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A PARTNERSHIP BETWEEN NATIONAL GOALS OF PROSPERITY AND SECURITY AND EDUCATION: NEW CHALLENGES FOR ASSESSMENT

NEW ASSESSMENT MODELS ARE ALL ABOUT ASSESSING NEW SKILLS WHICH ARE LINKED TO NATIONAL GOALS OF PROSPERITY AND SECURITY

A New Partnership Between Education and National Strategic Goals evolves from a core shared National and Educational goal: to prepare students **to be competitive successfully in the 21st Century Environment.**

NEW VOICES- NEW THEORIES- NEW MODELS **A NATIONAL STRATEGIC NARRATIVE** **THE INGENUITY GAP**

New voices providing conceptual frameworks for a new partnership are (1) A National Strategic Narrative, written by two prominent advisors to the Joint Chiefs of Staff, Captain Wayne Porter of the U.S. Navy and Marine Corps Colonel Mark Mykleby, published in 2011 by the Woodrow Wilson Center at Princeton, University. (2) An important rising influence is the author Thomas Homer-Dixon who identifies a growing innovative theory referred to as The Ingenuity Gap (Thomas Homer-Dixon, Knopf 2000)

Both new voices transform our skills development focus providing a platform for the potential of new skills for the future. The National Strategic Narrative with its emphasis on “**Intellectual Capital**” stresses that positive competitive skills are a foundation for national success in global systems and economies. Author Thomas Homer-Dixon describes the Ingenuity Gap as the space between problems that arise and our abilities to solve them.

Rethinking Skills and Assessment: The Strategic National and Global Environment and Assessment: A FOCUS ON SKILLS DEVELOPMENT AND ASSESSMENT OF SKILLS AS STRATEGIC INVESTMENTS, NOT SERVICES.

The emphasis on “developing *Intellectual Capital*” requires a new skills development and assessment culture. The exceptionalism demands of Intellectual Capital require “exceptional skills. Introducing the new Super-Skill of *Ingenuity* reflects the needs of a contemporary and future investment in new skills.

WE PROPOSE A NATIONAL CONVERSATION FOCUSED ON LINKING NEW MODELS OF SKILLS DEVELOPMENT AND RELATED ASSESSMENT MODELS TO EMERGING STRATEGIC REALITIES.

A NEW CONVERSATION ABOUT EDUCATION AND NATIONAL PROSPERITY

SKILLS MATTER

The two most powerful words in the 21st Century are “ABILITY TO”, The fundamental facility of the skills and competencies systems that are the indispensable currency for participation, achievement and competitiveness in the global economy.

The ingenuity, agility and skills of the American people are crucial to U.S. competitiveness In an economy driven by innovation and knowledge ... in marketplaces engaged in intense competition and constant renewal ... in a world of tremendous opportunities and risks ... in a society facing complex business, political, scientific, technological, health and environmental challenges ... and in diverse workplaces and communities that hinge on collaborative relationships and social networking. (21ST CENTURY SKILLS, The Partnership for 21st Century Skills is a leading advocacy organization focused on infusing 21st century skills into education.)

Emerging skills expectations have overrun the reality of the current skills development paradigm disqualifying the traditional skills delivery systems with its hierarchal ladder of developmental courses. The test-taking mentality has introduced the dilemma of schools developing “test-takers” rather than “thinkers.” “For the past decade, the United States has focused nationally on closing achievement gaps between the lowest- and highest-performing students—a legitimate and useful agenda, but one that skirts the competitive demand for advanced skills.” (21st c. Skills) The result is in a degeneration of skills proficiencies development.

RISING RETURNS OF SUPER- SKILLS IN THE 2013 SKILLS ECOSYSTEM: AN ASSESSMENT CHALLENGE

In today’s Skills Ecology a new emphasis on Ingenuity, as a key contributing skill for Intellectual Capital, introduces a new Category of what we call Super-Skills, taking its place in the global arena, where a Super-Skill, described as a Blended Skill, replaces single-source skills.

Ingenuity skills and success are allied in the 21st Century environment, as this modern skill is a key to today’s successful competitive participation.

NEW CHALLENGES FOR ASSESSMENT. *Shifting the Assessment Conversation Beyond Accountability To Strategic Assessment.* **Re-thinking assessment places assessment activities at the nexus of education and national prosperity and security.**

The Nature Of Skills Definition Is Changing. INGENUITY: A NEW CATEGORY OF SUPER SKILL: A NEW ASSESSMENT CHALLENGE

THE TRANSFORMATION OF THE SKILLS AND ASSESSMENT FOCUS CAUSES US TO LOOK BACKWARD AND FORWARD AT THE SAME TIME. *Assessment has remained out of step with the growing complexity of skills.*

Past models have not been successful in relating assessment to national goals—current models place too much emphasis on a growing student profile of deficiencies—translated by some practitioners as “The Death March Of the SLO’s.”

