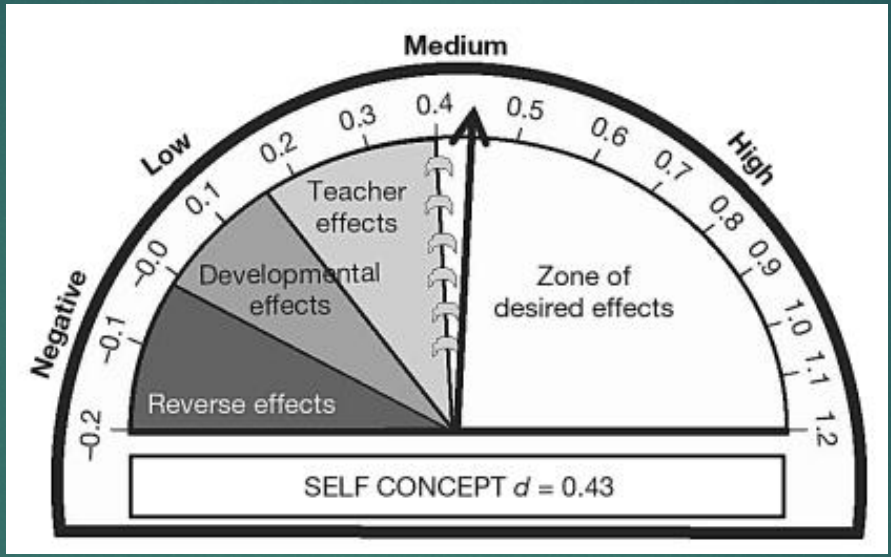
A Blueprint to Increase Academic Achievement

Leading for Learning 2018

Scott Morrison

Impact on Student Achievement



An effect size of 1.0 is equal to 1 SD and typically equates to 2 to 3 years of growth or improving a child's learning by 50%

Reverse effects which actually do harm = -0.2 to 0: e.g. retention = -0.16

Effects from development and maturation alone = .0 to .15: e.g. multi-grade classes = 0.04

Typical teacher effects on learning = .15 to .40: e.g. giving homework = 0.29

Zone of desired effects = .40 and above e.g. acceleration = 0.88

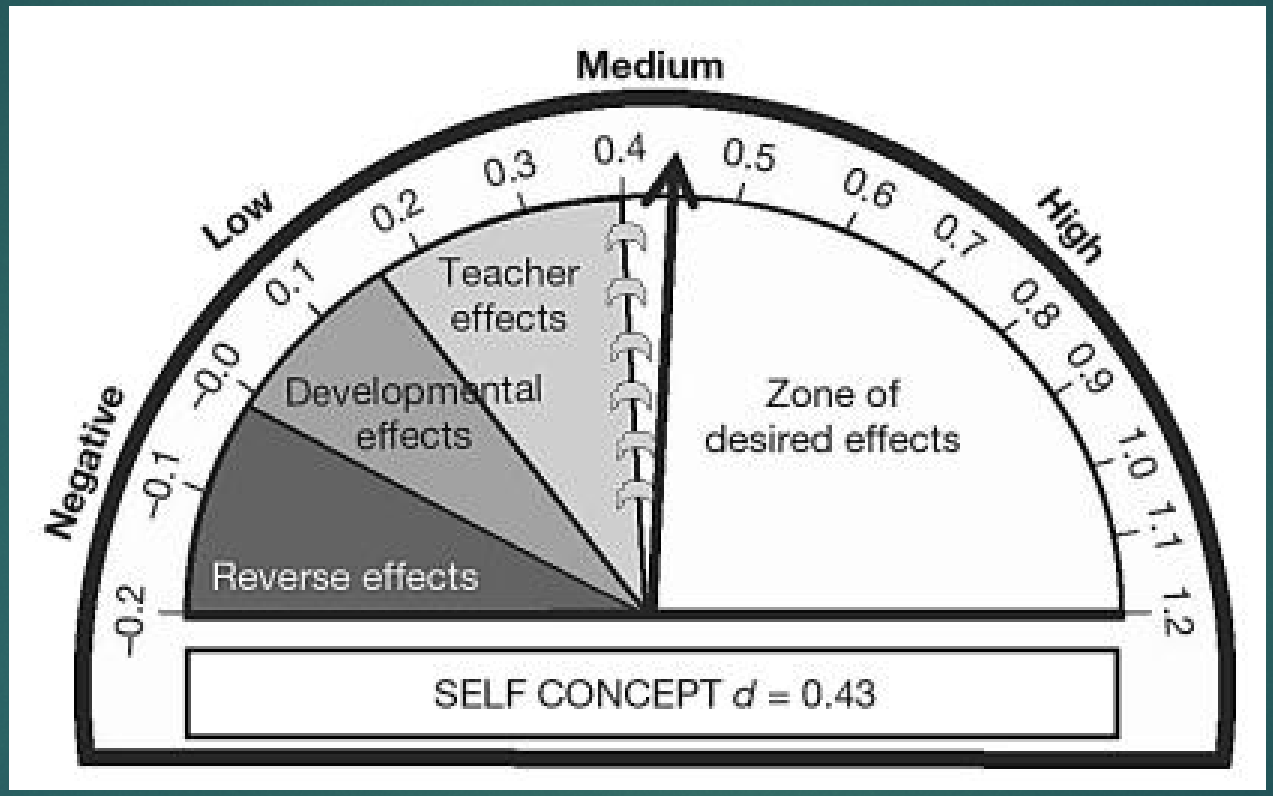
(Hattie, 2011)

