

# A New Conversation About Education and National Prosperity

## A Partnership Between Education and National Prosperity Goals

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# Introduction

## **A NEW CONVERSATION ABOUT EDUCATION AND NATIONAL PROSPERITY**

A powerful NEW VOICE linking National Goals to Education requirements is the document A NATIONAL STRATEGIC NARRATIVE written by two prominent advisers to the Joint Chiefs of Staff, Captain Wayne Porter of the U.S. Navy and Marine Corps Colonel Mark Mykleby, who wrote the paper for the Woodrow Wilson Center. They state that ***“We must recognize that security means more than defense, “The first priority, should be “intellectual capital” and a sustainable infrastructure of education, health and social services to provide for the continuing development and growth of America’s youth.***

The officers’ education argument is summarized in the introduction to the Narrative by Anne - Marie Slaughter, Professor of Politics and International Affairs, Princeton University, *“The strategic goal and its allied educational goal are to prepare American students to participate in a 21st century environment featuring positive competition in global politics and economics. We want to become the strongest competitor and most influential player in a deeply interconnected global system, which requires that we invest less in defense and more in a sustainable environment.”*

## **AN EDUCATIONAL STRATEGIC NARRATIVE FOCUSED ON PREPARING AMERICAN STUDENTS TO PARTICIPATE SUCCESSFULLY IN A 21<sup>ST</sup> CENTURY ENVIRONMENT.**

The National Strategic Narrative, with its emphasis on human capital or “Intellectual Capital” stresses that positive competitive skills are a foundation for national success in global systems and economies. This emphasis leads to the need to re-examine the capabilities of our educational systems to develop the student skills required for the 21<sup>st</sup> Century environments. Building on the Strategic Narrative themes, an Educational National Strategic Narrative can be described. The first core theme of the Educational Strategic Narrative focuses on the direct relationship between U.S. educational systems and our capacity to develop the human/intellectual capital required as a platform of our national prosperity.

This Human/Intellectual Capital motif shifts educational attention and priorities from content focused disciplines to the learner as the focus of teaching and learning. In this motif, the emphasis is on the learner becoming a skilled competitor, able to function successfully in today’s global economies. Basic educational requirements include attention to a redefined array of skill categories including: entrepreneurship, creativity and innovation, ingenuity as a new basic skill, adaption of new problem solving perspectives, a global connections emphasis on the integration of systems reflected in collaborative processes and products. This Educational Narrative, also describes some future forms that teaching and learning can take to develop the new educational tools.

These themes develop a vibrant and contemporary partnership between education and national prosperity. However, current educational data and reports describe an educational system out of sync with national economic priorities. To overcome a growing disconnect described in the Educational Narrative, A well-defined PARTNERSHIP BETWEEN EDUCATION AND GOALS OF NATIONAL PROSPERITY is essential.

## A Partnership Between Education and National Prosperity Goals

**REVERSING A GROWING DISCONNECT.** Human/Intellectual Capital is the cornerstone of American Prosperity. However, the special historical partnership between students and education as a basis for prosperity in the U.S. is becoming disconnected, jeopardizing human capital needs for future generations.

The students are the present and future Human Capital in our economy. The availability of skills, talent, and knowledge of students, who will become global participants, is key to economic health. **Here knowledge has become the most important factor in economic life, and its greatest competitive weapon.** (*Thomas Stewart, Intellectual Capital, 1988*)

However, the relationship between current educational systems and student knowledge and skills development is out of sync. The compounding forces are three fold: (1) new theories of learning reflecting a shift in problem solving theory and techniques, (2) current education policies and practices **not** 21<sup>ST</sup> Century focused, and (3) student performance not matching the requirements of education or the economy. The impact of this growing disconnect is no longer just a local problem; it has national and global implications.

**A NEW CONVERSATION ABOUT EDUCATION AND NATIONAL PROSPERITY.** We are 12 years into the 21<sup>ST</sup> Century in a world that has changed. Now is the Era of Global Connectedness where the crucial global issues are economic and the **crucial global actions are educational**. Yet, our dominant educational models still are based in the 20<sup>th</sup> and even 19<sup>th</sup> centuries.

