

Instructional Focus

Roanoke County

Schools



PreK-12...A cursory glance

➤ Early intervention

➤ K-12

- Special education
- Gifted
- Roanoke County Central Middle School
- Roland E. Cook
- Specialty Centers
- Arnold R. Burton Technology Center
- Dual Enrollment
- AP and PreAP
- School Counseling Services & Student Records (A.K.A. Guidance)
- Other programs within schools

Brain Research

- Poverty and the brain (Jensen, 2006)
 - Nearly 19% of all children in the U.S. are from low-income families
 - Increased exposure to hazardous materials
 - More transient
 - ≈20% watch >6 hours of TV per day
 - More likely to be in a single- or no-parent household
 - 1998 data suggests:
 - Black children of single parent – 54% poverty
 - Hispanic children of single parent – 64% poverty

Distress and Brain Cells

- Persistent stress hormones lead to the death of neurons
- Fortunately, the trend is reversible



Dendrites taken from rat PFC show effects of distress.

How much (time) exposure to distress would you predict it would take for neurons to wither as shown?

- a) 2 hrs./day for 2 months
- b) 30 min./day for 7 wks
- c) 1 hr./day for 10 weeks
- d) 10 min./day for 5 days

(Brown et al. 2005)

Distress Affects Neurons



Control

Stressed

Distress Affects Neurons

There is strong evidence of withering and retraction of dendritic branching within...

a)

b)

c)

d) 10 min./day
for 5 days!

(Brown et al. 2005)



Control

Stressed

So What???

➤ Brain vs. Mind

- Brain is what you have inherited (genetic)
- Mind is what you develop
- Cognitive scientists suggest it's 50-50 split

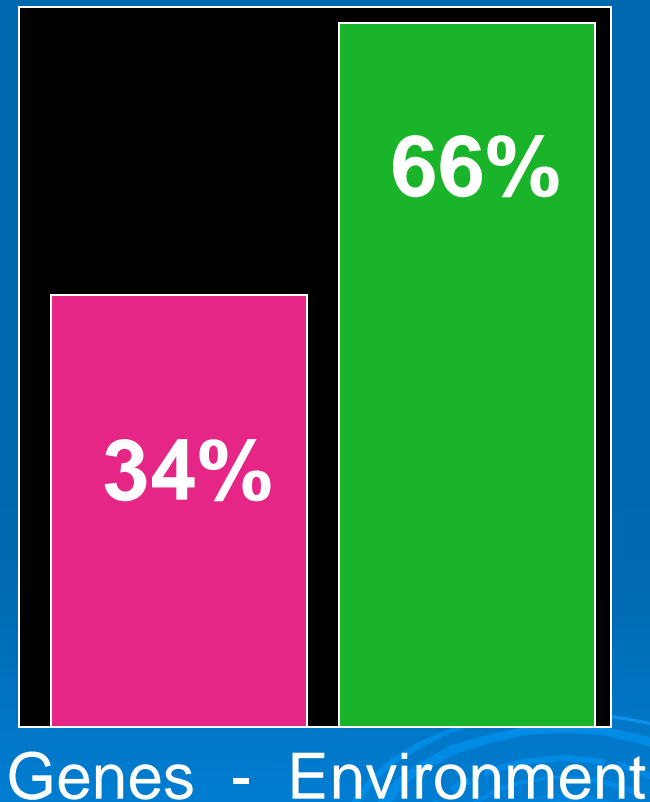
➤ Functions of the Brain

- Chemical
- Electrical – structures of the dendrites permanently change when learning occurs.
- Physiologically, this is why it is difficult to unlearn something

The Balance Has Shifted...Gene Expression Changes the Game!

There's nearly a 2-1 advantage of the potency of environmental influences over genetic ones. This suggests hope for all students!

(Devlin, et al., 1997)



Recap: **Poverty** is...

*a chronic condition
characterized by the:*

- 1) synergistic effect of multiple, adverse, economic risk factors
- 2) lack of access to basic human resources
- 3) *Something we can take action on!***

What can we do in the classroom???



