

Fact File: Education Update on MI

Characteristics of Effective Teachers of Gifted Diverse Students

What are the common traits of gifted or advanced learners? This is a most typical question asked by most parents, teachers, and school administrators. Seldom will people ask about what are the characteristics of **teachers of gifted students possess** or, to put it more practically or realistically, **effective teachers of potentially gifted students of diversity.**

From an authentic setting as in G.T. College, we might be able to come to some generalization via regular observation of the MI teacher traits, for example, a higher level of creativity and deep thinking in the teaching material and in the classroom, a higher level of tolerance and respect for the MI students.

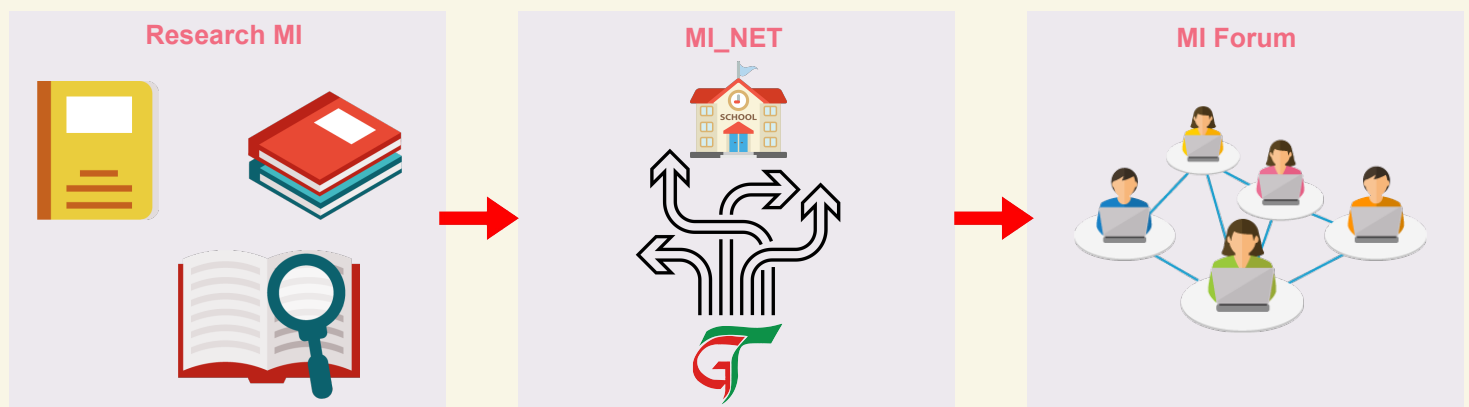
However, readers of *Research MI* might want to learn more about how the **academics or researchers** have found out about this topic. A journal article in 2001 has summed up the **general characteristics of effective teachers of gifted students:**

- Knowledge of the nature and needs of gifted students.
- Ability to develop methods and materials for use with gifted students.
- Skills in individualized teaching.
- Skills in teaching higher-level thinking skills and questioning techniques.
- Ability to identify gifted students.
- Seek to develop students' self-concept.
- Skills in counseling gifted students.
- Skills in creating an environment in which gifted students feel challenged and safe to explore and express their uniqueness.

Which characteristics and how much have you noticed in yourself or the teaching practitioners in your community? Rather than dwelling on the "Have or Have-not," the next most crucial question other than the one above might be—**If I don't have, can I receive some training or how can I train to have some of the characteristics in order to be an effective teacher of potentially gifted or MI students?**

There is an Absolute YES to the Question above.

Research MI should be a most faithful and resourceful partner to you on your way to your career advancement. There will be a MI school network (MIS_NET) to be established in 2022, by G.T. College and its network schools for the MI learning community. Stay tuned. If you will like to join MIS_NET, send an email of interest to Research MI (researchmi@gtcollege.edu.hk).



Note. 2001 From Teachers of gifted students: Suggested multicultural characteristics and competencies. 23(4), by Donna Y. Forda & Michelle Frazier Trotman. <https://www.tandfonline.com/doi/abs/10.1080/02783190109554111>.

Big Data in the MI School:

Capitalizing on Existing Data for Improving Teaching and Learning Strategies in the MI School

Dr. Raymond Tam

Teaching and research seem two incompatible polar extremes for a teaching practitioner whose hands are always full of teaching strategies, assignments and follow-up work every school day. Who else has the time or mood to dig or invent data for research-based practices?