Leadership Styles
Correlation with Achievement

Instructional leadership refers to those principals who have their major focus creating a learning climate free of disruption, a system of clear teaching objectives, and higher teacher expectations for teachers and students.

Transformational leadership refers to those principals who engage with their teaching staff in ways that inspire them to new levels of energy, commitment, and moral purpose such that they work collaboratively to overcome challenges and reach ambitious goals.

Instructional Leadership
Transformational Leadership



Instructional leadership – *d?*

Transformational leadership – *d?*

Focus

"...(Some) leaders resist simplicity; they are often irrationally enamored with novelty and complexity, which prevents them from focusing on and implementing their core priorities...Unfortunately, many leaders have a natural prejudice against 'old ideas and simple prescriptions' – even though, if implemented, these old simple ideas are the key to better results. Many leaders would rather launch new initiatives, regardless of their effectiveness. Why? Because it distracts them from the harder work of seeing to it that their highest, simplest priorities are implemented – actually done" (as cited in Schmoker, 2011, p.16).

Focus

"In contrast, successful organizations aren't enamoured with novelty, technology, or complexity; they know that success depends largely on implementing what is already known. They know that 'simple prescriptions' conveyed with clarity and simplicity are the hallmarks of effective action and leadership...It is critical that schools learn the lesson that 'best practice' in effective organizations is rarely *new* practice. On the contrary, the most effective actions are well known practices, with the extra dimension that they are reinforced and carried out reliably" (as cited in Schmoker, 2011, p.16).

Reading at Grade Level

- Core priority
- Not novel
- Simple prescriptions conveyed with clarity and conviction
- Reinforced and carried out reliably

- Early Reading Intervention (K-2)
- Precision Reading (3-12)
- Enhanced Reading (3-12)
- Before, During, and After Reading (K-12)
- Reading Blocks
- Readers' and Writers' Workshop

What are the Highest Yielding Strategies to Promote Student Learning ?

- The Hedgehog and the Fox.
- Think about your hypotheses about the best ways to promote learning at high levels?

Are there a Set of Universal High Yield Strategies?

Resources for generic strategies, applicable to all grade levels and subject areas:

- The Art and Science of Teaching – Marzano (2007).
- Classroom Instruction that Works – Marzano (2001).
- Improving Student Learning One Teacher at a Time – Pollock (2007).
- Visible Learning – Hattie (2009).
- Focus – Schmoker (2011).