The Answer Lies In The Future, Not the past, WITH WELL DEFINED STRATEGIC MODELS. In the 20th Century, the focus on Basic Skills development shifts in the 21st Century to an emphasis on SUPER-SKILLS, a new category of skills.

*We live in a Human Capital time requiring **new skills of Intellectual Capital.** It is said that national security is no longer a function solely of military might but is closely linked with “human capital” and that this capital is only as strong as the skills models which develop it. (INTELLECTUAL CAPITAL is the knowledge, applied experience, enterprise processes and professional skills, which are valued assets in today’s environment. (Journal of Intellectual Capital)*

As the skills we assess are changing—A new rhetoric is emerging: This focus on American *Exceptionalism* requires exceptional skills such as “Ingenuity” and introduces these concepts:

- A New Skill System To Develop” *Intellectual Capital*”
- A post Basic Skills time and *pre-Super Skills* time of Ingenuity.
 - Shift from deficient skills themes to *upskilling*.
 - *New Skills Formation* models which convert the problem solving of Ingenuity into an organized behavior.
 - Basic and advanced skills can be learned together- *discarding the prevailing bi-modal motif of skills.*
 - *Ingenuity Assessment* that focuses on the use of a wide range of idea creation techniques.
- *Strategic Assessment: A Focus On What Can Do With Knowledge: Developing the right capabilities.*

A KEY ISSUE IS HOW TO INVOLVE THE STUDENT IN HIS OWN ASSESSMENT PROCESSES.

INVESTING IN THE NEW SUPER-SKILL OF INGENUITY

Introducing the new super-skill of “Ingenuity” reflects the needs of a contemporary and future investment in skills. The challenge is not just what the Super Skill of Ingenuity is, but also we need to know how it works as a skill and

what to do with it. Educational concepts will address communication and relationship skills, concentrating on more complex relationships, as they become networks or systems.

A Super-Skill

1) Is Interdisciplinary, Drawing On Communication, Creativity, Cognitive Behaviors Of Problem Solving

(2) Blends Skills, omitting the current prevalent Basic – Higher Level Skills Dichotomy (3) Reflects that New Skills Evolve From New Knowledge

Ingenuity Takes Its Place In The Skills Eco-System That Will Generate The Dynamic Chemistry To Be Demonstrated As “Intellectual Capital?”

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STRATEGIC ASSESSMENT: HOW WE CAN ALIGN ASSESSMENT GOALS WITH EVOLVING NATIONAL STRATEGIC GOALS?

1. Create positive change by relating assessment to national goals as

Strategic assessment: developing the right capabilities identified as “ingenuity and intellectual capital”

2. Emphasize that the development of the strategic skill of “Intellectual Capital” requires a new skills development and assessment culture that addresses *higher-level skills*.

3. Focus on how NEW COMPLEX SKILLS ARE EVOLVING FROM NEW KNOWLEDGE.

For example, Ingenuity is the skill TO FIND AND IDENTIFY A PROBLEM WITH PROBLEM SOLVING ABILITIES at working out how to achieve things or the skill to invent new things or ideas.

4. **EMPHASIZE WHAT SKILLS WE ASSESS ARE CHANGING:** moving from a post - basic skills time to a pre-super-skills time introduces a new emphasis on the Super-Skill of Ingenuity. Ingenuity taking its place in today’s Skills Ecosystem that generates the dynamic chemistry to be demonstrated as “Intellectual Capital”

5. **COMMUNICATE THAT ASSESSMENT SYSTEMS HAVE TO REMAIN DYNAMIC** In assessing the new super-skill of Ingenuity,

6. **FOCUS ON A FUNDAMENTAL TRANSFORMATION OF THE RELATIONSHIP BETWEEN SKILLS DEVELOPMENT AND ASSESSMENT.** For example the premise “*What is assessed will be learned*” re-positions assessment as a leading influence in the skills development sequence.

7. **ADOPT NEW TOOLS OF ASSESSMENT: New tools will simulate they types of situations student’s activity will face. Examples: A SKILLS PASSPORT.** A shift in resumes. Resumes will be what can do, rather than what have done.

8. **DOCUMENTATION REPLACES TEST SCORES:** as a sample of student competency development, documentation would replace testing and test scores as evidence of student competency development.

The noted Assessment expert, Dr. William Turnbull (ETS) 1992) described this principle:“ We should not think of student performance as an answer on a test but rather as a WORK PRODUCT, expressed in some observable form and documented in a rubric summary. performance as expressed as a problem solved as with ingenuity. Forms include: writing, drawing a chart to predict relationships, etc.”