Inventing data to improve practices at school appears absurd and impractical. Instead of inventing data for “research-based practices,” I would suggest a change of mindset—teachers or policy makers can capitalize on existing data for “best evidence-based practices” in the school, which are more authentic and solid and will drive for resolutions and useful practices of and for teaching, learning, and school administration.

G.T. teachers and policy-makers have so much data to “refine their wheels” in the school building project and effective T&L strategies (O’Zearry, 2017, p. 176). First, teachers themselves are the data for research. They have their own expertise and they possess their diverse values, disciplines, and experience. Teachers can observe and learn from one another. Their traits and classes are the best materials for all MI research. Who will not want to know more about the common traits of exemplary MI teachers? Indeed, MI—multiple intelligences—should belong to every child in every school (Gardner, 1983 & 2015; Chan, 2000).

As a MI school in Hong Kong, our materials in our signature MI curricula for the academic and non-academic development are the inspirations for every researcher. G.T. College has its unique domains and intelligences in MI (in numbers, nature, sports, music, words, pictures, people, self, etc.). There are at least five curricula/programs developing the eight intelligences as cited above.

(1) the school-wide or school-based curriculum in all subjects for all learners with the concept of learning by doing [the play-work concept of learning] advocated by John Dewey, the 20th Century psychologist-educationalist.



(2) the enhancement programs (i.e., Accelerated & Enhancement Classes) for the advanced and gifted learners in their pursuit of excellence.



(3) the special program—Sports Friday—for every learner at school—in the hope of bringing joy and balance to the students as well as developing further interests among the students.



(4) the off-campus international challenges include two types---(i) the international contests or competitions for the advanced learners in different intelligences; (ii) the international exchange programs for more than half of each grade in G7 and G8. More than 20 inbound and outbound exchange programs with other renowned gifted/MI schools have covered more than 10 countries and cities for our students' learning by doing.



Teaching practitioners and policy-makers, let's be and have the primary data for the more needed evidence-based practices in the school and in the community. What makes research meaningful and valid is its relevancy and credibility to improve the most essential jobs at school—teaching and learning. By capitalizing the data around us, we are the change agents in and for education.

Let me borrow O'Leary's (2017) comments about the

ultimate purpose of doing research: "Research that attempts to drive change" (p. 176), and let me sum up what makes sense in research and teaching: Capitalizing the data around you for more evidence-based practices for improvement and sharing. Research is to make education from good to better to excellent.

"A thought which does not result in an action is nothing much, and an action which does not proceed from a thought is nothing at all."

-- Georges Bernanos



(5) the off-campus local challenges include making students join key local community programs involving community services, welfare visits, and presentations or competitions.

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Dr. Tam is a devoted school administrator with vision and vigour. He aims at providing quality education for gifted and talented youths. Dr. Tam works in the frontline to promote STREAM (Science, Technology, Reading, Engineering, Arts, and Mathematics) education. Dr. Tam is Chairman of the Gifted Education Council (Hong Kong) which organizes international events. He networks renowned schools from various countries to nurture students' global vision. He enjoys reading and writing articles for major Chinese and English newspapers in Hong Kong, commenting on education, politics, social policies, and school administration. He wishes to promote multiple intelligences education, particularly in Hong Kong and mainland China.



Howard Gardner's Educational Philosophy: How His Ideas in Education Develop (Part 1)

Professor Rex Li

(A) Education an Afterthought

Howard Gardner got into education not by his personal intention but by circumstances. He had his elementary and secondary education in public schools and did not find it interesting. In fact he disliked schools and gained his knowledge through self-learning. Looking back at his education, Gardner wrote:

As a young person in 1950s, I attended public schools in the small city of Scranton, Pennsylvania. . . I found school unchallenging and learned more through my own wide but haphazard reading and my interaction with a few intellectually oriented peers. . . During my freshman year in public high school I continued to be unchallenged and so decided, with my family, that I should attend an independent school. Nearby Wyoming Seminary was somewhat more intellectually oriented but still insufficiently demanding. Only when I was fortunate enough to attend Harvard College in the early 1960s did I discover what a truly engaging intellectual environment could be like. And that is probably why I have remained at Harvard for 45 years. (Gardner, 2006, p. 2)

In Harvard, he met four mentors that affected the trajectory of his life: Erik Erikson, Norman Geschwind, Jerome Bruner and Nelson Goodman (Li, 2020: 9; Gardner, 2020, p. 36–106). Erikson and Geschwind induced him to psychology and neuropsychology; Bruner and Goodman induced him to education. After earning his PhD in developmental psychology, he developed his own ideas and finally propounded a theory of multiple intelligences in 1983.