A favorite new term is “Going Global” and “global” is the prevailing adjective of ideas and themes **which need to be taught:** *global cooperation, global communication, global environment ecology*. Yet, on several measures of global skills, the United States no longer holds a leading position. “The education and skills of the American population are losing two races—one with technological progress, and another with the skill levels of workers in other, lower-wage nations.” (*Ferguson, Predator Nation, 2012*)

Education today also is at the center of national criticism asking: *What happened to our premier educational system?* Educators themselves are asking: How do we teach successfully with a steady erosion of the content of education, the high cost of low skills and the perceived dismantling of the educational system by sections of the corporate and political establishments?

The big worry is that this “destabilization” of the reputation of public education is undermining social and economic cohesion and innovation in this country. We are becoming immobilized by the so-called **high cost of low educational performance**. Yet, aside from a few reformer philanthropists, “There is no wealthy, powerful industry that has an (an agenda) to improve the education and skills of ½ of the American population.” (*Ferguson, Predator Nation*)

## OUR ECONOMIC FUTURE DEPENDS ON WHO IS BEING EDUCATED TODAY.

### **A snapshot of today's students sends a sobering signal of a growing demographic divide.**

Many of the students reflect a profile of non-native speakers of English, cheaters, chronic absentees, dropouts, and low readers.

**WHO IS COMING TO OUR SCHOOLS?** The number of school-age children (children ages 5–17) who spoke a language other than English at home rose from 4.7 to 11.2 million between 1980 and 2009, or from 10 to 21 percent of the population in this age range. In 2011, about 14 percent of youth ages 16–24 were neither enrolled in school nor working (*Nat. Center for Educational Statistics*). “

COLLEGE ENROLLMENTS REFLECT MORE DEMOGRAPHIC PROBLEMS FOR NATIONAL TALENT DEVELOPMENT NEEDS. According to author, Andrew S. Rosen in [Change.edu, 2012 Rebooting For The New Talent](#), college enrollment figures from 2008-2009 show of 19 million Americans enrolled in colleges/universities, only 7 million fit the classic profile: 39% attend college part time, 36% go to two-year colleges and 37% are 25 years or older.

**WHO IS STAYING?** Up to 15 percent of American children are chronically absent from school, missing at least one day in 10 and doing long-term harm to their academic progress, according to a [new study](#) by researchers at [Johns Hopkins University](#). (*Perez, N.Y. Times, 2012*) Another report describes that seven thousand students drop out of school each day because they lack the literacy skills needed to be successful. (*National Center For Educational Statistics*)

### **WHO IS STAYING? WITH WHAT SUCCESS? A MIXED SCOREBOARD**

- 70 Students at a top high school in NY recently had to Retake Exams After Cheating, one of many current examples of this rising school problem.
- More than eight million American students cannot read or comprehend what they read even at a basic level.
- **THE HIGH COST OF HIGH SCHOOL DROPOUTS.** Every school day, nearly 7,000 students become dropouts. Annually, that adds up to about 1.2 million students who will not graduate from high school with their peers as scheduled. Most high school dropouts see the result of their decision to leave school very clearly in the slimness of their wallets. The average annual income for a high school dropout in 2009 was \$19,540, compared to \$27,380 for a high school graduate, a difference of \$7,840. The impact on the country's economy is less visible, but cumulatively its effect is staggering. (*Alliance For Excellent Education, Nov. 2011*)

**U.S. STUDENT RANKINGS IN GLOBAL ASSESSMENTS SEND ANOTHER SOBER SIGNAL** The *Programme For International Student Assessment* (PISA) shows low capabilities of U.S. 15 year olds. [PISA Data Reflects American Schools' Failure to Prepare Students to Compete Internationally in the Digital Age](#)

The most recent comparison of developed nations from PISA shows that, although the United States is edging up in math and science, still our achievement places the U.S. only in the middle of the pack in the developed world:

