IBM Cloud Academy Overview

Mary Olson
molson@us.ibm.com
914-766-7565
Agenda

- Education for a Smarter Planet
- Cloud Computing Enabling Transformation
- IBM Cloud Academy
Education for a Smarter Planet
Forces Impacting Today’s Educational Institutions

40% increase
40% increase in public spending per student in K-12 schools over the last decade in developed countries

30% loss
Over 30% of students in higher education in developed countries without a degree or certificate

42% unemployed
42% of the 25-64 year-olds with less than an upper secondary qualification are not employed

15PB every day
15 petabytes of data are created every day in the world – 8 times the volume in all U.S. libraries.

10M teachers
10.3 million new teachers required worldwide to fill the demand for basic education

53% increase
53% growth in higher education enrolment in the past decade

70¢ of every $1
70% on average is spent on maintaining current IT versus adding new capabilities.

Improving Outcomes

2.5x increase
2.5 increase in the number of students expected to enroll in higher education outside their home countries by 2020

Managing Data and IT Resources

Finding More Efficiencies

Source: *Education at a Glance 2009. Organization for Economic Cooperation and Development*
Five Trends point to Transformative Strategies and an Educational Continuum

- **TECHNOLOGY IMMERSION**
  - Any Device Learning

- **PERSONAL LEARNING PATHS**
  - Student-Centered Processes

- **KNOWLEDGE SKILLS**
  - Learning Communities

- **GLOBAL INTEGRATION**
  - Services Specialization

- **ECONOMIC ALIGNMENT**
  - Systemic View of Education

**Consumer devices** represent diverse learning opportunities for all students.

Interoperable systems put students at the center of processes and services.

Comprehensive, multi-faceted student learning and collaboration environments promote 21st c. skills.

Shared services allow economies of scale while specialization promotes differentiation.

Education programs and economic initiatives align for long term sustainability and growth.

Source: Education for a Smarter Planet, IBM Corporation 2009
Education for a Smarter Planet: Building Human and Intellectual Capital

- **Smarter Classroom**
  - Education Quality
  - Access to Learning
  - Enabling Student Success and Skills
    - Analytics of aligned student data for improved outcomes
    - Open education resources and tools for personalized learning and teaching

- **Smart Administration**
  - Reducing Costs
  - Improving Efficiencies
  - Optimizing Educational System Operations
    - Data analytics and tools for institutional performance and asset management
    - Redesigned business processes and open standards for interoperability

- **Innovation in Research**
  - Accelerating Scientific Discoveries
  - Economic Value through Innovation
    - World class high performance computing tools and infrastructure
    - Aligning research initiatives to support economic recovery and sustainability

- **Learning**
- **Managing**
- **Discovering**

**Cloud Computing**
- Open Platforms
- Shared Services
Dr. Geoffrey Nicholson, inventor of the Post-It™ note

Transforming $ into Knowledge

Research

Transforming Knowledge into $$$

Innovation
The mission of the IBM Cloud Academy is to provide an organization for K-12 schools and higher education institutions who are actively integrating cloud technologies into their infrastructures to share best practices in the use of clouds and to collaborate with partners to create innovative cloud technologies and models.

From IBM Cloud Academy Charter as developed by initial member institutions, 1Q 2010
Three Functions of the IBM Cloud Academy

**Integrate**

Cloud Services and Technologies
Implement solutions for education based on IBM’s world class cloud services and technology, accelerating the transformation to a smarter planet

**Collaborate**

with peers, researchers and developers
Work with colleagues from around the globe in a cloud-based collaboration forum to share best practices, ideas, and insights

**Innovate**

Cloud Services and Technologies
Participate in the definition of emerging cloud technologies and implementations with IBM researchers, developers and partners
What are the Goals of the IBM Cloud Academy?

- Provide a forum for the exchange of **best practices** to accelerate the successful deployment of cloud computing models that enhance education.
- Gain early insight of and access to emerging cloud computing technologies **development and research** from IBM and partners.
- Develop **repositories** for cloud computing curriculum, tools and resources for teaching, skills development and implementation.
- Foster **pilot projects and collaborative programs** by members to evaluate technical, financial and service qualities of cloud computing.
- Disseminate our **insights, performance metrics, benefits and understanding** of cloud computing through reports, white papers, presentations and other scholarly and technical communications.
Membership Qualifications Criteria and Responsibilities

- **Membership Participation Qualifications**
  - Active integration of IBM cloud computing technologies and solutions into their institutional infrastructure
  - Ability to make an institutional-level commitment to participate in the IBM Cloud Academy over a multi-year timeframe
  - Commitment of participation in collaborative projects and initiatives of the IBM Cloud Academy

- **Member Responsibilities**
  - **Engage.** Use cloud computing technologies and solutions for a pilot or production service or infrastructure.
  - **Participate.** Share insights, lessons learned and experiences through the collaboratory, events, presentations and publications with IBM Academy members and the broader education community.
  - **Advance:** Contribute to or lead strategic projects as defined by the IBM Cloud Academy
  - **Feedback:** Provide IBM with feedback on newer solutions and cloud computing models and approaches, and their applicability in education.

*IBM Cloud Academy Charter, 1Q 2010*
Membership Benefits

- **Community Access.** Access to a support community that is changing local IT culture by embracing cloud computing.

- **Knowledge Sharing.** Thought leaders and technical experts with knowledge of proven cloud computing technologies and solutions.

- **Project Support.** Technical and business case examples, benchmarking data and access to resources that support cloud computing projects.

- **Project Funding.** Funding opportunities for cloud computing projects and research that are competitively awarded.

- **Resources.** Strategies to use cloud computing to transform education and research in K-12 and higher education globally.

- **Headlights:** Trends in K-12 and higher education globally as relates to the move to cloud computing models and approaches.
Collaboratory for IBM Cloud Academy Member Projects

- Collaborative Themes for 2010 agreed upon by charter members
  - Research Computing models using cloud
    - Including Analytics and Business Intelligence on a cloud
  - Delivering Educational Resources via a cloud
  - Building the institution’s future infrastructure
    - Including Roadmap for adoption & integration into current infrastructure
- Supported by an IBM Technical Board
  - Comprised of IBM researchers, architects and developers specializing in cloud computing
  - Members of the IBM Academy of Technology
Further discussion on Cloud Academy contact: Larry Postlewait lapostl@us.ibm.com
Resources on IBM and Cloud Standards

IBM Products and Services:  http://ibm.com/cloud

Cloud Success Stories:  http://www.youtube.com/ibmcloud

IBM Cloud Academy:
  Program Director: Chris Bernbrock, cwbernbr@us.ibm.com
  http://www.ibm.com/solutions/education/cloudacademy

Cloud Standards Information

- List of Resources: http://www.opencloudmanifesto.org/resources.htm
- Open Cloud Manifesto: http://www.opencloudmanifesto.org/
- Cloud Computing Use Case Project:
  http://groups.google.com/group/cloud-computing-use-cases
- Simple Cloud API: http://www.simplecloudapi.org/