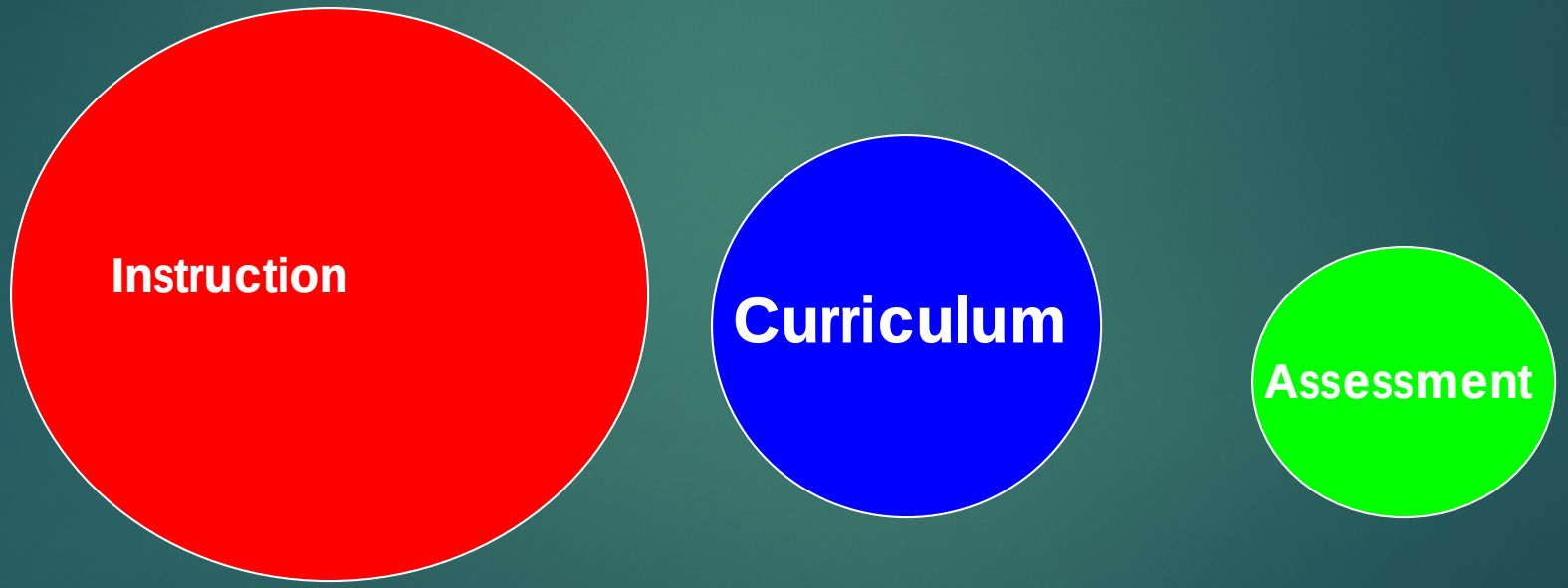
Your Hedgehog Thinking: Is probably revealed in how you answered the question about promoting student learning.

Curriculum Alignment
Scheduled Review
Formative Assessment

Curriculum Alignment

Setting clear learning expectations so students know:
What am I learning today?
Why am I learning it?
How will I know I've learned it?

The Instruction, Curriculum, and Assessment Connection



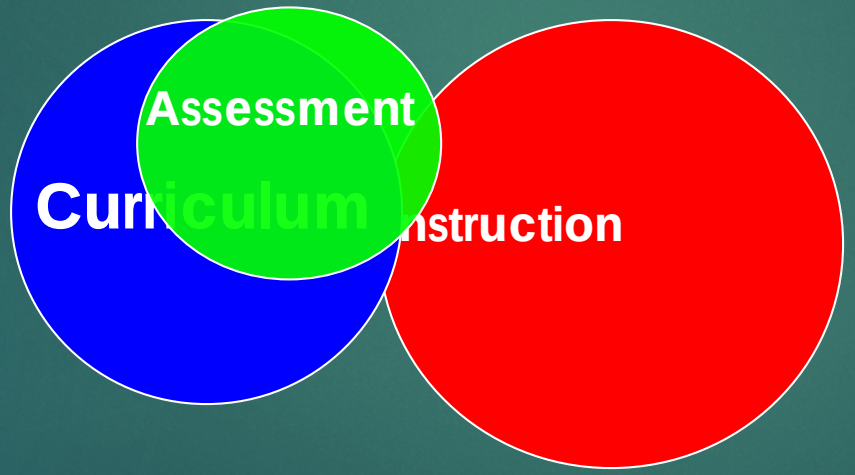
What we teach.

