Why Gifted Programs and Pedagogy Make A Difference in Children’s Lives

Sally M. Reis

Echa Conference 2012
Enrichment programs and opportunities can offer rich, challenging curriculum in both regular and gifted education programs and make a profound difference in the lives of students (even when they participate for 2-3 hours each week).
When teachers use enrichment-based approaches to learning and extend the pedagogy of gifted education to all children, learning is more engaging and enjoyable and all students are able to make continuous progress.
The use of creative and joyful teaching does not result in lower test scores! Rather, achievement scores INCREASE when we use creative teaching methods, differentiated instruction and enrichment pedagogy.
The Schoolwide Enrichment Model
(Renzulli & Reis, 1985, 1997)

Evolved from over 30 years of research and field testing. It has three major components:

- The Total Talent Portfolio
- Curriculum Compacting
- Enrichment Learning and Teaching

Applied to:
- the regular curriculum,
- enrichment clusters
- continuum of services
What happens to students who graduate from these types of programs?
Are we creating the next …
Named the “Smartest kid in Maine” 1990 – cover on Parade magazine

Age 12 – SAT 740 M · 710 V; Age 15 – SAT 790 M · 800 V

Little support from poor, rural home or school; poor grades in school

No self-regulation
Flunked out of college from the large state university

Recently fired from her job as a check-out clerk at a convenience store and unable to identify appropriate career goals
Look in my face,
My name is might have been.

— Dante Gabriel Rossetti
The Japanese Minister’s of Education’s Visit to the NRC

- Why are you here?
- You Americans have all the patents. We can make everything that the Americans invent faster and cheaper… But we don’t have the creative ideas and inventions.
Fareed Zakaria:

Singapore’s students do brilliantly in math and science tests. American kids test much worse but do better in the real world.

January 9 Newsweek, p.37
We both have meritocracies. Yours is a talent meritocracy; ours is an exam meritocracy. There are some parts of the intellect that we are not able to test well—like creativity, curiosity, a sense of adventure, ambition. Most of all, America has a culture of learning that challenges conventional wisdom, even if it means challenging authority. These are the areas where Singapore must learn from America.

Tharman Shanmugaratnam, Minister of Education in Singapore, ranked #1 in global science and math rankings in the world.
Gifted Program Goals

• Students will be academically challenged and engaged in advanced learning experiences.

• Students will explore and develop their interests.

• Students will develop their creativity and task commitment.

• Students will be encouraged to become leaders committed to social action and improving their world.
The Nobel Prize in Physiology or Medicine 2009
"for the discovery of how chromosomes are protected by telomeres and the enzyme telomerase"

Elizabeth Blackburn
USA
University Of California
San Francisco,
b. 1948

Carol W. Greider
USA
Johns Hopkins University
School of Medicine
Baltimore, MD, USA
b. 1961
American Physics Nobel Prize winners 'transformed' physics, for their discovery of the blackbody form and anisotropy of the cosmic microwave background radiation.

George F. Smoot of the Lawrence Berkeley National Laboratory in California, born in 1945.

John C. Mather of the NASA Goddard Space Flight Center in Greenbelt, Md, born in 1946.
The Nobel Prize in Chemistry
for studies of the molecular basis of eukaryotic transcription

Roger D. Kornberg

Stanford University
Stanford, CA,
Born in 1947
The Nobel Prize in Medicine
"for their discovery of RNA interference - gene silencing by double-stranded RNA"

Andrew Z. Fire
Stanford University
School of Medicine
Stanford, CA
Born in 1959

Craig C. Mello
University of Massachusetts Medical School
Worcester, MA
Born in 1960
GIFTED PROGRAMS SHOULD CREATE PEAK MOMENTS:
Did you create memories in your classroom?
Make learning enjoyable?
Help students develop their interests and creativity?
Give any open-ended assignments with depth and complexity?
Create talent development opportunities?
My Interest in Theatre
The wedding of a former student

Ten years after they had graduated from high school, my former gifted students remembered every Type III study they had completed in elementary and secondary school!
Sally,

A few years I emailed you about my doctoral program work and described my research in pharmacological chemistry. I also reminded you of all of the Type III products I did in the TAG Program. I finished with my doctorate and was invited to give a seminar at UCONN in the School of Pharmacy next month. I was writing to see if you would be available for lunch and perhaps you can attend my seminar? Looking forward to reconnecting.