- \*25th in Math.
- \* 17in Science,
- \*12<sup>th</sup> in reading, an area where many countries' scores, including ours, have fallen since 2000, the United States now ranks 12th, tied with Poland and Iceland and far below neighboring Canada,

\*Only 1/3 meet readiness benchmarks for higher -level work, with no change in reading literacy scores, while a number of countries outperforming the US. doubled. \* Even more disturbing is the fact that only about one-third of 15-year-olds in the United States meet reading benchmarks that indicate readiness for higher-level work. (*The Education Trust, 2009*) Rosen describes that one of the few postsecondary stats in which the U.S. was first, was the high rate at which the students drop out of college. (ROSEN, 2012)

**A TEACHING IMPERATIVE: VOICES OF THE TEACHERS SEND ANOTHER SIGNAL OF PROBLEMS CAUSING EDUCATIONAL DISTRESS: (1)** An Alarming attrition rate of teachers. Forty-six percent of new teachers in this country quit teaching after five years or less, with that percentage growing to fifty percent in urban areas. **(2) Lack of Parental Involvement. (3) Reading Epidemic** It is a well-known fact that a large majority of our nation's students are not reading on grade level, and this can have devastating effects on their education. One (2008) report found that more than eight million American students couldn't read or comprehend what they read even at a basic level. (*From Boyer and Wolfe, 2008, Focus on Colleges and Universities, Vol 2*)

What happens to the other students, the non-problem students, academically ready for a vibrant learning experience? These students, often ignored as the focus of instruction, become the "silent majority" invisible in a classroom with non and low-performers who dominate the instructional time and efforts.

### **INTELLECTUAL CAPITAL, EDUCATION, AND NATIONAL PROSPERITY, INITIATING A GROWING DYNAMIC OF CONNECTEDNESS**

**Students Who Learn More Earn More.** For instance, if the students who dropped out of the Class of 2011 had graduated, the nation's economy would likely benefit from nearly \$154 billion in additional income over the course of their lifetimes. According to a study published last month by the McKinsey Global Institute, by 2020, the world will have a *surplus* of up to 95 million low-skill workers and a *shortage* of up to 40 million college graduates. (*Alliance For Excellent Education, Issue Brief, Nov 2011*)

The National Strategic Narrative merges concepts of national prosperity and "intellectual" capital. A strategic role also emerges for education, as the developer of "intellectual capital." The Narrative's call for more support toward innovating global solutions suggests a major educational re-focusing on developing that human capital **capable of** global participation and competitiveness and innovating problem solving. A call for better managing of the global information grid underscores the importance of a stronger educational emphasis on the development of global communication skills.

## AN EDUCATIONAL/STRATEGIC NARRATIVE: PREPARING AMERICAN STUDENTS TO PARTICIPATE IN A 21<sup>ST</sup> CENTURY ENVIRONMENT

**National and global prosperity require educational change.** Two pillars for teaching and learning now drive conventional education practice and theory: (1) course content and (2) skills development. New concerns that will shape new course content and skills development include that teaching and learning must be driven by a point-of-view about the future and content and skills must be global to be relevant. *“Education and internet technology are the two principal drivers of productivity in advanced economies.”* (Ferguson)

**A NEW CO-INVESTMENT IN SKILLS IS NEEDED.** Skills development is a dynamic process with new skills being identified. Problem solving rises to become *The Art of Problem Solving*. For example a new, emerging skill is **QUANTITATIVE RIGOR**, an information predictive skill, uncovering trends in data that have not been available before, which describes how strategists are able to forecast War’s future activities. (*L.A. Times, Forecasting War’s Future, July 18, 2012*)

**THE NATIONAL SURVIVAL SKILLS And Intellectual Capital: Critical thinking and information literacy, (how to find and use information)** stand beside oral and written communication skills as fundamental proficiencies required for academic, professional, and personal success. These lifelong learning abilities overlap and intersect in many areas, including the abilities of our students to be critical consumers of information as well as creators of new knowledge. *Yet, in the United States, about one-quarter of 15-year-olds fall into the lowest proficiency level on assessments of skills and knowledge.*

**ADVANCED SKILLS OF INTELLECTUAL CAPITAL:** Developing the tools of effective global engagement will include a different view of today’s student’s skills. Thomas Friedman, in *The World Is Flat, A Brief History of the 21<sup>st</sup> Century*, characterizes the new learner by his essential skills.

