Starting Smart: Twenty-first Century Early Education

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The vision for early education in the 21st century does not need to be imagined. It already exists in the work of three geniuses – Maria Montessori (1870-1952), Loris Malaguzzi (1920-1994), and Reuven Feuerstein (1921- ). Each one’s work is a pillar of what education could be from infancy through age eight. Interweaving the best from these practices would create a new tapestry.

In Montessori classrooms today, in the schools Malaguzzi founded, and in Feuerstein’s work, computers are as much a part of children’s experience as markers and blocks. But, the future is not technology; the future is being able to think! Every generation lives in a different technological surround, but every new technology, including those in the future, results from thinking. Thinking occurs in communities that create joy. Joyless communities are chilling, as Orwell portrayed in his book 1984. Research by Mihaly Csikszentmihalyi (1991) and others show that learning occurs when there is joy.

Writ large across the wall-sized window looking into the art studio in Malaguzzi’s Diana School are the words “Nothing without joy.” This article describes a vision for thoughtful, joyful future learning and raises issues about realizing it.

Three Geniuses

Twenty-first century early education would be built on practices of three
great 20\textsuperscript{th} century educators. Each made unique contributions.

\textbf{Maria Montessori}

As physician and anthropologist, Montessori was asked to devise a program to keep prostitutes' children from defacing new public housing in Rome. Casa de Bambini opened in 1906. Word spread and the world flocked through the school. They saw children “in flow” (Csikszentmihalyi, 2005) who were responsible and aware. Once, visitors arrived when school was closed and the children “did school,” as though a teacher were present, selecting their work, concentrating as Montessori knew young children can. Every European dictator invited Montessori to train their youth. She fled Italy and Spain, eventually settling in India, England, and Holland. Wherever she went, teacher training programs sprouted.

Montessori designed a wealth of clever apparatus from which children learned logical thinking, attributes, letters, numbers, and more. Her foundation for literacy is a tri-modal approach to learn letters by simultaneously seeing, hearing, and touching them. As reading programs have come and gone, Montessori’s sound approach to beginning literacy could be the basis for teaching young children to read and write. Yet, it has languished in about 4,000 Montessori schools rather than becoming the highway to a nation that reads. No Child Left Behind (2000– ), which focuses on reading, is out of sync with how young children’s brain functions and the development of their visual, movement, and language systems. In contrast Montessori’s approach is fully aligned with early brain development, not in the least because it is joyful. A recent book shows the intersection between current research on brain and Montessori’s work (Lillard, 2005).

\textbf{Loris Malaguzzi}

The wonder is that two 20\textsuperscript{th} century giants in early education came from northern Italy. Malaguzzi paid tribute to Montessori’s genius. Both respected the enormous capacity of young children and recognized the environment as a critical factor in their development. Montessori called it the “prepared environment,” Malaguzzi the “third teacher.” Unlike Montessori who conceived her method mainly from her own keen mind, Malaguzzi worked
with many colleagues to evolve what today is called the Reggio Approach. There are 50 infant/toddler centers and preschools in the city of Reggio Emilia and educators flock there from around the world to learn about the approach.

The theory underlying Montessori’s work is constructivist: we learn through our interactions with things in our environment. The theory underlying Malaguzzi’s is socio-cultural: we learn through our relationships with the environment, with things, but primarily with others. (Lewin-Benham, 2008, pp. 26-42) The differences are evident in Montessori’s emphasis on using apparatus and Malaguzzi’s on interactions among small groups of children who work collaboratively with one another and a teacher on projects.

Beyond working in small groups, a key feature of Reggio schools – and prime example of Multiple Intelligences (Gardner, 1983) – is the emphasis on using high quality clay, paints, wire, fiber, pens, and hundreds more “materials” including music, dance, and conversation as stimuli for children to learn to express themselves skillfully. Reggio educators say children learn “100 languages.”

What children make and say becomes the basis for what they do; in effect a curriculum emerges from children’s own interests that teachers record and reflect on with the children. As teachers and children analyze, reinterprets, relaunch, and extend children’s own ideas, a curriculum takes shape: What were we doing here? What should we do next? The teachers call their work “action research” as they listen and reflect on how children’s words reveal their interests.

For example, children were blowing balloons to decorate for a party, but quickly tired! “Why,” asked one, “don’t we make a machine to blow balloons?” The teacher thought this through with her colleague who said Why not? A lengthy process ensued – studying machines, sketching them, determining how to make a machine that would actually blow up a balloon. The machine that emerged blew balloons, but did not look “finished” to the children because it was not beautiful. So, they made a papier mache construction to house it – large, colorful, and complex. Other children transformed the medieval stone lion in the town square into drawings,
paintings, sculpture, words, shadow play - 100 forms of expression. Topics for projects grow from children’s first hand experiences and projects develop in unpredictable ways.