Sherry
Department of Biochemistry and Biophysics, University of California
Dear Sally, do you remember me? I have written to you periodically during the last ten years. I write to tell you that I finished my doctorate last week and that I have regretted not staying in closer touch. I often think about why I was able to finish my degree-- a poor kid whose parents didn’t even attend college. The courage and confidence to believe I could finish a Ph.D. came from my earliest years in the gifted program in Torrington. . . . I think what made me want to pursue a career in research were my earliest Type III Projects.
The TAG Program in Torrington

- Began in 1976
- Elementary, Middle School, and High School Services in Academics and in the Arts
- Based on the Enrichment Triad Model
- Original Pilot Site for the Revolving Door Model and the Schoolwide Enrichment Model
TYPE I*  
GENERAL EXPLORATORY ACTIVITIES

TYPE II  
GROUP TRAINING ACTIVITIES

TYPE III  
INDIVIDUAL & SMALL GROUP INVESTIGATIONS OF REAL PROBLEMS

Regular Classroom

Environment in General
Longitudinal findings....

The Type III process serves as important training for later creative productivity. Students perceived their Type III experiences as life-shaping influences on

- college and careers
- continued desire for creative outlets throughout education and life
- the consistent enhancement of non-intellectual characteristics (task commitment, curiosity, creativity)

From the group of 6 students who worked on Bobby Bones....

Four attended and graduated from Medical School!
What Happens to Young, Creative Producers?

Karen Westberg

A Longitudinal Study of Students who Participated in a Program based on the Enrichment Triad Model
Grant during middle school invented a shoelace clip.

At 28 years old, he completed his doctoral work at Cal Tech in aeronautical engineering, was employed at Hughes Aeronautical.

- Maintained his interests in creative writing with the completion of nine novels.

- These interests were documented on his interest-a-lyzer (Renzulli, 1977) relate to hi his current activities.
Characteristics of High-Level Creative Productivity: A Longitudinal Study of Students Identified by Renzulli’s Three-Ring Conception of Giftedness

Marcia Delcourt

Strong childhood interests developed in the Enrichment Triad Program

Overall Importance of Projects
Characteristics of High-Level Creative Productivity

Studied students who participated in Enrichment Triad Programs who:

Produced a Regional Television Show
Conducted Experiments in Plant Hybridization
Developed a Computer Program to Analyze Cancer Growth
Published Poetry and Creative Writing
Parental support helped these young people develop:

- Independence to pursue interests
- Safe risk-taking behaviors
- The ability to explore ideas early in life
Creative Productivity Developed in Three Phases

Phase One: Parents encouraged and nurture their children’s interests and their independence.

Phase Two: Students participated in enrichment programs to develop interests and creative products.

Phase Three: Interests, academic programs, and post-secondary plans merged for students to pursue a goal.

Phase Four: College majors and careers emerge from early creative productive experiences.
120 Individuals under the age of 35 who had demonstrated high accomplishment in the fields of:

**Music & Art:** (Concert pianists and Sculptors)

**Athletics:** (Olympic swimmers and Tennis players)

**Mathematics & Science:** (Research Mathematicians and a Research Neurologist)

- How they became interested in the field.
- The role their parents played in the early years.
- The kind of instruction they received.
- Some of the factors contributing to their success.
Developing Talent in Young People

“We speculate that if the talented individuals we studied had been reared in a very different home environment, it is probable that their initial instruction and encouragement to learn would have been very different.

And it is not likely that they would have reached the level or type of talent development for which they were included in this study.”

Bloom (1985) p. 544
The Type III interests of students affected their post-secondary plans. In many cases, their career interests were a synthesis of their early Type III interests as young children, leading to . . . Type IV--life and career choices based on interests.
“Growing” Interests

Marcia Delcourt found that:

Students made meaningful contributions in Type III projects.

….had a sense of pride and accomplishment.