What we are told to teach.

What we grade.

The University Experience

Sociology 1000

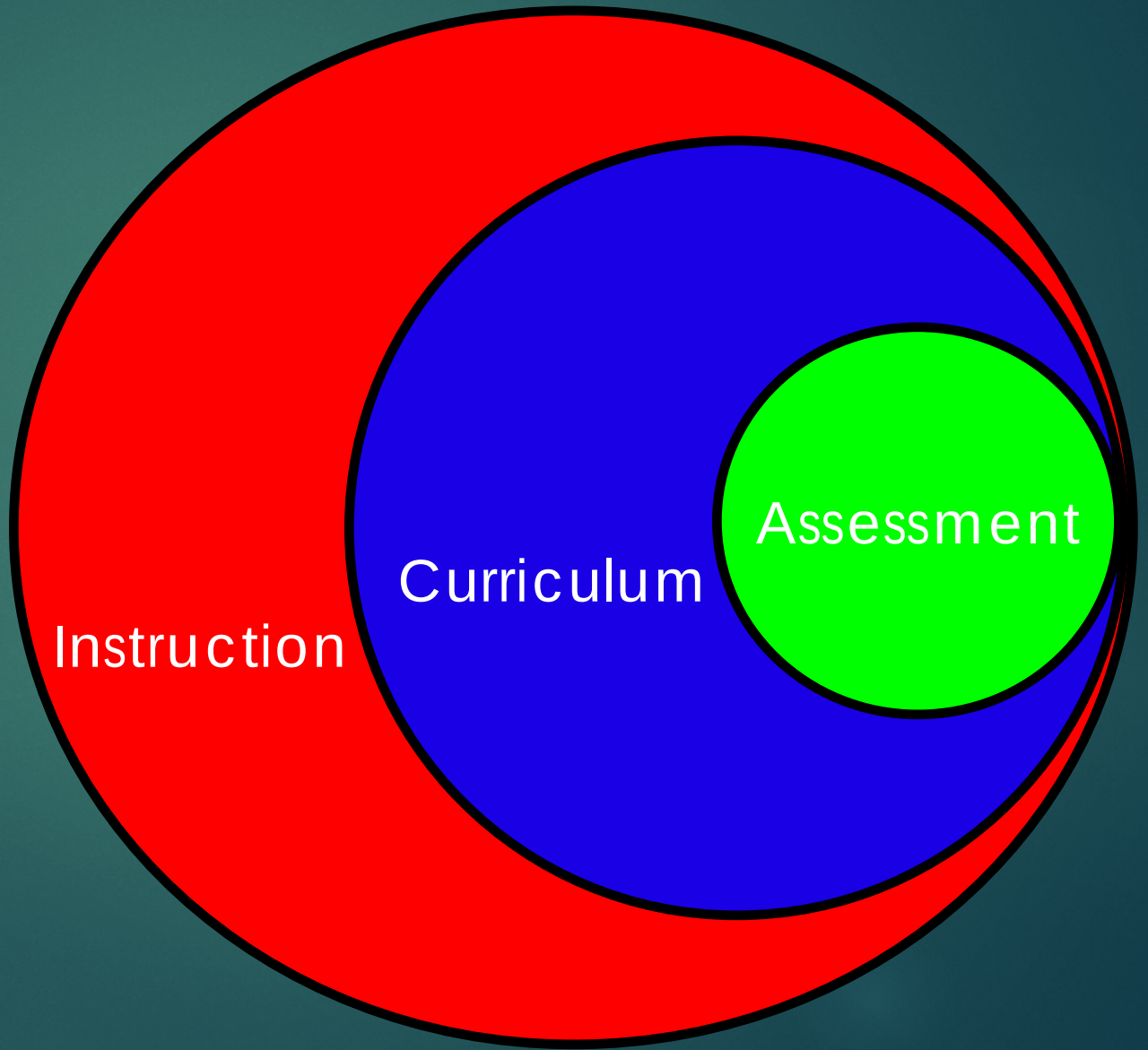


Effective Curriculum Alignment

Teach all of the curriculum.