That theory brought him instant fame and changed his life. Within years, schools based on the principles of multiple intelligences sprang up across the US, such as Key School and New City School 1985 and 1986 respectively. In effect Gardner had become a guru in education and a public intellectual and he had to answer questions on multiple intelligences and education. Confessed Gardner:

Education was literally an afterthought—a topic to be touched on gingerly. . . in the concluding pages of *Frames of Mind*. Much of the immediate and enduring interest in the theory came from the sector of education. I began to think and write seriously about education. (Gardner, 2020, p. 186)

That thinking kept going on for the next 30 years, with notably interesting and provoking titles: *The Unschooled Mind* (1991), *The Disciplined Mind* (1999), *Five Minds for the Future* (2008) and *Truth, Beauty, and Goodness Reframed* (2011).

(B) From Forties to Sixties

The life and work of a Harvard tenured professor is largely free and self-determined. Gardner became one in Harvard Graduate School of Education (HGSE) at around the time he attained fame through *Frames of Mind*. He was then 40 years of age. Tracing his academic life from then on, I would characterize in three phases:

Adventurous and colorful forties (1983 – 1992), during which Gardner ventured into many domains, visited China and developed his education manifesto.

Creative and collaborative fifties (1993 – 2002), during which he focused on creativity and collaborated with other scholars; yet he had taken time to write his personal statement on “good education”.

Summative and mindful sixties (2003 – 2012) were years when Gardner ended in expounding his goals of education in the new era.

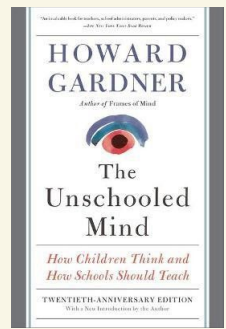
(C) The Unschooled Mind—Gardner’s Education Manifesto

“If Gardner’s manifesto were heeded, the future of our children would benefit immensely.”

Howard’s friend Mihaly Csikszentmihalyi endorsed *The Unschooled Mind* upon its publication.

What was even more provocative was by Albert Shanker:

“If we closed schools today and asked ourselves how we could reinvent them to work for all youngsters, my answer would be: “According to the ideas and models in Howard Gardner’s *The Unschooled Mind*.” Visionary yet practical, scholarly yet accessible, this book is stunning achievement.” (back cover)



The Unschooled Mind : How Children Think and How Schools Should Teach (1991)

The *Unschooled Mind* was written not merely as an intellectual exercise; it includes a vision to reform American schools. So what was that vision and did it have impact on the American education scene?

(1) Problems, Assumptions, and Approaches

Gardner’s starting approach to the complicated problems of American education was surprisingly simple. He asked simple straightforward questions:

- (i) What do 6-year-olds know before they enter school?
- (ii) Why do they fail at school?
- (iii) What should schools teach them and how?

His answers are far from common sense. In fact, he poses two puzzling problems, three assumptions and four answers.

Table 2 Gardner’s Starting Approach to the Problems of American Education

(A) Gardner’s puzzling problems:

- (1) Why do the 6-year-old learn so well but fail at school?
- (2) Why do college students (and adults) fail in developing deep understanding of their own disciplines (subjects)?

(B) Assumptions:

- (1) Young children learn fast.
- (2) Schools fail.
- (3) Adults fail cognitively.

(C) Answers

- (1) Schools do not teach for deep understanding.
- (2) School symbols and assessments (reading, writing, formulas, memory) do not test genuine understanding.
- (3) Students manipulate symbols to get grades and do not learn (only test smart).
- (4) There are gaps between three kinds of understanding.

Gardner argues that a 6-year-old child is successful in practical understanding and living in a social world, but the school asks her for rote / traditional learning to reproduce facts, formulas, symbols, and abstract terms from memory, which are not what she encounters in daily life. She may fail in this “rote, ritualistic and conventional performance.” The school is not testing her genuine understanding.

