

Learning Innovation and Technology Consortium

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Fostering Innovation for Social Change

A Position Paper from the Learning Innovation and Technology Consortium

For more than a decade, the business world has focused its attention on innovation. From popular books to business school journals, from blue-chip corporations to start-ups, the advice for 21st century success comes down to this: *innovate or die*. “Ideas and innovation are the most precious commodity in the new economy,” reports the *Harvard Business Review on Innovation* (Hargadon & Sutton, 2001, p. 56). In *The Innovator’s Dilemma* and *The Innovator’s Solution*, Clayton Christensen outlines the risks to companies that fail to embrace innovation as a core value.

The message is beginning to spread beyond business. Government leaders, educators, researchers, private foundations focusing on social change, and a new breed of social entrepreneur embrace and encourage innovation as a strategy for building a better world. Indeed, historian Karen Armstrong suggests that a modern society can thrive only when two major characteristics are present: independence and innovation. (Armstrong, 2002)

But what does innovation mean in today’s world? Why is it an essential skill? Why is innovation of critical importance to the developing world? And how can we teach today’s young people to become the next generation of innovators?

Solving everything from global concerns to local community challenges depends on being able to generate, recognize, and apply innovative thinking. The Learning Innovation and Technology Consortium (LITC) brings together people dedicated to creating strategies for teaching innovation. LITC is an innovation in itself—a nonprofit organization that is pioneering educational materials and resources designed to engage learners in the processes of innovation, including authentic problem solving, invention, creativity, and social entrepreneurship. LITC is forging connections among diverse thinkers and organizations focusing on the common theme of innovation. By building alliances and learning from innovators around

the world, LITC aims to help grow innovation as a force for positive global change.

The Meaning: Defining Innovation

Innovation is a buzzword. It shows up in the pages of scholarly journals, popular magazines, and international reports; in advertisements and marketing slogans; and on hundreds of Web sites. At last count, Amazon stocked more than 78,000 books that discussed innovation. The *Harvard Business Review* has published so many articles on innovation that a special volume was published on the theme in 2001.

Innovation is a complex term describing a complex set of behaviors and outcomes. It's about new ideas, but real innovation involves much more than that. Defining innovation is a useful exercise. Creating a shared vocabulary is an important step in discussing, understanding, and elevating this powerful idea so that we begin to understand innovation as a process that can be replicated.

Innovation is partly about new ideas. But that's only the dictionary definition. A true innovation is more than a new idea. It's a force for change. As Harvard Business School Professor Rosabeth Moss Kanter explains:

The best innovations can be mass produced, adopted by users in other settings, and supported by additional investors...new knowledge and capabilities will stem from innovation. (Kanter, 2001, pp. 170-71)

Innovation is also partly about invention. Inventors have long been celebrated as heroic characters. In the United States, inventors are considered quintessentially American. Textbooks and museum exhibits recount the stories of Thomas Edison, the Wright brothers, Eli Whitney, and the many inventors whose breakthroughs have shaped history and changed society. Even our own Information Age has spawned inventions in fields ranging from technology to medicine to communications, producing a new hall of heroes. The history of invention tends to depict inventors as those who, through genius and persistence, turn a new idea into a viable product. That makes inventiveness a critical piece of innovation, but not the whole story.

And, innovation is partly about creativity. The creative spirit produces paintings, dance, poems, sculptures—diverse and often wonderful outcomes of self-expression. The arts provide us with the most visible examples, but creativity also transforms medicine, business, transportation, and every other aspect of society. Stanford University's Graduate School of Business started offering a course on creativity because the world of business began to demand creative thinkers. (Goleman, Kaufman, & Ray, 1992) The CEO Forum on Education and Technology has identified creativity as an essential skill, and suggests educators find ways to encourage creativity, curiosity, inventive thinking, and risk taking in students.

(CEO Forum, 2001) Innovation draws on creativity, but not as an end in itself. Innovation is about applying creativity to solving problems. Often, we only recognize true innovation in hindsight—when we see the breakthrough that engendered other ideas or acted as a catalyst for new products or processes.

So, what does LITC mean by innovation? True innovation can be identified by both the process and the results, so we define it this way: *Innovation means the process of thinking and acting creatively to solve an identified problem, with the outcome being a new process or product that acts as a catalyst for new cycles of development.* Thus, innovation inspires more action—not simply more ideas, but more innovative approaches to putting ideas to use. Innovation thus increases potential and opportunity, and sparks new cycles of thinking—revolutionizing how we learn, how we live, and how we work.

LITC has developed a working definition of innovation that deliberately integrates diverse perspectives. As a consortium, we consider it our mission to draw ideas from the international worlds of business, community development, environmental action, education, and social entrepreneurship. The increasingly global nature of education and economics demands that we consider new ways of thinking and problem solving.

Social innovation applies the innovative process to serving the social good. Change starts with ideas. Through innovative thinking, new ideas become reality. They transform how we live. LITC acknowledges the need for innovators and innovative thinking worldwide, but we focus specifically on making a difference where it counts most—in the social sector. Therefore, LITC fosters the kind of innovation that has the potential to create enormous social improvements.

