

Harvard Project Zero The First Forty Years

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Harvard Project Zero

40 Years in 5 Minutes

Pre-Origins and Origins

1957: Sputnik launched; US prioritizes science, math, technology; cf 2000-today

1967: What about attention to the arts?
Philosopher Nelson Goodman assembles a team including D. Perkins and H. Gardner and names our project.

Basic Ideas

- Arts as cognitive--development of measurable skills and understandings in different art forms.
- Resistances--arts as emotion, mystery, ineffable, unanalyzable, untestable.
- “If this work were funded, the arts would be destroyed” (the best is the enemy of the good)

“Progress” by Decade

- 1970s: From philosophy to psychology and brain study (DP and HG co-direct; E.Winner joins)
- 1980s: From basic interdisciplinary research to education (e.g., Arts PROPEL) (S. Tishman joins)
- 1990-present: International reach (42 countries at Annual Institute: Beyond arts but arts and artists always central)

Five Achievements

1. Survival for 40 years on soft money
2. Second successful leadership transition from Gardner and Perkins to Steve Seidel in 2000.
3. Discoveries in psychology, brain study, pedagogy, etc. See pzweb.harvard.edu

- 4. Influential educational interventions--teaching for understanding, multiple intelligences, visible thinking, Arts PROPEL.
- 5. Change the educational conversation to arts as cognition rather than emotion, mystery, etc. While “ars longa,” we hope we have moved from beyond zero in the last 40 years.
- From history to research findings--Ellen on artistic learning...

Two Recent Lines of Research

What has past research shown about transfer of arts learning to other kinds of learning?

What is learned in the parent domain, before we consider the issue of transfer to other domains?

Four ways to misunderstand arts education

- It's peripheral (the “nice but not necessary” view)
- It's a remedial activity for students who struggle in other areas (the “just throw it at them” view)
- It's just a means to an end, a tool for learning, only doing. (the “just a tool” view)
- It's a handmaiden to academics, but not a serious subject in its own right (the “better SATs through the arts” view)

Unimportant!

guitars etc.



748-1111

**PLAYING MUSIC MAKES
YOU SMARTER**



Former Governor Zell Miller of the
southern state of Georgia, USA

“Build Your Baby’s Brain through the Power
of Music”

Former Governor Zell Miller on National Public Radio

“I’ve always thought the children of Georgia were the smartest anywhere. With this program we can now give them an even greater head start.”

But why not the Beatles???

Well, I think the research has shown that the music should be soothing. It also should have certain things that will affect spatial temporal reasoning. **That is what you want to improve** because that's what underlies **math and engineering** and even the ability to play **chess**....
When I proposed this I played Ode to Joy, but I have a lot of other ones that I think would work.

--Gov. Zell Miller on "All things Considered," National Public Radio, Jan. 13, 1998.

Mozart's music is particularly beneficial when used to help students study, BUT PLEASE BE CAREFUL: Listening to more than 25 minutes of music at a time reduces the power of the Mozart Effect.

--brochure inside the CD called The Mozart Effect: Music for Children compiled by Don Campbell.

A willful? misunderstanding of the work of
Frances Rauscher on the “Mozart effect”

The Project Zero View

(Nelson Goodman)

- Core, not peripheral
- Thinking, not just feelings
- Another way to understand the world, as important as the scientific way
- Cultivates habits of mind, not just craft

SERIOUS!!!



REAP

Reviewing Education and the Arts Project

Project Zero Study from 1997 – 2001
(with Lois Hetland)

When students study arts, do they improve in non-arts subjects?