Back to his starting approach. Gardner answers question (1) [What the 6-year-old know before entering school] — by his knowledge in developmental psychology. He calls young children “natural” learners who are able to know the world through symbols with the emergence of intuitive understanding. Gardner answers question (2) by examining the organization and values of educational institutions. He finds that schools do not concern much with knowledge and deep understanding; they have historical and institutional constraints. In Gardner’s words:

Schools have evolved over the centuries to serve certain societal purposes in certain ways. From the need to teach literacy to large numbers of young students to the pressures for turning out citizens who embody certain attitudes and virtues, schools reflect these constraints. The relative absence in schools of a concern with deep understanding reflects the fact that, for the most part, the goal of engendering that kind of understanding has not been a high priority for educational bureaucracies. (Gardner, 1991, p. 8)

To go further, Gardner offers a penetrating sociological analysis of the American schools:

Even though educational systems may pay lip service to goals like “understanding” or “deep knowledge,” they in fact prove inimical to the pursuit of these goals.... In the interests of efficiency and accountability, school systems tend to mandate large sets of rules and procedures. Many of these have only questionable relevance to the daily operation of classes and to the learning of students, and yet all teachers and administrators must adhere to them. . .

Nearly all the problems and constraints routinely encountered in schools are exacerbated in the urban American schools of today. Problems are almost always magnified in large bureaucratic settings, where many thousands of teachers, administrators, and students must be “served” and the pressures for uniform treatment of diverse “customers” are profound. . . In most cases, however, school teaching, at least below the secondary or higher levels, is considered a low-prestige occupation, and those charged with the education of the young may have only modest intellectual abilities and pedagogical skills. The gifted women who might have gone (or perhaps would have been forced to go) into teaching two generations ago are now attracted to higher-paying, more prestigious positions, depriving the schools of a cohort that was of enormous values in the past. . .(Gardner, 1991, pp. 140–141)

(2) Framework of Understanding

Therefore, if schools fail to help children achieve deep understanding, what does Gardner mean by deep understanding and why is it important? Here Gardner offers a framework of educational understanding.

Table 3 Framework of Educational Understanding at a Glance

	Preschoolers	G1–12 Students	College students
Type	Intuitive learner (also natural, naïve or universal person)	School learner (also traditional student)	College learner (also skilled person)
Age	Up to age 7	School age	Any age
Constraints	Neurobiological, developmental	Institutional, historical, rote, ritualized	Disciplinary, epistemological
Performances	Intuitive understanding	conventional understanding	Disciplinary understanding

(Adapted from Gardner, 1991: 14, with editing from author)

In Gardner’s framework, preschoolers possess intuitive understanding. Grades 1–12 students at school are required to attain rote, ritualized, and conventional understanding, such as, memory of symbols, facts, formulas and abstract terms without deep understanding. Only in college will they take up a discipline (subject) and attain disciplinary understanding. However, even this disciplinary understanding can be “bookish” and they may fail in daily application. For Gardner, then, deep understanding is the mastery of disciplinary understanding, which is fundamental for knowledge transmission and creation.

The third and final question is: What should schools teach and how? The answer is simple: Schools (Grades 1–12) should teach for deep understanding. Below are Gardner’s solutions:

- **Improve pedagogy, curriculum, and process**
- **Improve assessment — portfolio**
- **From basic skills to better understanding**
- **Hands-on children museums**
- **Project work**
- **Apprenticeship**
- **Co-operative learning**
- **Community support**

(3) Discussion

Assertion

The book title *The Unschooled Mind*, may derail a serious reader. With universal education (every child goes to school) in America, how can a mind be *unschooled*? Is Gardner talking about home schooling? Is he talking about children of illegal immigrants who are unable to attend school?

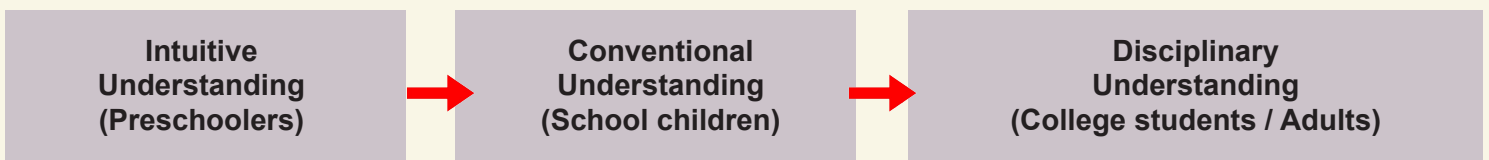
But Gardner is writing with an assertive tone; all through the chapters, we see “I argue that ” (pp. 12, 20) “I have posited that” (p. 12), “I find clues (p.14), “I have questioned the assumption” (p. 14), “My own belief is” (p. 187), “I strongly endorse...” (p. 263). Apparently, Gardner wants to assert his voice in educational reform as a public intellectual.