…. developed expertise and confidence in becoming an adult creative producer.
Students who did Type III’s in Triad programs initiated their own creative products in and out of school three times more often than a control group!

Students in the enrichment group completed twice as many creative projects per student.

The number of Type III’s products completed in school was a significant predictor of self-efficacy.

(A Study of the effects of the Enrichment Triad Model on creative productivity and self-efficacy-- Alane Starko)
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(Alane Starko)
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This retrospective study investigated the effects of an elementary pull-out program gifted program based on the Purdue Three-Stage Model. Students and their families indicated the program had a long-term positive impact on the cognitive, affective, and social development of most participating students.
A sample of 2,409 intellectually talented adolescents (top 1%) who were assessed on the SAT by age 13 was tracked longitudinally for more than 25 years. Their creative accomplishments, with particular emphasis on literary achievement and scientific-technical innovation, were examined and results showed that distinct ability and interest patterns identified by age 13 portend contrasting forms of creative expression by middle age.
Follow-up Studies…

Four Enrichment Programs in Connecticut
West Hartford, Avon, Simsbury, Talcott Mountain Science Center
Jody Bourgeois
Simsbury Gifted Program
Type III: Proved that a land form was not really a drumlin in a glacier’s path through Connecticut, but was instead, an ice channel deposit, surprising the experts.
She attended Barnard College at Columbia, then…

- Completed a Ph.D. in Geology
- Became a professor at the University of Washington
- Authored the Standard Text on Sedimentary Geology
Steve Perlman--Participated in the West Hartford Enrichment Program and worked on a research project at Talcott Mountain Science Center where he built his first computer. He attended Columbia University where he invented a system that enabled students to write papers from their dorms and send them to the computer center electronically.
Steve was hired by Apple computers and was instrumental in the development of the color Mac…He produced three independent start-up companies and continued to be a high creative. He got an idea and spent 3 days and nights inventing the first tv set internet device and started WebTV, the first product of a company that he and his partners subsequently sold for 500 million dollars.
Steve Perlman

Gave his first million dollars to Talcott Mountain Science Center as a donation!
Dr. Linda Ivany

Paleontologist
Ph.D. Geology, Harvard University
Research: Mass Extinction 34 years ago and new directions about global climate change and the history of our earth.
Gifted Program graduate from Connecticut
Eric Fossum

Another Enrichment Program graduate from Connecticut
Interested in computers and photography
Attended Trinity College in Hartford
Yale for graduate school
Worked at NASA’s jet propulsion lab where he used computer chips for photography.
PILL CAMERA OF THE FUTURE

- lens
- video chip and lamp
- microactuator
- power and data antenna
- system and lab on a chip
- microfluidics (fluid which runs through chip)
Jennifer Weiner

Another gifted program graduate from Connecticut
Interested in creative writing
Student of Jean Gubbins
Author of 3 books, two on the New York Times Book List.
including:
Good in Bed
In Her Shoes.. (Current Movie!)
Little Earthquakes
Joyful Learning

In our Enrichment Triad Model program, the focus was on helping students become creative producers in an area they chose and loved--joyful learning...
Poetry
by
Alice Valsecchi
Let’s compare.... Alice’s poetry project with what other educational priorities?
PRACTICAL PRACTICE READING
Functional Life Skill Activities

INTEREST LEVEL: 4-6  READING LEVEL: 5-8

The many job descriptions in these books run the gamut—from serious to not-so-serious! Besides introducing students to a variety of jobs, Reading About High-Interest Jobs presents a number of follow-up questions to build vocabulary, test comprehension, and provoke thoughtful discussion about the world of work.

REM 445A READING LEVEL 2 $7.99
REM 445B READING LEVEL 3 $7.99
REM 445C READING LEVEL 4 $7.99
REM 445D READING LEVEL 5 $7.99
REM 445E 4-BOOK SET $48.99

UNDERSTANDING INSTRUCTIONS
Real-Life Activities to Boost Comprehension

INTEREST LEVEL: 4.0  READING LEVEL: 2-5

IN THE KITCHEN
25 tasty recipes are the basis for this unique way to teach comprehension. Activities check understanding of recipe information. Students can test their understanding at home.