10 Meta-analytic Reviews (complex numerical averages)

Conclusion:

Claims exceed evidence for transfer from arts to non-arts learning

Three Clear Causal Links

- Music listening and spatial skill
Lois Hetland
- Music performance and spatial skill
Lois Hetland
- Dramatic enactment of texts and verbal skill
Ann Podlozny

Two Possible Causal Links but Very Few Studies

- Music and Math
- Dance and Spatial (near transfer)

Five Areas Where NO Causal Link Has Been Found

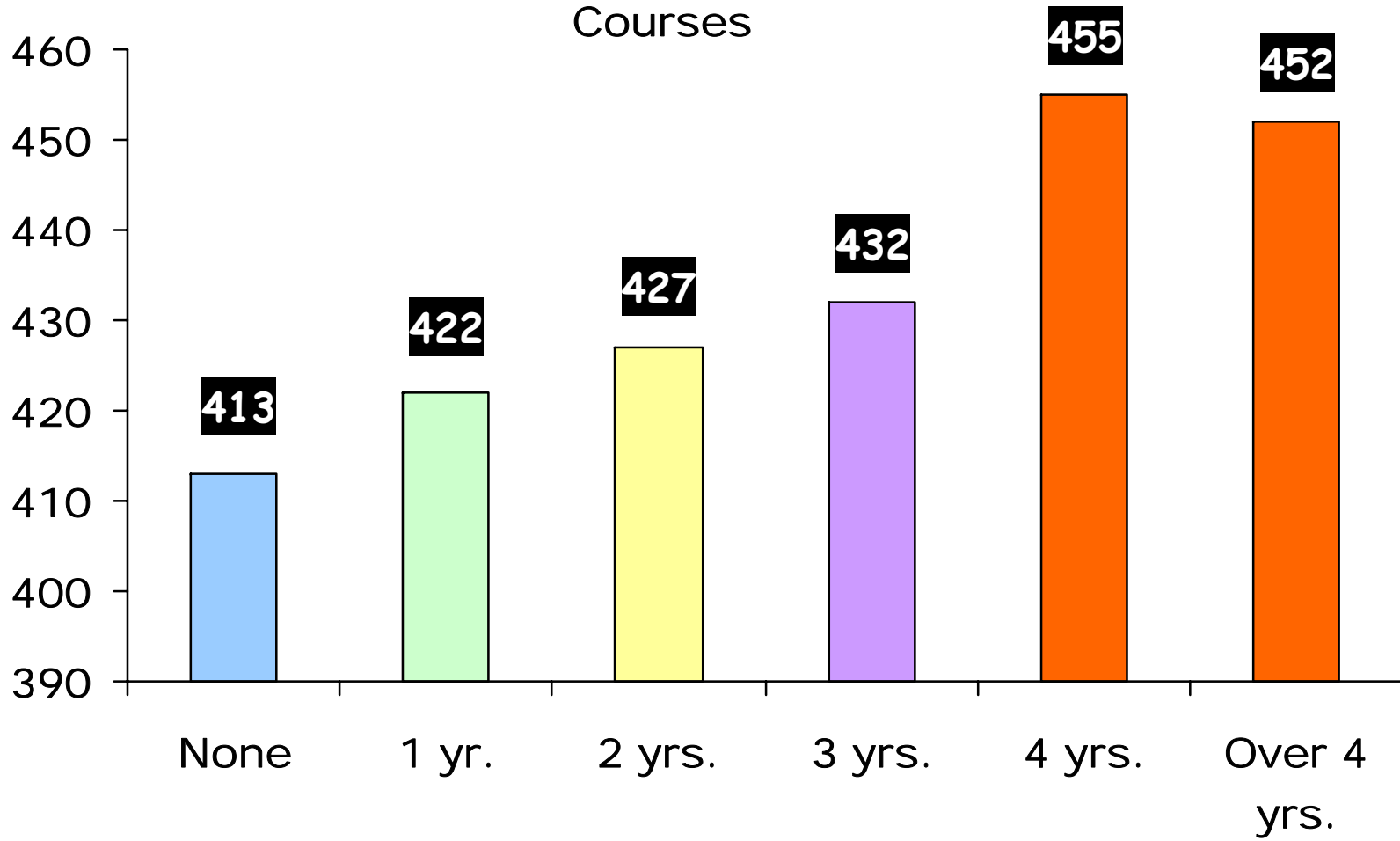
- Music and reading
- Visual arts and reading
- Dance and reading
- Multi-arts disciplines and creative thinking
- Multi-arts disciplines and math/verbal/composite achievement

Published Yearly by the College Board in the US

College Bound Seniors: Profile of SAT and Achievement Test Takers

1988-1998 (1993 missing)