Another pivotal Reggio innovation is documentation through which teachers encourage children to listen to themselves as a way to pursue a project thoughtfully. Teachers carefully listen to children, record what they hear, and select children’s words, photos of them working, or their work product to display on a large panel. The purpose is to provide a way for children to reflect on what they have done by analyzing and interpreting what they see on the panel. Exchanges among children and with their teacher are lively! Documentation enables children to find meaning to their work and is a way to assess children’s capacity at a particular time. Moreover, it gives visitors a window into the school and is a powerful draw for parents, an impetus for the deep ties that develop between families and school.

The presence in every school of an artist and artist’s studio and the abundance of children’s sophisticated productions suggest that Reggio schools have rich art programs. But, the purpose is not for children to develop artistic facility (although many do). Rather, making things hones many means of self-expression and especially children’s thinking skills. Thus, what we see in Reggio schools is high level cognitive activity, expressed in amazingly precise and varied ways, well beyond the capacity most people ascribe to young children.

Reuven Feuerstein

Psychologist Reuven Feuerstein has devised masterful ways to teach thinking skills. Driven initially by the need to uncover potential in youth who were brutally damaged by the Holocaust, Feuerstein was the first to devise dynamic assessment, a means of simultaneously testing and teaching that reveals not what individuals know but their capacity to change and learn.

Once Feuerstein saw that children labeled “idiot” or abandoned as hopeless could, in fact, learn, Feuerstein felt impelled to develop ways for them to do so. Over time, the ways became a body of materials, called Feuerstein Instrumental Enrichment (FIE). FIE is organized according to a wide range
of brain functions. An “instrument” is a series of problems of increasing
difficulty that can all be solved by engaging a particular cluster of brain
functions. Each instrument addresses a different cluster. FIE-Basic
addresses essential skills such as making comparisons, orienting oneself in
space, and logically sequencing actions.

How FIE is taught is critical. Each instrument progresses systematically
from simple to complex so can be used remedially with low-functioning
children who require one-on-one instruction. Or, instruments can be used
with groups along a spectrum from low-functioning to gifted. FIE is used in
school systems worldwide.

Feuerstein has built extensive training programs on how to teach FIE. He
refers to teachers as mediators and to teaching as mediation. Among many
parameters of mediation, the three critical ones are: intention, the mediator
must convince students that he (the mediator) is conveying something of
importance; meaning, the mediator must select one particular meaning
(from the many in any stimulus) as the focus of the lesson; and
transcendence, the mediator must encourage students to think how the
lesson at hand relates to something remote – either past or future – that is
somehow similar. (Feuerstein, R., Feuerstein, R. S., Falik, L., Rand, Y.,
2006).

Combining the work of Montessori, Malaguzzi, and Feuerstein

Twenty-first century early education would rest on the belief that Montessori,
Malaguzzi, and Feuerstein share: Each child is born with a great capacity to
learn and a brain primed to form relationships.

Reggio practices would provide the school’s structure: small group work,
collaborative activity, use of diverse tools and materials, activity based on
children’s expressed interests, intense listening, reflection and assessment
through documentation, presence of an artist and artist’s studio, deep parent
involvement, and on-going support for teachers in the form of continuing
professional development.
Certain Montessori practices would be incorporated — settling a new group of children so that they become able to self-regulate their behavior; helping children learn to respect and care for the environment; using sound game, sandpaper letters, and movable alphabet to establish literacy; other didactic material to teach logical processes and attributes. FIE-Basic would be used to build thinking skills, honing the essential brain functions that enable a person to compare, to make analogies, to orient oneself using self-referential guides (left, right, back, front, etc.) and universal guides (north, south, east, west). Educators would be expert mediators — intentional in their manner, meaning-full in the content they select, transcendent in encouraging children to seek and form relationships.

Thus 21st century early education would marry the work of three incredible educators and in the marriage produce a new form of schooling.

 Achieving the Vision.

Actualizing this vision would require establishing model schools, readying a cadre of master teachers, demonstrating that such schools prepare children for increasingly demanding challenges, and using the models and master teachers to prepare enough teachers to bring the system to scale. Easier said than done.

Psychologist Howard Gardner says, “If the community fails to support the desires and standards of school people, the educators are destined to fail” (1991, p. 255). Preschool practices in the U.S. are “fragmented, under-funded, and squeezed in a political vice” (Edwards, 2005, p. xii). The problem is complicated by demographics and economics: “What is unusual for a developed nation like the U.S. is to have 12 percent of its children born to teenage mothers, which gives a virtual guarantee that the children will be raised in poverty without much attention to the whole child” (Hodgkinson, 2006, p. 5).

It is far easier to describe visionary schools than to actualize them. Living models are essential because difficult as it is to describe quality schools, it is harder yet to convey the depth and subtlety of their practices. Without studying Reggio schools in action, watching how Montessori schools establish
self-discipline and literacy, or observing how FIE-Basic builds thinking skills, it would be impossible to emulate them substantively.

Between 1995 and 2005 about 800 Reggio-inspired schools opened across America, a noble attempt to provide quality education, but for the most part shallow practices that suffer from a lack of expertise and a cogent plan to design environments, educate teachers, inform the community, and engage decision makers.