“He must be a Synthesizer, Explainer, Adaptor, Leverager who can figure out how one person can do the job of 20, a Localizer, who can discover local angles to global problems, a Collaborator skilled in networking and participating in teams, a Developer of An Environmentally Sustainable Enterprises.” We add that the learner must be an Integrator, A Relationship Manager, Information Manager, and Task Manager.

**WE MUST INNOVATE TO SURVIVE**, thus a focus on creativity and innovation is essential to prepare students for the future. **The INNOVATOR** will think creatively, work creatively with others. (*21<sup>st</sup> Century Skills*)

**HARMONIZING 21<sup>ST</sup> CENTURY SKILLS WITH STUDENT’S WORLD VIEWS.** The “Must Have 21<sup>st</sup> Century Skills” emphasize what students can do with knowledge rather than what units of knowledge they have. (*Education Sector Reports, 2008*) Yet, today’s learner often describes the world this way: **“Imagine that the world today is full of individual pieces.”** and today’s teacher now must teach how we can problem solve in an environmental system characterized by *complexity, chaos, competition, connectedness and on-going change, a world of “C Concepts.*

**THE BIG NEW THEORY: A SHIFT IN LEARNING FROM Linear TO Non-Linear Problem Solving Emphasis.** We need a NEW U.S. EDUCATION INVESTMENT AGENDA based on the 21<sup>st</sup> Century world in which a rising key influence on national and global models of prosperity is the distinction between our world as a linear system based on predictable, cause and effect models, and our world as a non-linear system, based on holistic, interconnected, trans-disciplinary models. EQUILIBRIUM THEORY, the core idea of modern economics, that everything is potentially interconnected, supports the non-linear framework.

As the foundation for problem-solving theories, the linear-non-linear difference impacts on our key national systems of Education, Economics and Security. **We speak of these systems in the plural for a reason, generating a dynamic chemistry of connectedness.**

Educational change is not easy. "Human societies see what they want to see" according to author and theorist Chris Hedges in his "How to Think." (Digg website).

**Two Canadian educators urge us to "Look at our classrooms. In a traditional transmission-based classroom the desks are in rows, the students are seen as individual entities separate from each other, designated and classified by their performance which is determined by standardized testing and compartmentalized assessment. This theory or educational philosophy is very ingrained in our educational system."**

**But what, they ask, if we look at the classroom with a very different set of lenses. What will we see? Complexity theory, as far as education goes, states that all the components in a classroom such as: teacher, students, environment, context, framework of curriculum, engagement and the interpersonal relationships, create a complex system focused on interactions"** (FROM the Complexity and Education site from the University of Alberta, Complexity as a theory of education pdf by Brent Davis and Denis Sumara)

**OUR EDUCATIONAL FUTURE: A SUMMARY: "SMART" EDUCATIONAL MODELS THAT ARE REVOLUTIONIZING TEACHING AND LEARNING.**

#### **1. THE NEXT WAVE OF CHANGE FOR COURSE CONTENT WILL:**

- EMPHASIZE THE RISING importance of COMPLEXITY, INNOVATION, AND INGENUITY THEORIES affecting curriculum and skills development.
- Acknowledge how Complexity theory redefines 'the basics' of education, away from a controlled and controlling subject-based education and towards a discovered, inter-disciplinary, emergent and constructivist curriculum.
- **Emphasize integrating** learning from various disciplines through collaborative products and processes such as team teaching, project based learning.
- **Implement A 21<sup>st</sup> Century Skills development plan which blends academic and technical skills development.**
- **Ensure that Character Education is Part of the Core Curriculum.** Schools must do more than teach the basic three R's; they must also teach young people about responsibility, reliability.
- **Adopt New course content and learner vocabulary for SUSTAINABLE EDUCATION.**
- **Teach how to interact within the national and global environments.**