From a business perspective, innovation is an essential force for maximizing profits. For example, Deloitte Research, an international consulting firm, has created deloitteinnovation.com, an effort to “demystify innovation” in its customers. deloitteinnovation.com offers an entire toolset and interactive Web site for clients whose future success depends on innovation. Indeed, Deloitte argues that innovation needs to be seen as a core component of an organization’s growth strategy. (Deloitte Innovation)

In the hands of a social entrepreneur, innovation takes on even greater importance. It becomes an economically viable way to harness a new idea that can transform society. The Ashoka Foundation highlights the unique role of social entrepreneurs and their value as innovators:

Identifying and solving large-scale social problems requires a social entrepreneur because only the entrepreneur has the committed vision and inexhaustible determination to persist until he or she has transformed an entire system. The scholar comes to rest when he expresses an idea. The

professional succeeds when she solves a client's problem. The manager calls it quits when he has enabled his organization to succeed. Social entrepreneurs go beyond the immediate problem to fundamentally change communities, societies, and the world. ... **Nothing is as powerful as a big, new idea—if it is in the hands of a first-class entrepreneur.**

(Ashoka Foundation, 2004)

What does this meshing of innovation and entrepreneurship look like in practice? ApproTEC is a company based in Africa that sells simple, foot-powered water pumps that enable subsistence farmers to substantially increase their productivity and break the cycle of poverty. In Kenya alone, the ApproTEC pump has been credited with launching some 30,000 new businesses. ApproTEC's marketing and educational outreach efforts have been supported in part by the Lemelson Foundation, a private U.S. foundation that has launched an international program to inspire, encourage, and recognize inventors, innovators, and entrepreneurs. To date, the foundation has invested more than \$87 million, with an increasing focus on those who use innovation for sustainable development worldwide.

The Mission: Powering the Innovation Generation

In 2005, PBS will air a remarkable series of documentaries called "The New Heroes," underwritten by the Skoll Foundation. The stories showcase the work of social entrepreneurs, like the founders of ApproTEC, whose innovations are bringing electricity, water, medicine, and other life-changing tools and resources to people in the developing world. Each story illustrates the results possible when an innovative idea is coupled with a strategy for action. That's where innovation becomes a force for lasting change.

While such stories are inspiring, it will take more than inspiration or even luck to help today's young people become tomorrow's heroes. Creating a new generation of innovators requires deliberate teaching strategies and resources. Learning to innovate involves learning strategies for applying higher-order thinking to solve problems, and also gaining the confidence and savvy to put these problem-solving ideas to work. Young people need to see that innovation is not only for the geniuses among us, but rather a process they can grasp and use—with powerful results. When young people acquire innovation literacy, they master a new way of understanding and interacting with their world. They develop a new way of thinking about their future.

Throughout the developing world, innovation is emerging as a cornerstone of economic development efforts. Singapore, for example, is investing more than \$2 billion to build a state-of-the-art research facility, hoping to attract the world's leading innovators in biotechnology and other fields. At the same time, the country has set a national goal of creating a new generation of innovative

thinkers. Singapore's educational system, known for producing students who lead the world in mathematics and science achievement, is now being redesigned to foster innovation.

In an interview with *Wired* magazine, Philip Yeo, co-chair of Singapore Economic Development Board, explained that the country's biggest challenge is not finding cash, but creative, innovative people.

The government is suddenly encouraging a type of creativity that it has all but purged from this hermetically sealed country. "People have had a very good deal here, but unfortunately compliance is part of the problem for the future. They don't think for themselves." (Luman, 2004)

Teaching for innovation is a mission of global importance. This mission fits well with other goals set out by leaders of the knowledge economy. The CEO Forum, World Bank, education researchers, and others have invested significant amounts of time and energy in identifying the skills that young people need to succeed in today's economy, including creativity, collaboration, communication, scientific literacy, and problem solving. All of these skills support the larger goal of innovative thinking.

Innovation offers a new approach to problem solving. Learning to attack problems innovatively means being willing to reconsider yesterday's processes and products. It means not replicating outdated solutions that no longer make sense. It means taking a specific approach to problem solving that incorporates sustainability and long-term success for lasting impact. And it means generating a ripple effect of increasing potential for others to follow. Innovative efforts don't just solve an interesting challenge, but yield enduring benefits for society.

The Method: Teaching Innovation

LITC aims to elevate innovation as a process worth understanding. We are developing unique educational strategies and resources to foster the development of innovative thinkers. We also work to build the spirit of collaboration that will inform, disseminate, and sustain innovation. This approach will help to create a new generation of innovators worldwide, and also help all of us to recognize, appreciate, and leverage innovation when we see it.

LITC's educational materials will be grounded in effective instructional practices while building on the considerable body of business research about innovation. We know from business experts, for example, that key factors drive innovation, such as: creating and nurturing a system for experimentation; using technology as a tool for rapid experimentation and testing; and having a tolerance for failure and an openness to new, even disruptive, ideas. (*Harvard Business Review on*

Innovation, 2001) All of these factors should have a place in formal and informal learning settings.

Similarly, we know from educational experts that research-based strategies can increase student achievement. Many of the instructional strategies outlined by Marzano, Pickering, and Pollock in their landmark *Classroom Instruction That Works* (2001) align naturally with the process of innovation. In particular, innovative thinking involves:

- Identifying similarities and differences
- Reinforcing effort and providing recognition
- Cooperative learning
- Setting objectives and providing feedback
- Generating and testing hypotheses

Marzano has also identified the powerful learning benefits that accrue when students are engaged in meaningful problem solving and are inspired by the innovative efforts of others. As he explains (Marzano & LeMaster, 2004):

People who accomplish extraordinary things follow similar patterns of behavior— patterns that become a framework for students to follow as they set and pursue their own personal goals.

Thus, learning to be an innovative thinker involves learning how to:

- Analyze authentic problems and find novel solutions
- Use relevant technologies
- Experiment, explore, and test ideas
- Collaborate with others
- Communicate ideas
- Sustain and spread innovation
- Find new avenues, such as social entrepreneurship, through which to spread innovation

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