Teach knowledge and skills above and beyond the curriculum (instruction).

Asses what you teach (instruction) and, especially, what is in the curriculum.



The St. John's Story

- Second year of teaching.
- Proof that "failure is not an option" strategies worked…results now!
- Social PAT year.
- Three units….six textbooks. Definitions and pages. Skills and pages. **Solution…A study guide and a skills guide.**
- **Discovery**…Concepts and not Facts:

  Textbook: Inventions and inventors of the Industrial Revolution in Britain and America.

  Curriculum: Domestic System > Mechanization > Industrialization > Urbanization.

- **Discovery**…Poor Alignment:

  Quality of Life – Physical.

- **Later Discovery**…How the other half lived without curriculum alignment while teaching Social 9 at Trinity…Tsars, Tsars, Tsars.

Curriculum Aligned Study Guides

- **Curriculum Aligned Study Guides:**
- Gather teachers in teams/departments to create the guides collegially.
- Step 1: Copy and paste every curriculum outcome into a Word Document.
- Step 2: Define knowledge concepts. In math (and science), provide worked examples (illustrative examples) of questions for each outcome. In Language Arts, provide illustrative examples of learning activities that develop the outcome.
- Step 3: Identify textbook or other resources that will be used by the teacher to help develop the objectives.
- Step 4: Develop test questions and other forms of assessment for each curriculum objective.
- Step 5: Identify the skills (ie: critical thinking) and develop 3 to 5 seminal learning activities to continually practice and refine them.

"Complexity interferes with turning knowledge into action" (as cited in Schmoker, 2011, p. 16).

Social Studies 30

SS 30: The Contemporary World

Topic A: Political and Economic Systems

Theme 1: Political and Economic Systems in Theory

Curriculum Objectives

a) Ideologies contain beliefs and ideas about human nature and are used to explain and justify political and economic systems.

Ideology - A systematic set of beliefs that provides a fairly thorough picture of the world that a group of people accepts as true. The key beliefs around which a political or economic system is centered. In general, there is a strong ideological difference between those who value individualism and collectivism. For example, the capitalist ideology values individualism and includes private property, free choice, and individualism, whereas communism values economic equality and collectivism. *(Global Systems - page 9)*

Individualism - A value held by supporters of a political or economic system that allows the individual goals to be emphasized over the needs of society. Capitalists and those who believe in democracy would support this value. Adam Smith's economic ideas justify this value because they emphasize the idea that when people pursue their own goals it will benefit all of society, because they work to provide the best products and services as they seek to make individual profit. Democratic political systems are aligned with this value because people have the freedom to choose the representatives they like the best. *(Global Systems - page 11)*

Conceptual Knowledge Defined

1. The belief that an economy must be based on the price system in order to function successfully places the greatest emphasis upon which of the following values?

A Empathy

B. Cooperation

C. Individualism

D. Social consciousness

Textbook References

Assessment of Objective

Application to English Language Arts

Technological Process:

- Identify 10 key outcomes: i.e. Preview complex texts for intent, content, and structure to help set purpose for reading.
- Identify the best practices or activities that allow students to meet those outcomes. Illustrative examples give basic ideas. Develop more.
- Teach outcomes using identified best practices and activities over and over and over…spiral curriculum.

Naturalistic Process:

- Develop high quality, motivational, and stimulating learning activities.
- Block out a host of these learning scenarios and then determine which outcomes are met intentionally or ostensibly.