**2--THE NEXT WAVE OF CHANGE FOR CLASSROOMS: THE FLIPPED CLASSROOM.** THE KHAN ACADEMY: A NEW MODEL OF EDUCATIONAL REFORM: Called the largest blended-learning experiment in the nation: an emerging educational model of the classroom as a learning laboratory, the Khan Academy, is gaining in prominence as a true transformational model of teaching and learning. His video driven teaching method is aimed at fundamentally changing the role of teachers in the classroom and redefining the concept of homework. His big concept is called “flipped classroom,” fast becoming a new buzzword in education. (*Time*, July 9, 2012)\_

**3. NEW KNOWLEDGE FOR THE FUTURE.** A growing innovative theory referred to as THE INGENUITY GAP is defined as “the space between problems that arise and our ability to solve them.” Author Homer-Dixon focuses upon complexities, unexpected non-linear results. The theory exemplifies how multiple theories contribute to this system- based model: Here **Ingenuity performs as a new basic skill** to combat the gap between global problems and solutions. Educational concepts will address communication and relationship skills, concentrating on more complex relationships, as they become networks or systems. Ingenuity theory reflects the interdisciplinary nature of problem solving and *ingenuity* integrates with other contemporary learning-teaching theories such as the following:

- Use of *Open Content Technology*, which shifts ways students study and learn.
- *Open Data Systems*, which make data freely available and accessible to all.
- *Workshop Based Education where the student participates in real life problem solving.*
- Making *change less challenging* by participating in communities, teams, coalitions

## CONCLUSION

The nation needs to do a much better job of teaching and measuring advanced 21<sup>st</sup> century skills that are the indispensable currency for participation, achievement, and competitiveness in the global economy. Our challenge as educators is to provide that school environment in a new vision where goals of successful learning and achieving prosperity can be linked together in a new educational paradigm, which prepares students to participate successfully in the 21<sup>st</sup> Century environment.

**A BARRIER TO CHANGE: TODAY’S LEARNERS: THINKERS OR TEST TAKERS?** A *National Research Council report tells us that test-based incentives don’t produce real student achievement, yet, “* State and federal officials endlessly debate the role of test scores in teacher evaluations, but they pay too little attention to building creativity—while ensuring that vital academic materials is still covered. It is not easy to figure out how schools can balance creativity with academic rigor, productive thinking with knowledge. **The nations that do so will have the competitive edge in the future.”** (*The Los Angeles Times*, July 15, 2012)



**CONCLUSION: BIG QUESTIONS:** How do we educators cause the transformation of education as the platform for sustained national prosperity? If, as some write, that our corporate cultures have effectively severed us from human imagination, how do we educators re-imagine teaching and learning and teach for tomorrow? . **Re-imagine is the new key verb in the dialogue on innovation.**

**WE WILL:**

- Re-imagine the **Educational Investment Motif** toward new content and skills development relevant to developing effective 21<sup>st</sup> Century global participation and prosperity.
- Seek **better funding toward innovating global solutions as a foundation for new SMART EDUCATION.** Failure to invest in education will impact on wealth creation and social mobility as well as national security and prosperity.
- Push for innovation to be accepted and disseminated more readily.
- Bridge the gap between research and reform.
- Describe how new **global cooperation is dependent on global communication** and new global skills include emerging skills of “ingenuity”, “abilities to develop solutions to complex problems, and new skills questions such as “if innovation and creativity are vital to today’s learning,” are they skills or content?
- Implement new skills models bridging the well publicized “skills gap” between skills taught and skills required by jobs.
- Reverse information failure **by** better managing of **the global information grid**, information deficit and filling information and skills gaps.
- **Let the Best and Brightest Teach: Create a National Teacher Corps.**
- **Invite students to be partners in designing new education models.**

**BETTER TELL OUR TEACHING-LEARNING STORY**

American Education today is not well reconciled with today’s global environment and global systems along with a disconnect and fragmentation in educational strategic thinking and program implementation.