- **Mass Media Support:** Step One would be to rouse eagerness in the U.S. for excellent early education. Media campaigns made masses of people wear seat belts and quit smoking. As this century opens, is it too much to ask that the media be enlisted to create a mind set that supports children from zero to age eight starting smart?

  When Eric Johnson, founder of Texas Instruments and Mayor of Dallas, wanted to promote the use of technology in early education, he hired MIT Professor Seymour Papert, creator of the LOGO computer language. Papert trained the staff of Lamplighter School and educators from throughout the U.S. poured in to learn how to do the same. The model is the magnet that brings the media. The trick is to harness the media’s attention long enough to educate the public.

- **Leadership:** The 21st century preschool initiative would require a leader with the passion of Nancy Hanks, first Chairman of the National Endowment for the Arts, the force of Nancy Rambusch, spearhead of the first U.S. Montessori schools, and the vision of Dwight Eisenhower in establishing a citizen ambassador program or Bill Clinton in establishing Americorps. The time is propitious because President Obama’s message of change has energized young adults whose children would be most likely to benefit from quality early education. The right leaders would undoubtedly rise to the challenge.

  But time is also a problem: The creation of models of best practices – where the “product” is the development of showcase schools, master teachers, and young children’s minds – requires at minimum ten years to form and far longer to bring to scale. Expectations would have to be tailored accordingly.
Location: A National Institute of Education (NIE) was established in the Education Division of the Department of Health, Education, and Welfare in 1972 to support scientific inquiry into the educational process. The agency was abolished in 1985 by then-Secretary of Education William Bennett.

During its life NIE established regional centers across the U.S. Those areas suggest where the 21st century early education centers could be located. All NIE sites were in proximity to major universities where some of the pioneering spirit that marked the NIE centers still lingers.

Teacher Education: Envisioning a teacher education process is more challenging. In fact, teacher education is the critical determinant of any educational initiative’s success. There are “deep divides” (Vermilya, 2008, p. 24) over who is responsible for U.S. early childhood. The task would require a team with first-hand knowledge of Reggio, Montessori, and Feuerstein practices. This would mean drawing on the expertise of the Reggio educators themselves, on those Montessori teachers or trainers with demonstrated excellence, and on trainers from Feuerstein’s worldwide network of Authorized Training Centers. Feuerstein’s organization, the International Center for the Enhancement of Learning Potential (ICELP), offers a model for bringing a program to scale. In the economically distressed state of Bahia, Brazil, the ICELP in seven years trained 17,000 teachers who in turn reached three quarters of a million students, an effort that is on-going.

It is likely that 21st century early education centers, organized by parents, would spring up around training centers. The centers would absorb trainees and in time would become observation sites. In time the centers would also provide classrooms for supervised practice teaching. A similar pattern followed the establishment in the 1950s of the Washington Montessori Institute (Washington, DC). Scores of Montessori schools sprang up throughout metropolitan Washington, DC, eager to absorb the teachers trained by Margaret Stephenson, a precise, demanding, inspiring Montessori trainer. The teachers she produced ranged in quality, as any group of trainees will, but among them enough excelled to make the Washington area a hub for Montessori practice and to seed schools across the U.S.
Assessment: An essential element of any new vision is to provide a valid way to determine success. Sam Meisels says, “Simplistic approaches to outcome assessment that are uninformed by research, that attempt to compress all a child’s experience into a narrow set of achievement items, and that do not take into account the context in which children live and grow will only do harm” (2004, pp. 1401-1402). The Reggio Approach embodies extensive means of authentic assessment. Too involved to describe here, the techniques align with Meisels’ ideas about best assessment techniques and are a well-developed, integral, part of Reggio practices.

Inclusion: In tribute to the American ideal of equality, initial schools would be models of inclusion. Children would be selected by lottery. Using U.S. censor figures and documents such as the Children’s Defense Fund’s Green Book, places would be allocated in proportion to the percent of each group in the population as a whole. The inclusion formula would designate places for children 1) from all economic levels, 2) from all major religious/cultural groups (those broken out on the Census form), and 3) from those “differently abled” children who are sufficiently mobile to take part in most school activities.

The cluster of schools in the city of Reggio Emilia, Italy began with a single school at the close of WW II, organized by parents who sold detritus from WW II that littered their countryside. By 1992 the cluster numbered 32 schools, recognized as the best in the world. By 2010, 15 years after Malaguzzi’s death, the cluster has grown to 50 (in a city of 140,000) and become the world standard for excellent early education. They evidence “intentionality, consistency and continuity” (Gambetti, 2008, p. 2).

While 65 years seems a long time to wait to realize a vision, we need only think of the founding of any endeavor – a great university, a venerable museum, a new nation – to realize the need for a long view. Long views have been sorely lacking in U.S. education which has a history of innovation by fiat or revolution. Yet, evolution – gradual change against a tapestry of well-founded beliefs, practices, and values – is the better path to quality, especially in an endeavor as vital to the future of humankind as the business of smart starts for children.
References