Verbal SAT Score as a Function of High School Arts Courses



Many Non-Causal Plausible Explanations

- ◆ Attend schools strong in both academics and arts.
- ◆ Come from families that value both academics and arts.
- ◆ Doing so well academically that they have time for arts.
- ◆ Building resumes for selective colleges.
- ◆ High achievers have drive to master academics and arts

UK Findings

- John Harland's report



Instrumental Claims
are a *Double-Edged*
Sword

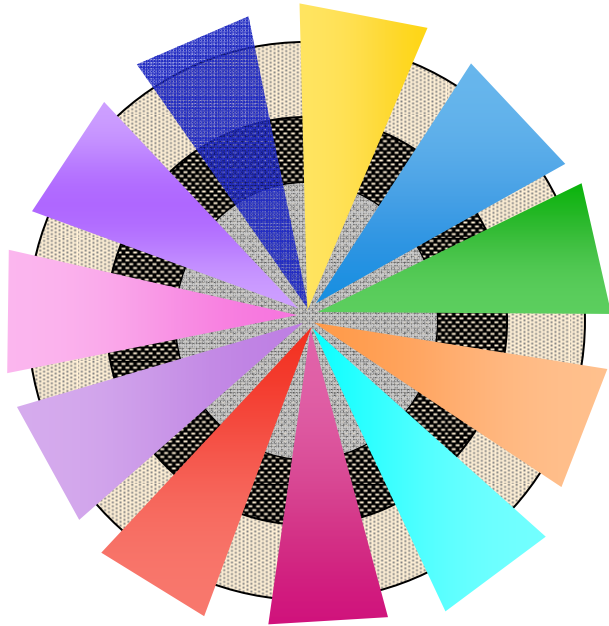
3 PROBLEMS WITH MOST OF THE STUDIES

- NO MEASURE OF QUALITY OF ARTS EDUCATION
- NO MEASURE OF WHAT'S LEARNED IN ARTS CLASSES
- NO TEST FOR UNDERLYING MECHANISM

What do the arts
teach?

Then . . .

Does it transfer?