Curriculum Alignment and Curriculum Redevelopment

"Complexity interferes with turning knowledge into action" (as cited in Schmoker, 2011, p. 16).

- **Less conceptual knowledge**
  - Broad and general learning outcomes
  - Each outcome consists of conceptual knowledge…define concepts
- **K-12 competencies**
  - Identify iterative learning experiences to develop.
- **Literacy is infused across the curriculum**
  - Before, during, and after across the curriculum
- **Numeracy is infused across the curriculum**
  - What is it?
  - Intentionality when you are developing it

Distributed Practice

AKA – Scheduled Review

Distributed Practice – Distributed practice is the provision of multiple practice periods over a period of time. Without practice to reinforce it, 80% of new information is forgotten within 24 hours. With periodic reviews spread out over an extended period of time, such as four or five months, nearly all new information can be retained. The effect is cumulative: the more information a person has stored in memory, the easier it is for him or her to learn new information. This is because more items of information are available from which to form memory connections.

Content
Problem Solving
Creative Thinking

St. John's Story…Continued

- Curriculum Alignment Completed: Concepts defined and skills broken into small chunks through scaffolding. Iterative process.

Domestic System - The production of products by hand in the home. This is how they produced goods before industrialization. The domestic method of production required highly skilled craftsmen, and they produced high quality products. The domestic system began to die out when mechanization and the **Factory System** began producing products more quickly and cheaply while using unskilled labourers. Though the factory system offered speed and low prices, the individuality, quality and care that was put in to domestically produced products was gone.

Writing an Essay Introduction:
Identify issue.
State competing sides and their values.
State your position.

- Teach exact curriculum content.
- Review. Review. Review….Concepts. **Scaffold and add to schemas about concepts at hand.** (This is remediation and enrichment combined).
- Practice. Practice. Practice…..Skills such as essay writing and analysis and evaluation of sources (charts, graphs, primary sources, cartoons, maps, etc.)

The Effects of Practice

Study	Focus	Number of Effect Sizes	Average Effect Size	Percentile Gain
Bloom, 1976	General Effects of Practice Mental Practice or Motor Skills	13 8	.93 1.47	32 42
Feltz & Landers, 1983	Mental Practice or Motor Skills	60	.48	18
Ross, 1988	General Effects of Practice	12	1.26	40
Kumar, 1991	General Effects of Practice	5	1.58	44

Marzano, 2007

Implementation for Declarative x 3

Day 1	Day 2	Day 3	Day 4	Day 5
O1	O2 **01**	O3 O2 **O1**	O4 O3 O2 **O1**	O5 O4 O3 O2
Day 6	Day 7	Day 8	Day 9	Day 10
O6 O5 O4 O3 **O1**	O7 O6 O5 04	O8 O7 O6 O5	O9 O8 O7 O6	O10 O9 O8 O7 **O1**

Implementation for Procedural x24

Spiral Curriculum
Take the ten competencies and develop learning experiences and activities to revisit them time and time again.

Example: Competency of Critical Thinking = Analysis of political cartoons, graphs, charts, etc.

Scaffolded Instruction
Creating a foundation for learning, one piece at a time…break the task into its component parts and teach little by little.

Example: Skill of essay writing = thesis, opposing positions and values, statement of one's own position and underlying values.

Scheduled Review and Bloom's Taxonomy: Anything that is taught can be reviewed.

Scheduled Review of Poetry Writing: Dead Poets
Scheduled Review of Procedural Skill of Poetry Writing.wmv

- **Knowledge** – Recall social studies concepts.
- **Comprehension** – Explain science concepts.
- **Application** – Guided practice of the completion of math problems.
- **Analysis** – Analyze messages of social studies political cartoons.
- **Synthesis** – Formulate a hypothesis.
- **Evaluation** – Evaluate the quality of an idea or piece of work.