ARTS & CRAFTS PROJECTS
A fun way to test comprehension. Each page features directions for an arts and crafts project. Students read, then give a written response to show understanding of directions.

REM 454A IN THE KITCHEN $56.99
REM 454D ARTS & CRAFTS PROJECTS $56.99
REM 454F BOTH BOOKS $114.99

To learn more about our research-based materials, go to www.rempub.com/research
What path do we want our gifted program graduates to pursue?
Top 1 in 10,000: A 10-Year Follow-up of the Profoundly Gifted

David Lubinski, Rose Mary Webb, Martha J. Morelock and Camilla Persson Benbow

Lubinski, Webb, Morelock and Benbow found:

320 gifted students identified as adolescents who pursued doctoral degrees at over 50X the base rate expectations. (The base rate expectation for the general population is only 1%--1 in 100!).
Where are the opportunities for creative children?
What do you remember as a peak experience in school?
Making a Difference--One Care Bag at a Time

- Annie Wignall of Newton, IA founded Care Bags Foundation when she was eleven years old. Care Bags provides essential, fun, safe, and age appropriate things (games, toothbrushes, books, etc.) to kids during difficult times in their lives. Care bags go to over 800 abused, and displaced kids every year and are distributed by 20 agencies serving over 80 towns in Iowa as well as going to other states for disaster relief.
Jon Wagner Holtz was 9-years-old when his mother was diagnosed with breast cancer. Feeling alone and confused, with no one his own age with whom to share his feelings, Jon set out to find other kids who felt the same way. When he was 11, he started a support group for children who have a parent with cancer, called Kids Konnected.

"I was not only worried for her; I was worried for me. My biggest question was: would she die? I really didn’t know where to turn-what to do with my feelings of anger and guilt and most of all, fear.

Since 1992, Kids Konnected has provided outreach, education and support to more than 10,000 kids nationwide.
"There were no groups where I could talk to other kids who knew what it was like to have a real sick mom," Jon explains, so he created his own.

Jon secured a grant in 1993 to operate a 24-hour hot line from his home, which soon led to the creation of more support groups, and by 1997, Kids Konnected was incorporated as a non-profit organization with 18 chapters in 12 states.

He trained a young member of the board of directors to take over as CEO when he leaves for college. "It's real important to continue Kids Konnected as a corporation that is run by kids, for kids," says Jon.
Carolyn's Compassionate Children

- Carolyn Rubenstein founded Carolyn's Compassionate Children in 1999 when she was 13 years old. Carolyn's Compassionate Children is a support organization linking critically ill children and children with life challenges with volunteer teens in schools through letter writing. The organization has since expanded to include organizing annual school supply, holiday letter, and gift drives and awarding college scholarships.
Carolyn Rubenstein today,
Baldwin Scholar, Duke

I have had a passion for helping critically ill children since a visit to Camp Sunshine in Casco, Maine when I was just six years old. Camp Sunshine is a retreat for children with life-threatening illnesses and their families. I volunteered at the camp in middle school. Because of these experiences, I founded a program for critically ill children, Carolyn's Compassionate Children, that links home bound or hospitalized children with their "healthy" peers through pen pal relationships. In addition to being a pen pal network, Carolyn's Compassionate Children awards ten college scholarships annually to childhood cancer survivors.
When I looked at my freshman yearbook and compare it to my senior book, I see a lot of friends who came into high school with me, but did not graduate.

Many of my used-to-be friends are either selling drugs, doing time, or dead.

You're probably thinking, why didn't I end up like them? I chose the alternative.

I started Arms Up, a group that encourages young black men to volunteer at a daycare center or food pantry. And guess what, fewer of my friends are dropping out.
Brandon Keefe, founder of Bookends

- Brandon went to a Board of Directors meeting at Hollygrove Children's Home with his mother. Hollygrove is a residential treatment center for abused and neglected children where she served as CEO and President.

Brandon sat in a corner with his hand-held video game. The adults listed a litany of obstacles to creating a library (e.g., books were too expensive, volunteers were scarce and the budget couldn't be stretched any farther).
Merry Christmas, Mom!