In fact, it is a bold and ambitious attempt to reframe education. Eight years before, he reframed psychology by seven multiple intelligences; this time he reframed education by a framework of three understandings (1991, p. 14). He did make a convincing case, synthesizing from abundant research in cognitive science and education, citing dozens, if not hundreds, of researchers on their findings, cases, practices, conclusions, plus many of his own.

Synthesis

This masterful synthesis started from his multiple intelligences theory and his new framework of understanding, the latter of which was encouraged by Lawrence Cremin (1925-1990) an accomplished historian of American education, who was the president of Spencer Foundation and supported Gardner’s research. Basically, Gardner is proposing a stage theory of understanding:

Table 4 Gardner’s Stage Theory of Understanding



This framework is less convincing because there are breaks and gaps between them, and there is a lack of clear developmental mechanism to explain the growth process. Schools being a human invention, so are universities, how do they grow for or against the biological and psychological needs of human beings? How did they come into being and with what consequences? What are the successes and failures of institutions that are trying to impose understanding on children and youths? Gardner seems to say that intuitive understanding and disciplinary understanding are desirable but conventional or school understanding is undesirable (and thus, school failures), but he did not elaborate further.

Widely researched and erudite as Gardner, he did not mention Kieran Egan (1942-), a Canadian philosopher of education and his contemporary on the theory of human understanding. Egan is important here because he had proposed story-telling (1986), primary understanding (1988), and romantic understanding (1990). Since then, Egan has refined his stage theory of understanding into mythic understanding, romantic understanding, philosophic understanding, ironic understanding, and somatic understanding (Egan, 1997). If Gardner were to revisit and revise *The Unschooled Mind* today, he might have to take into account all these ideas.

But Gardner is ambitious and pioneering in this work; he has amassed lots of successful practice in education, both local and worldwide; he has suggested and documented the use of technology in education: computers, *Envisioning Machine* (p. 229), *Geometric Supposer* (p. 223), *Thinker Tool* (p. 230), *Apple IIe* (p. 223) and the like. No doubt that he is good at synthesis and creating learning tools.

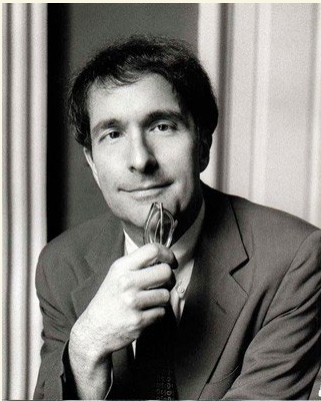
Vision

With his understanding in psychology and education, Gardner believes in a vision that there is a harmony between human development and education. While this may contradict with the antagonism between understanding and education, he sees these conflicts as constraints; it allows for “creative breakthroughs of human individuals” (pp. 199, 264). He has put himself in the Dewey – Kohlberg tradition:

A fourth, Deweyan perspective, as realized most recently by Lawrence Kohlberg, discerns an almost preordained harmony between development and education. In this view, education is seen as a means of fostering human development, or, indeed, development is seen as the goal of education. To the extent that development entails a deeper understanding of the physical, social, and moral universe, I strongly endorse this vision. (Gardner, 1991, 263)

Here we see a bold Gardner trying to explore the limit of education and psychology. In closing he remarked, “Perhaps it is time to explore this principle in our attempts to educate the human mind” (1991, p. 264). Surely this is a fruitful direction of thinking and research.

(1) Gardner's Adventurous and Colorful Forties (1983 – 1992)



In ages 40–49, Howard continued to show his iconoclasm and adventure in his colorful forties. When finishing the touch on *Frames of Mind* in 1983, he was already venturing onto another book in psychology—*The Mind's New Science: A History of the Cognitive Revolution*. It summarized an emerging field, cognitive science, and the book was published in 1985. In his personal life, Howard married the second time (Ellen Winner, a psychologist) and adopted a son of Chinese descent. It appeared that our young and aspiring scholar wanted to work on psychology but his audience wanted his ideas on education.