Our Calling As Teachers

- Instructional Delivery
- Strategies
- Individual Attention (SOL test preparation example)
 - Pre/post assessments
 - Re-teaching
 - Flexible skill grouping
- Utilize the strong principal leadership at each building

Classroom Walkthrough (CWT)

- Principal and assistant principals will visit for 4 minutes
- Assesses programs and staff development needs – not teachers
- Creates an instructional focus for the school based on the needs of the student population

Bloom's Taxonomy

➤ Low

- Knowledge
- Understanding

➤ Medium

- Application
- Analysis

➤ High

- Synthesis
- Evaluation

Instructional Strategies and Their Relevance in RCS

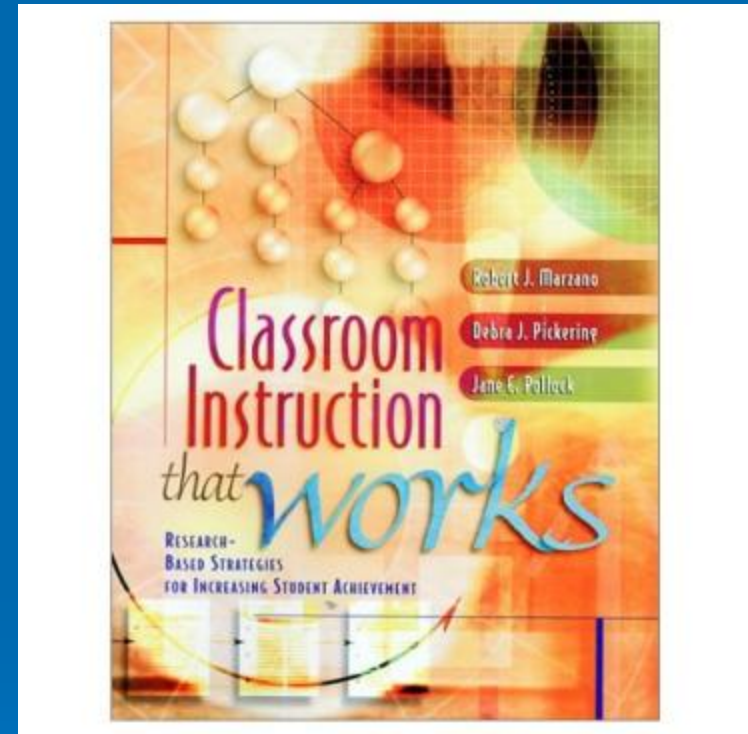
- Pre/post assessment
- Flexible grouping (skills based)
- Learning Styles
- Differentiation
- Interactive notebooks
- Jean Blades – kinesthetic strategies
- Marzano's High Yield Strategies

- Cooperative learning
- Setting objectives and providing feedback
- Generating and testing hypotheses
- Cues, questions, and advance organizers

- Similarities and differences
- Summarizing and note taking
- Reinforcing effort and providing recognition
- Homework and practice
- Nonlinguistic representation

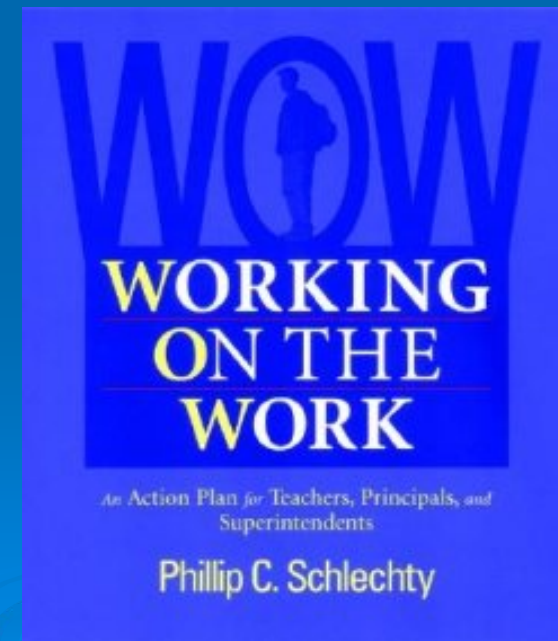
➤ *Classroom Instruction That Works: Researched-Based Strategies for Increasing Student Achievement*