Brandon convinced his fellow classmates to help, "Everybody has books on their shelves that they've outgrown. Why not give the ones we've already read (which were still in good condition) to kids who need them?" They collected 847 new and slightly used books.

On the last day of school before winter vacation, a grinning Brandon stood on the sidewalk surrounded by dozens of boxes of books and exclaimed, "Merry Christmas, Mom!"
What began as a community service project for his class is now the grassroots nonprofit organization BookEnds, which has given away 76,000 books to children in need, has completed 23 libraries and has 19 other libraries in development. “Brandon”, explained his mother, started this community.”
Brandon today...
Jacob Komar, age 13, from Burlington, CT, created “Computers for Communities, Inc.” in order to help close the digital divide. Four years ago he observed that well-off families had computers but those who were poor did not. He also saw thousands of outdated computers being discarded. Jacob put these two problems together and fashioned a solution. Given his amazing skills, he and other friends so far have been able to rebuild and give away over 1,000 computers to families in need. He started the company when he was 9 years old!
In Jacob’s words....

- Since I am a computer fanatic, I was shocked when I learned that my sister's school was throwing away their old computers. I knew that there were many kids who didn't have computers at home. I started a program called "Computers for Communities." First, I secured the school district's approval to take more than 60 old computers. Then I went to work restoring and upgrading them. I also had to get software licensing and install new software and hardware. I worked with the Department of Social Services to identify those most in need in my community. Finally, I installed them and have taught over 200 family members how to use them.
"It's not too late. People who care will do something!"
The creative product interests of students affected their post-secondary plans. In many cases, their career interests were a synthesis of their early Type III interests as young children, leading to . . . Type IV--life and career choices based on interests and according to Baum, Hebert and Renzulli, reversed their underachievement!
These creative learning opportunities would NOT have occur without sustained time in a enrichment or gifted program.
What gifts should children receive from gifted and enrichment programs?

- TIME to pursue their interests in areas they choose
What else?

Exposure to topics children may love
Identification of their abilities and talents, interests, learning and expression and styles.
Students with special needs: It’s not just about their deficits!

- Sara and all of the IEP meetings! Why didn’t I know what to ask?
- Our friend, Susan Baum
- Stop telling us what she can’t do and start telling us what she can do.
- Who is the most passionate teacher at this school?
Graduation from Miss Porter’s

- Graduated from Miss Porter’s School in Farmington
Talent Development, Not Deficit Reduction!

Stop focusing on deficits and start focusing on strengths!
Baum’s Study of Using Enrichment Triad Model with Students with LD

Creative Type III work can be used high ability, learning disabled students and is associated with improvement in the students' behavior, specifically the ability to self-regulate time on task; improve self-esteem; and development specific learning strategies.
Opportunities
Resources
Encouragement
What else matters in programs for gifted and talented students? What makes a difference in their subsequent lives, education, and work?
Now you are ready to start! We suggest you start with the first puzzle piece, Interest Areas. Then, you need to complete all of the other puzzle pieces. As soon as you have finished puzzle pieces 1-4, you will be able to view your profile, view enrichment activities, answer some open-ended questions, and work in your notebook.
What else matters?

- Interaction with advanced content
- Opportunities for continuous progress
- Differentiation of content and instruction
SEM in the classroom and in your school: What can teachers do?

Opportunities for continuous progress and differentiation
Curriculum Compacting
Renzulli Learning
Creativity Training
Future Problem Solving
Project-based independent and small group studies each week
Enrichment Clusters
Classroom Enrichment Programs
Enjoyment

Engagement

Enthusiasm
The Schoolwide Enrichment Model

Evolved from over 30 years of research and field testing. It has three major components:

– The Total Talent Portfolio
– Curriculum Compacting
– Enrichment Learning and Teaching

Applied to:
the regular curriculum, enrichment clusters continuum of services
What Else Matters?

• Understanding that one’s gifts and talents can be used to make the world a better place...even the immediate world of one small child.
Every individual matters. Every individual has a role to play. Every individual makes a difference. And we have a choice: What sort of difference do we want to make?"
Schools should be places for talent development!