8. **DEVELOP NEW FEEDBACK FOR SUPER-SKILLS, WHICH EMPHASIZE WHAT THE STUDENT IS DOING WITH KNOWLEDGE.** For example, **Feedback** should take the form of process-oriented cueing (or task-valid cognitive feedback) helping the student: perceive his strengths and *upskilling needs*, learn how others perceive his Ingenuity skilling, monitoring student collaborative participation.

9. ADOPT THE PRINCIPLE OF **DIFFERENTIAL OUTCOMES** FOR STUDENTS as an individualized competency record. HERE, MEASURES AND OUTCOMES ARE TENTATIVE.

10. **LINK ASSESSMENT AND POLICY DEVELOPMENT.** Report on new skills results linked to national goals of prosperity and security as outlined in A National Strategic Narrative.

BE WHERE HISTORY IS HAPPENING: NEW VOICES- CREATING POSITIVE CHANGE BY RELATING ASSESSMENT TO NATIONAL GOALS:

10 PILOT PROJECTS FOR YOUR PARTICIPATION IN THE NEW CONVERSATION

DEVELOPING NEW PARTNERSHIPS

- 1- **National/International Student Learning Panel:** Co-creating with our students, activating the learner voice and perspective on assessment modeling. Elicit student input at the front of the educational process of model development.
2. **Working With A National Strategic Narrative,** www.nationalstrategiconnarrative.org a strategy document for the future of the U.S., which defines education to be a national priority: define and demonstrate how investments in education are vital to the future prosperity and security of our nation. Assessment's role will be to define and demonstrate the new results that can be achieved.

FROM A BASIC SKILLS TIME TO A PRE-SUPER-SKILLS TIME

- 3-- **Assessing New Super Skill "Ingenuity":** Ingenuity performance indicators
Blended skills, collaboration skills--assessing student engagement, Problem solving: fluency in use of analogy/metaphor; Idea generation, Creativity skill set.
4. **Activity Based-Assessment,** emphasis on adaptive, emergent abilities, contributing to becoming competitive in the global and national agenda.
- 5--**Benchmarking of Ingenuity Skilling:** focus on contextual skills of becoming competitive. Describe past and emerging practices that help students demonstrate ingenuity. Describe key academic behaviors of Ingenuity skilling.
- 6--**New tools of Assessment: Skills Passport** The skills passport is an innovative product developed and used primarily in the UK.
7. **Redefining Success:** Value of Student Self-Appraisal in Assessment models. Assessing how many mistakes students can generate, then analyze with self-appraisal of mistakes.

NEW EDUCATOR VOICES: HOW DO WE ALIGN ASSESSMENT GOALS WITH EVOLVING NATIONAL STRATEGIC GOALS?

8. **ADDRESS WHO WILL TEACH THESE NEW SKILLS**
And The TENSION BETWEEN CRITICS OF HIGHER EDUCATION AND FUTURE FORECASTS
WHAT QUESTIONS SHOULD TEACHERS BE ASKING TO DEVELOP INGENUITY AS A SUPER-SKILL?
9. **New messaging:** Link policy and the development of skills and assessment.
Communicate The Importance Of The Relationship Of Skills And Assessment To National Goals Of Prosperity And Security As Described In "A National Strategic Narrative."
10. **Empowering the Education investment motif:** what new investments in innovation, creativity, and models are possible through global consortia, collaborative models?

SUMMARY: A New Conversation About Education And National Prosperity

The Rising Need To Link Education and National Goals For Prosperity and Security requires A NEW FRAMEWORK WHICH ENCOURAGES ONGOING DIALOGUE.

The Educational Challenges And A New Partnership With National/ International Goals Of Prosperity And Security will focus on *Experimenting At The Intersection of Skills Performance, Assessment of New Skills Performance and National Goals.*

Key New Voices Linking National Goals To Education include (1) A **National Strategic Narrative, Wilson Center, Princeton University** <http://nationalstrategicnarrative.org/> (2) **The Ingenuity Gap, Thomas Homer-Dixon, Knopf, 2000)**

CORE QUESTION: HOW DO WE ALIGN EDUCATION GOALS WITH EVOLVING NATIONAL STRATEGIC GOALS? EMERGING NEW VOCABULARY AND CONCEPTS

1. Smart political strategies and “smart education.”
2. Strategic National Goals Require Strategic Skills—Strategic Assessment Models.
3. New Theories For Educational Models:
 - Rising importance of theories of complexity, innovation, ingenuity.
 - The big new theory: a shift in learning from linear to Non-linear problem solving.
 - --"General equilibrium theory" -- the core idea of modern economics, which is that everything is at least potentially connected to everything else