Marzano et al. (2001),
ASCD



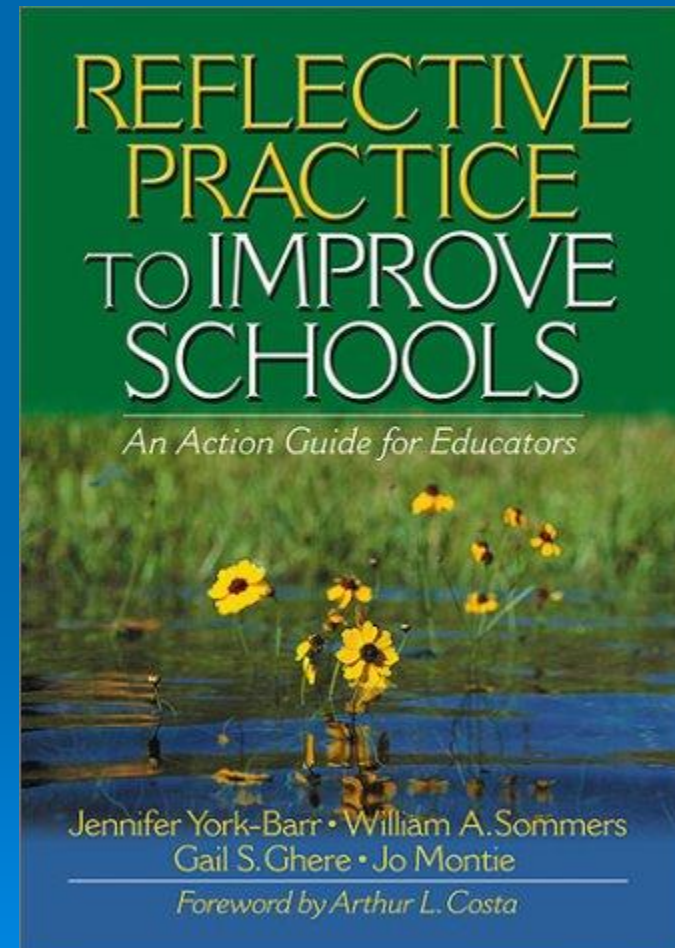
➤ *Working on the Work:
An Action Plan for
Teachers, Principals,
and Superintendents*

Schlechty (2002),
Jossey-Bass



➤ *Reflective Practice
to Improve Schools:
An Action Guide for
Educators*

York-Barr et al.
(2001), Corwin
Press



Roanoke County Schools - Comprehensive Plan

- Vision for 6 years
- Instructional Goals
- Technology Goals
- Community Relations
- Health & Safety
- Budget & Finance
- Facilities
- Your school will have these committees – one of which you may be a member. This assists with school improvement. It will be call an R-CAP (Roanoke County Accreditation Plan) Committee.

So What Does This Yield?

- More meaningful and student-centered staff development
- Higher student achievement
- Successful students who are productive beyond graduation from Roanoke County Schools

You Are Now On Your Way...

Have a most productive year with your
students!!!

Best wishes to you!!!



Bibliography

Jensen, E. (1998). *Teaching with the Brain in Mind*. ASCD: Alexandria, VA.

Jensen, E. (2006). *Enriching the Brain: How to Maximize Every Learner's Potential*. San Francisco: Jossey-Bass.

Jensen, E. (2006). *Poverty and the Brain*. Jensen Learning Corporation.

Jensen, E. (2007). *The New Teaching with the Brain in Mind*. Anaheim, CA. Jensen Learning Corporation.

Marzano, R. J. (2004). *Building Background Knowledge*. ASCD: Alexandria, VA

Marzano, R. J., (2003). *What Works in Schools*. ASCD: Alexandria, VA.

Bibliography continued...

Marzano, R.J., Pickering, D. J. & Pollock, J. E. (2001). Classroom Instruction That Works. ASCD: Alexandria, VA.

Payne, R. K. (2002). Understanding Learning: The How, The Why, The What. Highlands, TX: aha! Process, Inc.

Payne, R. K. (2005). A Framework for Understanding Poverty, 4th Edition. Highlands, TX: aha! Process, Inc.