We need to **change the messaging of the educational system.** Re-discover its confidence factors in exciting initiatives and innovation resting on a partnership, which emphasizes the education dimensions of national PROSPERITY.

**Education’s Challenge:** We need to **Implement a transition** from tensions between current educational practice, technology, and global requirements, moving from past educational policies and practices to A NEXT GENERATION FOCUS ON EDUCATING AS A NEW THEME REPLACING THE BI-MODAL MODELS OF TEACHING AND LEARNING.

## **A Narrative Tells A Story And Should Be Ongoing.**

The story has many “Chapters.” This Narrative serves as Chapter 1 of The Educational Strategic Narrative and opens the New Conversation About Education and National Prosperity. Additional Chapters can focus on the numerous topics relevant to this Conversation including these, among others:

1. Models integrating new emerging theories with educational process and practices. These include Theories of: Non- Linear, Equilibrium, Ingenuity, Innovation, The C Theories: Complexity, Chaos, Creativity, Connections (Global), Collaboration.
2. Global Skills Development
3. Global Cooperative Models
4. An Agenda For A Series Of Conversations and Dialogs With Professionals and Students.
5. The High Cost of Low Performance Of Our Students
6. 21<sup>st</sup> Century Skills
7. THE FUTURE OF Sustainable Development Education
8. Further Analysis of Old and New Practices: Responses To These Guiding Questions:
  1. WHAT’S GOING?
    - Linear based educational paradigm
  1. WHAT’S STAYING? **How to disseminate the best practices.**
    - Small-scale initiatives that create momentum for transformational change.
    - Core educational principles to be retained—focus on integrating knowledge from various disciplines with team teaching, trans-disciplinary curriculum, project based learning.
  2. WHAT ‘S NEW?
    - A future for sustainable education.
    - More attention to systems theories.
  3. WHAT NEW ALLIANCES SHOULD BE FORMED? (Transnational Partnerships, Interdisciplinary Coalitions
  4. CHALLENGES NOW AND FUTURE

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## ADDENDUM

ARTICLES AVAILABLE At [www.dhbraycom](http://www.dhbraycom).

1. Bibliography For This Narrative.
2. BRAY CONSULTING
  1. Sustainable Development Education Bibliography
  2. Student Focused Participation Model
  3. Skills Alliance Model
  4. Skills Master Plan Model For 21<sup>st</sup> Century
  5. Academy Proposal For California Colleges: Disseminating Promising Practices For Skills Development
  6. Transnational Skills Alliance For Africa, 2012
3. CSICG ( GLOBAL SKILLS INVESTMENT CONSULTING GROUP)
  1. Global Skills Investment Description
  2. CSICG Global Skills Model, 2010

### ***GLOBAL SKILLS INVESTMENT CONSULTING GROUP PARTNERS***

Dorothy H. Bray, Ed.D obtained her degree in Educational Psychology at the University of Southern California. She has served as Dean, Vice-President, Provost-CEO in California Community Colleges and Hawaii Private Two year Colleges.

She is the founding President of the LARC (Learning Assessment Retention Consortium of 82 community colleges in California) which produced data and new models on remediation instruction in two-year colleges. She is the author of articles on Assessment and Basic Skills Instructional Issues and has served on numerous state and National committees. Her international background includes presentations and consulting in England, Japan, Finland, The Netherlands, as well as participating in an English-American Administrative Network of Women Administrators.

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Helen Gilchrist, PhD, has been Principal of two English Further Education Colleges (Bury and Nelson Colne Colleges). Under her leadership, Bury College was judged outstanding by the independent, national inspection service.

Whilst a serving Principal, she was seconded to take over as Interim Principal for a failing college in severe financial difficulties and began its successful process of recovery.

She has served on a number of national committees on 14-19 education, curriculum, and qualifications and lifelong learning. She is now an educational consultant, her work includes a major strategic review of the National Association of Colleges. Her international experiences include presentations and consultancies in New Zealand, Europe and the U.S. Dr. Gilchrist was awarded a CBE (Commander of the British Empire) by the Queen for her services to further education.