Scheduled Review Techniques

- Simple question and answer sessions.
- Simple whole group guided practice, breaking complex skills into component parts and completing by calling on volunteers to do each step.
- Personal Whiteboards, Senteos, Thumbs Up.
- Post-it note passing.
- Examples and non-examples for concept formation.
- Talk about…
- Popcorn.
- Vote with your feet.
- Students ask the questions or formulate the problems.
- Students evaluate quality of completed work offering evidence.
- Teacher or student models work completion and students are selected to explain his or her thought processes and/or steps.
- Add items to a concept web in different colours in subsequent lessons. What is industrialization?

Massed Practice

The terrifying Master's Degree revelation...
at first

Frequent Formative Assessment

- Formative versus Summative.
- Formative for growth and Summative for grades.
- Research about impacts of Frequent Formative Evaluation (Marzano, 2007).

Number of Assessments over 15 Weeks	Percentile Gain
0	0
1	13.5
5	20
10	22.5
15	24.5
20	26
25	28.5
30	29

St. John's Story…Continued

- First, the bad…the grade 8 stories.
- Identified curriculum content and skills.
- Reviewed and practiced.
- Assessed every day with review.
- Assessed every week with a short criterion referenced quiz. Criterions were curriculum concept definitions and skill demonstrations (ie: introductory paragraph construction; source analysis of political cartoons, charts, and graphs).
- Used the results to inform my instructional decisions.

Typical Formative Evaluation Ideas

Social Studies: A weekly short answer quiz on key curriculum objectives.

Science: A weekly quiz allowing students to demonstrate knowledge with a diagram, an oral report, or a written response.

English: Have students submit thesis statements on three selected topics rather than grading an entire introductory paragraph or essay.

Math: A three question quiz given at the start of each class.

Phys-Ed: Break complex skills into their component parts and observe students completing them on a weekly basis.

Differentiated Assessment Done Wrong

- Allowing students to demonstrate their knowledge in different ways.
- Can sometimes result in multi-day projects with cumulative demonstrations of knowledge and skill.

Is it augmented by formative assessment?

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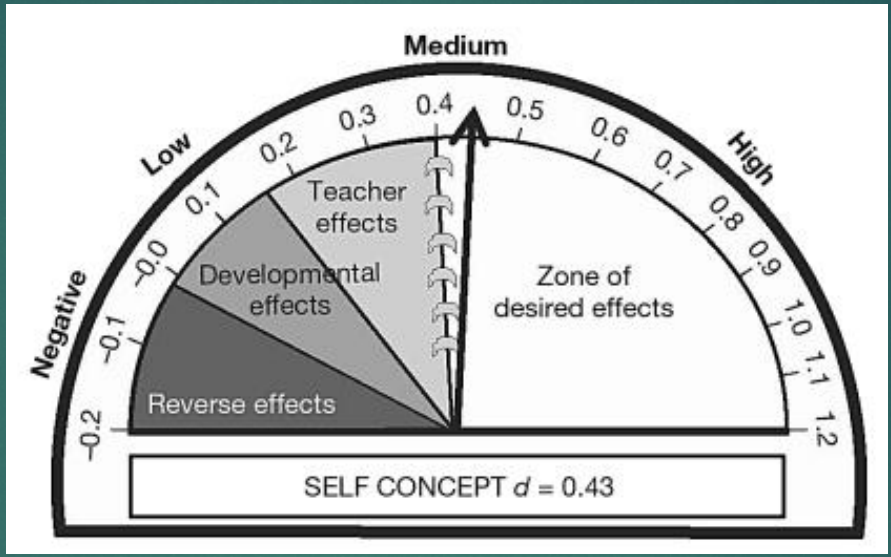

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"Zone of desired effects" = .40 and above

(Hattie, 2011)

Hattie's Quotes from Visible Learning

- Almost everything works. Setting the bar at zero is absurd.
- Thus, any effects below .15 can be considered potentially harmful and probably should not be implemented.
- Teachers typically can attain between .15 and .40 growth per year. Hattie considers this average.
- Educating is more than teaching people to think – it is also teaching people things that are worth knowing.
- Innovation does not occur merely because it is something new or different. Innovation occurs when a teacher makes deliberate action to introduce a different (not necessarily new) method of teaching, curriculum, or strategy that is different from what he or she is currently using.

Thank-You