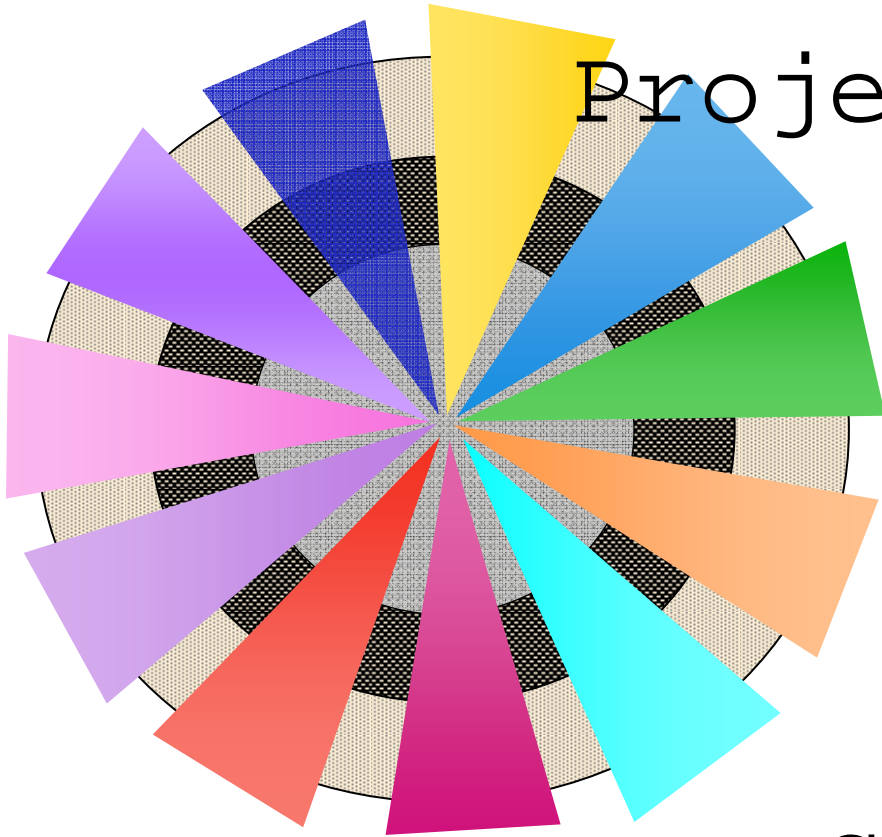
Studio Thinking

How Visual Arts Teaching
Can Promote Discipline
Habits of Mind

Project Zero, Harvard Graduate School of
Education

Research supported by the J. Paul Getty
Trust

2001-2003



Project Zero Research.

Co-Principal Investigators:

Lois Hetland

Ellen Winner

Researchers:

Shirley Veenema

Patricia Palmer

Kim Sheridan

Collaborating Tea

Beth Balliro, Boston Arts Academy

Jason Green, Walnut Hill

Kathleen Marsh, Boston Arts Acade

Mickey Telemaque, Boston Arts Aca

Jim Woodside, Walnut Hill

Methods: Who we studied

Five teachers in two Boston-area high schools in which the arts play a central role

- Boston Arts Academy (public, urban pilot school)
- Walnut Hill (independent, residential suburban)

These schools are characterized by three criteria

- Students attend to focus on arts (audition and many continue in arts)
- Students get a minimum of 10 hours per week instruction in visual arts
- Teachers are practicing artists

Qualitative Methodology

- Observed and videotaped 38, 2-3 hour classes monthly for each teacher
- Interviewed teachers after each class about what they were doing and why they did it that way
- Coded tapes and interviews for what was being taught
- Identified 4 thinking dispositions and 2 working styles being taught along with technique

Four Potentially Generalizable Cognitive Skills

Observe

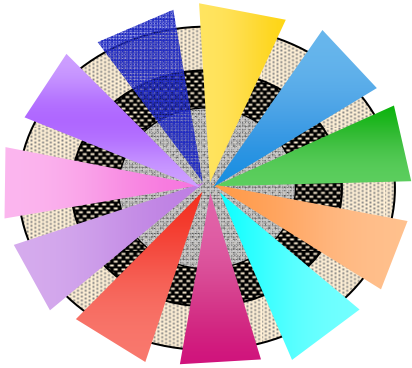
Envision

Express

Reflect

Observe

- Students taught to look more closely than they ordinarily do, and see with new eyes.
- “Looking is the real stuff about drawing”
- *A reasonable transfer hypothesis*: If observation improves from arts learning, this may transfer to domain of science.

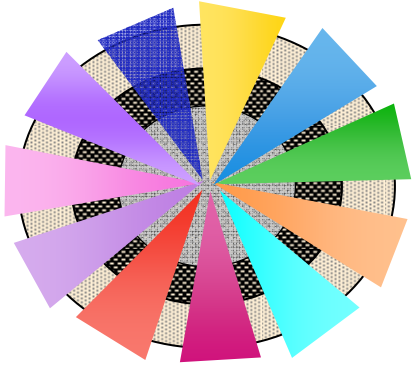


Observe

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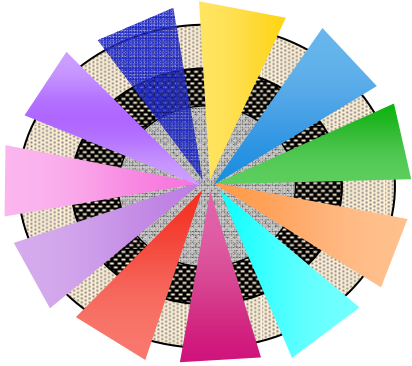
Envision

- Students frequently prompted to *envision what they cannot observe*
 - What would happen if you moved this over here? Darkened this area?...
 - Can you see the underlying triangle that connects these figures?
- *A reasonable transfer hypothesis*: If envisioning improves from arts learning, this may transfer to domain of science.



