- Digital Inclusion Centers in 46 locations
- eGovernment, eHealth IT industry incubator ++

# "All Kids Online" Primary Schools

todos los  
chicos  
en la  
red

- Teacher professional development & coaching
- Digitized content resources
- ICT
  - Full-featured laptops for teachers
  - Intel® -powered Exomate PCs for students
  - Connectivity in schools and homes
  - School support software
  - PC & network support & maintenance
- Evaluation tied to student achievement



# Balance Zero Collaborative Environmental Project



Children calculated total electric energy consumed in their towns, electricity produced, and related carbon dioxide emissions

Then calculated the number of trees needed to offset emissions, and set up a tree-planting program



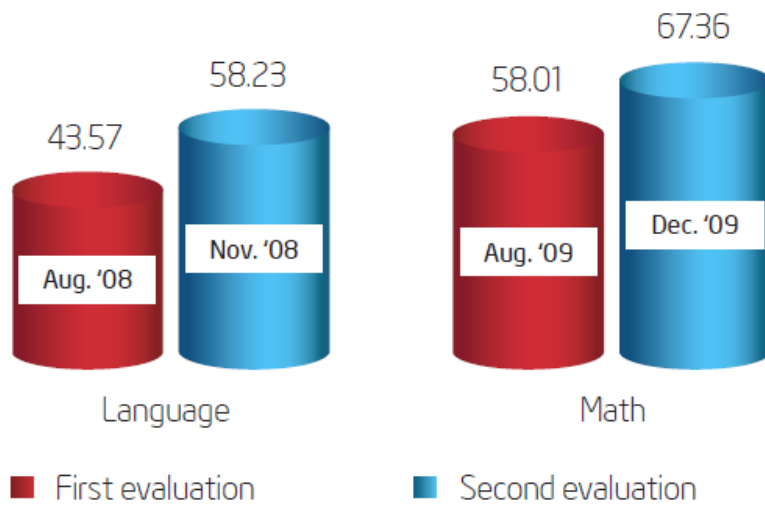
# The Results



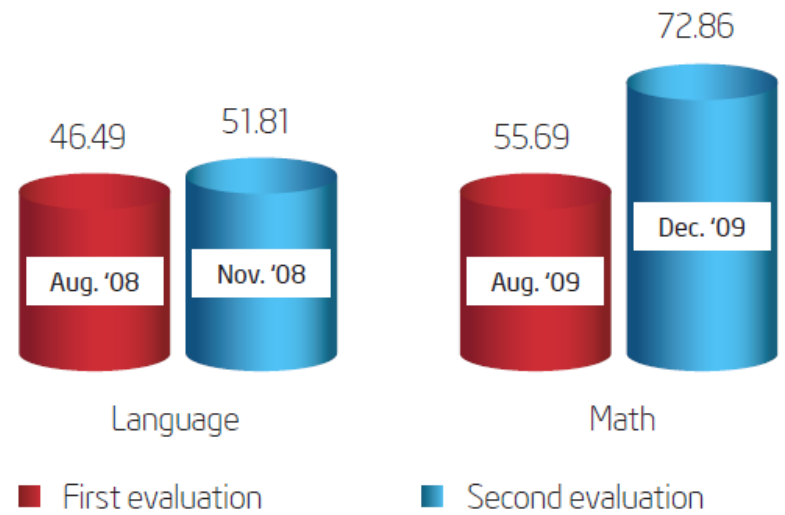
- 74% Internet penetration
  - 85% teacher training
- Homes with PCs: 31% in Dec '08 → 70% in Dec '09
  - 70 community centers

# The Results

Evaluation results for the 3rd grade



Evaluation results for the 6th grade



(Source: Center for Studies in Public Policy and La Punta University), [www.funacionceplorg.ar](http://www.funacionceplorg.ar), [www.ulp.edu.ar](http://www.ulp.edu.ar)



# 21<sup>st</sup> Century Assessment

# 21<sup>st</sup> Century Skills & Assessment



## ***Summative Challenges:***

- Allow students to construct responses to open ended items
- Incorporate adaptability to novel situations
- Largely performance-based
- Measure collaboration

## ***Formative Opportunity:***

- Add value to both teaching and learning
- Makes students' thinking visible



# Assessment and Teaching of 21st Century Skills

[www.atc21s.org](http://www.atc21s.org)

*Research and development of new approaches, methods and technologies for measuring the success of 21st century teaching and learning in classrooms around the world*

- Sponsored by Intel, Cisco & Microsoft
- 60 education experts to lead the research phase of the effort
  - What are 21<sup>st</sup> C skills (measurable definitions)
  - What new info can be collected with computer-based assessments
  - How to develop reliable & valid methods for scaled performance assessment
- 6 Founder Countries will take research findings and pilot in their assessment reform efforts (Singapore, Australia, Finland, UK, US and Portugal)
- Key Challenges of the ATC21S project:
  - Developing new kinds of psychometrics (educational and psychological assessments).
  - Making students' thinking 'visible.'
  - Accounting for new modes of communication.
  - Ensuring the validity of standards on which assessments are based.



**Examples:**

**Finland  
Sweden  
India**



# Intel's Support of Formative Assessment

The screenshot shows the Intel Assessing Projects website. At the top left is the Intel logo. The main header reads "Assessing Projects | Using Assessment to Improve Teaching and Learning". Below this are navigation tabs: "Overview and Benefits", "Try It", "Assessment Plans", "Assessment Strategies", and "Workspace". A user greeting "Welcome, Guest | [Sign Out] | Edit Sign in Profile" is visible. The left sidebar contains "Personal Library" with a "Show" button and a list of items including "My Assessments" and "Research Interview Checklist—High School". The main content area is titled "Assessment Library > Thinking Skills > Creativity" and lists several assessment tools with brief descriptions: "Creative Flexibility Checklist—Elementary", "Creative Flexibility Checklist—Middle School", "Creative Fluency Checklist—Middle School", "Risk-Taking Checklist—Elementary", "Creativity Evaluation Rubric—Elementary", and "Risk-Taking Checklist—High School".

Assessment in a  
21st Century Classroom

Coming soon.....

A graphic featuring a colorful pie chart with seven segments in shades of teal, orange, pink, and blue, set against a dark blue background.