In the 1980s, the US was loomed with an “education crisis,” so to speak, when the National Commission on Excellence in Education published a report, *A Nation at Risk, The Imperative for Education Reform* in 1983. As the education sector was anxiously finding ways to heal the supposedly sick and failing school system, some multiple intelligences schools sprang up with new initiatives. Consequently, Howard wrote about education and proposed individual-centered curriculum (1987) and individual-centered education (1988) as his early response to the US school and curriculum reform.

While working in the HGSE and Project Zero on arts education, Howard gained sponsorship to visit China and to study its arts education. This mysterious Asian nation had just opened up and Howard, adventurous and self-determined, was among the earliest batch of scholars to visit it. It leads to another book, *To Open Minds – Chinese Clues to the Dilemma of Contemporary Education*, published in 1989. The book was more or less like an autobiographical account of his visit to China with his son. It is pioneering in its own right—visiting China in 1980s. Cheered a reviewer:

For those who have traveled to China, and especially for those who have visited Chinese schools, this is an essential book. For anyone interested in Chinese and American education, this is one of the most interesting books in years. Howard Gardner is a unique individual. His book provides a key to the mysterious East, and perhaps to the equally mysterious West. (Wiesniewski, 1991, p. 46)

In the book, Howard had already revealed his preference on education: creativity, exploration, liberal and child-centered educational philosophy.

After his China visit and the above publication, which is a popular book targeted at the American public, Howard wrote systematically to expound his ideas on education in 1991. He gave it a puzzling title: *The Unschooled Mind*. If you find the term “unschooled” hard to digest, just look at the sub-title; Howard wants to explain “*How Children Think and How Schools Should Teach*”. See more details below.

(2) Gardner's Creative and Collaborative Fifties (1993–2002)



In his fifties, Howard saw himself as a seasoned scholar (Gardner, 2020: 182). He enjoyed his teaching and work in the HGSE. He kept thinking, reading, and did many case studies. They were turned into a book every two years: *Creating Mind* (1993), *Leading Minds* (1995) and *Extraordinary Minds* (1997). Gardner studied in depth about many people, ideas and cases; below is a list of cases he covered and synthesized:

Table 1 People, Ideas and Cases in Gardner's Works (1993, 1995, &1997)

1993 <i>Creating Minds</i>	<ul style="list-style-type: none"> - Freud - Einstein - Picasso - Stravinsky 	<ul style="list-style-type: none"> - T.S. Eliot (poet) - Martha Graham (dancer) - Gandhi
1995 <i>Leading Minds</i>	<ul style="list-style-type: none"> - Margaret Mead (Anthropology) - J. Robert Oppenheimer (Physics) - Robert Maynard Hutchins (Higher education) - Alfred P. Sloan, Jr., Business (General Motors) - George Marshall, (Military and Statecraft) - Pope John XXIII (Religion) 	<ul style="list-style-type: none"> - Eleanor Roosevelt (Social leader) - Martin Luther King, Jr. (Civil rights) - Margaret Thatcher (Politician) - Jean Monnet (International leadership) - Mahatma Gandhi (International leadership)
1997 <i>Extraordinary Minds</i>	<ul style="list-style-type: none"> - Mozart (The master) - Freud (The maker) 	<ul style="list-style-type: none"> - Woolf (The introspector) - Gandhi (The influencer)

In addition, Gardner collaborated with William Damon of Brown University and Mihaly Csikszentmihalyi of the University of Chicago on an ambitious project. It started in a sabbatical in 1994–95 when the three met in Stanford. Damon was a scholar on moral development, Csikszentmihalyi was on creativity and Gardner was on multiple intelligences. The three conceptualized a research project of “humane creativity” which lasted for a decade and involved dozens of researchers, culminating in *Good Work: When Excellence and Ethics Meet* (2001).

The above busy schedule did not deter Howard from writing on education. He turned out *The Disciplined Mind – Beyond Facts and Standardized Tests, the K – 12 Education that Every Child Deserves* in 1999. For this, he called it his personal statement on “good education.” (Gardner, 1999, p. 16)

Howard Gardner in Hong Kong

Gardner had visited HK many times. In 2014, he gave a talk entitled “Beyond Wit and Grit” at Hong Kong Institute of Education.

Prof Gardner taking a photo with G.T. College Administrators.
From left: Dr. Hong Sang Fung, Mr. Alex O, and Dr. Raymond Tam