Envision

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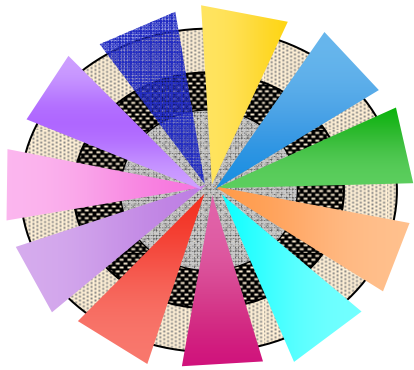


Envision

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Express

- Students frequently asked to go beyond technique to *convey a personal vision*
 - “art is beyond technique”
 - “a drawing done honestly and directly always expresses feeling”
- *A reasonable transfer hypothesis*: If expressing a personal vision/voice improves from arts learning, this may transfer to domain of writing.

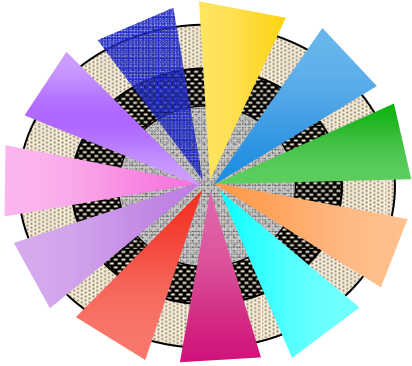


Express

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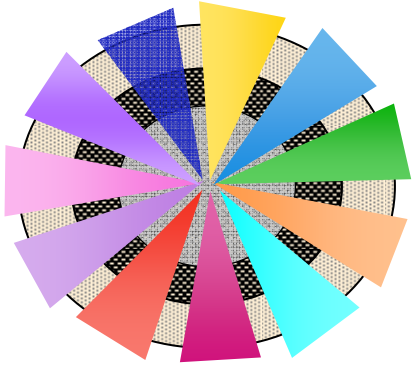
Reflection

- Evaluate
 - Frequent critique sessions in which evaluate own/others' work—to make critical judgments and justify them.
- Question/Explain
 - Frequently asked to step back and explain work/working process
- *A reasonable transfer hypothesis*: If metacognition improves from arts learning, this may transfer to other areas of learning.



Reflection: Evaluate

QuickTime™ and a Sorenson Video decompressor are needed to see this picture.



Reflection: Question & Explain

How to reflect
(both privately
and with
others) on an
aspect of one's
work or working
process.

QuickTime™ and a Sorenson Video decompressor are needed to see this picture.

Two Potentially Generalizable Working Styles

Engage & Persist

Stretch & Explore

Engage and Persist

- Students pushed to become engaged enough to stick to projects over sustained periods of time.
- Taught “how to work through frustration.”
- *A reasonable transfer hypothesis*: If ability to persist improves from arts learning, this may transfer to other areas of learning.

Stretch and Explore

- Asked to explore, take risks
- “You ask kids to play, and then in 1-on-1 conversation you name what they’ve stumbled on.”
- *A reasonable transfer hypothesis:* If playful exploratory attitude develops from arts learning, this may transfer to other areas of learning.

JG C5					
KES 3.20.03					
Interaction Units 49		Sum	%	Fraction	
Intended Outcomes	Interaction Units (SaW start to end)				
Express		0	0%	0	
Art World		1	2%	<1/10	
Social		1	2%	<1/10	
Other		6	12%	1/8	
Studio Practice		10	20%	1/5	
Engage and Persist		14	29%	2/7	
Observe		14	29%	2/7	
Question & Explain		17	35%	1/3	
Evaluate		18	37%	3/8	
Technique		18	37%	3/8	
Envision		23	47%	1/2	
Stretch and Explore		26	53%	1/2	

Studio Thinking

The **Real** Benefits of Arts Education

Lois Hetland
Ellen Winner
Kimberly Sheridan
Shirley Veenema

Teachers College Press, Summer, 2007

We Should Never ASSUME or PROCLAIM Transfer

1--Show that skill in question was actually *learned* in parent domain.

2--Plausible transfer hypothesis.

Never confuse...

- An instrumental justification for arts education



- The scientific question of whether there is transfer

Thank you to our hosts

And especially to Charlotte Fesneau who made everything clear and easy for us all