4. Today's Skills Ecology: Investing in A New Educational Paradigm Featuring The New Super-Skill of Ingenuity. *We can't ignore the legitimacy of a strategic association between the need to close the Ingenuity Gap and the evolution of a new Super-Skill concept of Ingenuity, capable of generating the unique and high productivity required to close the Ingenuity Gap.*

- **New Super-Skill Ingenuity, a blend of behaviors of critical thinking, communication, and collaboration, key to being competitive in environment of economic prosperity.**
 - **New Vocabulary: Skills Formation Systems, Upskilling, Ingenuity—Developing, Assessing Blended Skills.**
5. New Assessment Models To Guide Measurement of Super-Skills reverses some of the conventional logic with these counter-intuitive premises:
 - What skills are assessed will be those learned.
 - Testing how many mistakes a student can generate and then analyze) Emphasis on **Value of Self-Appraisal; Value of peer appraisal.**
 6. A K-12 Perspective Can Be Developed: Developing A Cognitive Ingenuity Model where Ingenuity is no longer viewed as a rare personal quality, but a skill, and like most skills, it can, and should be taught.

TEACHING THE NEW SUPER-SKILL OF INGENUITY

7. Teaching Ingenuity Requires New Rhetoric: Effective thinking (teach how to think) looks for connections/ patterns. Appreciative Inquiry; Emphasis on Blended Skills.
8. Key Ideas Emerging: Redefining success beyond money and power.
9. WHO WILL TEACH THESE SKILLS? WHAT ARE SOME QUESTIONS TEACHERS WILL HAVE TO ASK?
10. BE AN INFLUENCER: NEW MESSAGING OF A NEW FRAMEWORK. Educators As A Driving Force To Create Positive Change. **Communicate the importance of the relationship of skills development and assessment to national goals of prosperity and security as described in the document: A National Strategic Narrative.** (See website above) **SEEK AN INCREASED FEDERAL INVESTMENT IN FUNDING THAT REFLECTS THAT SKILLS DEVELOPMENT AND ASSESSMENT ARE STRATEGIC INVESTMENTS, NOT JUST SERVICES.**

FUNDAMENTAL CHANGE MUST BE DRIVEN BY A POINT OF VIEW OF THE FUTURE.

MODELS MUST BE GLOBAL TO BE RELEVANT

IN THE FUTURE QUESTIONS

Students, Educators and Policy Makers should become familiar with the knowledge that is projected to increase in value in the global communities.

1. WHAT DOES “GOING GLOBAL” MEAN FOR SKILLS DEVELOPMENT AND ASSESSMENT WHEN Global companies have people working in global teams?
2. WHO AND WHAT DOES “SKILLED” MEAN IN THE GLOBAL ECONOMY?
3. WHAT NEW SKILLS, ASSESSMENT AND VOCABULARY ARE PERTINENT TO LIFE AND JOBS IN THE 21ST CENTURY WHERE 21ST CENTURY SKILLS IS A DOMINANT UMBRELLA TERM?
4. WHAT COMPETENCIES, CAPABILITIES SHOULD WE BE BUILDING TO ENSURE STUDENTS ARE COMPETITIVE IN SUCCESSFUL GLOBAL PRACTICES?
5. HOW CAN WE DEFINE THE IMPORTANCE OF THE NEXUS BETWEEN POLITICS, SKILLS AND ASSESSMENT?
6. HOW DO WE INVEST IN AND ADOPT EVOLVING GLOBAL SKILLS DEVELOPMENT MODELS SUCH AS:
 - From skills deficiencies models to Skills Formation models.
 - Not even the basic: from basic skills to complex competencies and qualifications.
 - From stuck in basic skills to on-going *upskilling*
7. WHAT NEW ASSESSMENT TOOLS WILL SERVE AS A VALUABLE SOURCE OF DEVELOPMENTAL FEEDBACK?
8. WHAT NEW FORMS OF DATA WILL BE REQUIRED FOR SKILLS DEVELOPMENT IN THE GLOBAL ECONOMY?
9. WHAT GLOBAL SKILLS AND ASSESSMENT INITIATIVES ARE CURRENTLY IN PROGRESS AND WHO IS CONTRIBUTING TO THEM?
10. WHAT GLOBAL SKILLS PARTNERSHIPS ARE DEVELOPING AND WHO IS PARTICIPATING WHERE SHARED FORECASTING OF SKILLS AND SKILLS DATA ARE BEING DEVELOPED IN JOINT INTERNATIONAL CENTERS, SKILLS ALLIANCES?

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