Effectively Teaching Comprehension & Critical Thinking Skills Across the Disciplines Gr. 6-12

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Literacy: It’s EVERYONE’S Responsibility

Main Entry: literacy

Pronunciation: ’lite•er•at•ee

Function: adjective

Etymology: Middle English literat, from Latin literatus marked with letters, literate, from litteratus, lettered, from plural of littera

Date: 15th century

1 a : educated, cultured b : able to read and write

2 a : versed in literature or creative writing : LITERARY b : LITERAL, PECULIAR

<adj literate> c : having knowledge or competence

<computer literacy> : facility with a computer

— lit•er•ate•ly adverb

— lit•er•ate•ness noun

√ reading, writing AND speaking, listening (THINKING)
√ across the grades, content area disciplines
√ each discipline has a unique lexicon students must master

Focus/Collective Efficacy/Alignment… is a MUST

Collaborative Coherence

or one could simply say… “Getting our Ducks in a row”!!

Practical Wisdom

There are two ways to improve results: redesign the school based on best instructional practices or get new kids.

- Tim Westerberg, former high school principal in Littleton, CO

How do we adjudicate “best”? A requirement without which coherence is impossible!

What is the “gold standard” for best evidence in education?

Meta-Analysis

Meta + Analysis = ?

Meta-cognition = thinking about your thinking...

Meta-Analysis is...

Improving Adolescent Literacy:
Effective Classroom and Instructional Practices

1st Step? Begin w/the best research evidence available...

IES Research Summary:
Improving Adolescent Literacy

FREE: www.centeroninstruction.org
Improving Adolescent Literacy - IES Synthesis/Practice Guide: Pathway to the New Alaska State Standards

1) Provide explicit vocabulary/academic English instruction
2) Provide direct & explicit comprehension strategy/critical thinking skills instruction
3) Provide opportunities for extended discussion/writing re: text/content meaning and interpretations
4) Increase motivation and engagement in literacy learning (e.g. connections, choice, applications, etc)
5) Make available intensive individualized interventions for struggling students based on their assessed literacy/academic needs (RTI)

Explicit Teaching Is:

I do it - modeling (including thinking aloud)
We do it - teacher guided,
Y’all do it - partner practice/small group IF task/topic warrants (w/feedback)
You do it - independent practice (w/feedback)

Structured Engagement “tool kit”: Ensure ALL Are Responding

1) Choral Responses - do “it” together (verbal or physical)
   - teacher cues students to respond (e.g. hand signal, voice, eye)
   - physical responses too; fingers under the word, chart, etc.
   - “thumbs up when you know/fist of five (metacognition)
2) “Precision” Partner & Small Group (IF task warrants) Responses
   - teacher assigns - provide a label/title “1’s tell 2’s”
   - alternate ranking (high with middle, middle with lower)
   - thoughtful questions/prompts up & down Bloom’s taxonomy
3) Written Responses: Brief non-fiction writing
   - focused prompts increase thinking, accountability, focus
   - structure academic language (e.g. sentence starters)
4) Individual Responses (AFTER rehearsal/practice)
   - random/strategic call on individuals (NO hands up)
   - use complete sentences, use new vocabulary/AL

What is Reading Comprehension?

“the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (RAND, 2002, p. 11)

“Reading is an active and complex process that involves
- Understanding written text
- Developing and interpreting meaning; and
- Using meaning as appropriate to type of text, purpose, and situation” (NAEP Framework, 2009)
**Critical Thinking?**

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.

Critical thinking is, in short, self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem solving abilities and a commitment to overcome our native egocentrism and sociocentrism.  


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**How Psychologists Think About Comprehension**

- **Declarative Knowledge**
  - Facts/information
  - Word meanings
  - Academic concepts
  - Schema
  - Relevant personal experiences
  - Political, social, historical contexts

- **Procedural Knowledge**
  - Procedures
  - Strategies

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**Background Knowledge**

- Background knowledge of text has a major impact on whether or not a reader can comprehend text.  
  Anderson & Pearson, 1984; Bransford, Stein, & Sherhan, 1984; Wilson & Anderson, 1986

- Across grades and reading ability, prior knowledge of subject area and key vocabulary results in higher scores on reading comprehension measures.  
  Langer, 1984; Long, Winegard, & Bridget, 1989; Stevens, 1980

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**Background Knowledge**

(Background Knowledge by Fisher and Frey - http://www.fisherandfrey.com)

How much a reader already knows about the subject is probably the best predictor of reading comprehension. When readers engage with a text for which they have limited background knowledge, the text is much more difficult to understand than one for which they have ample background knowledge. ... research indicates that children continue to spin their wheels when they don’t have the background knowledge required to understand much of what they are reading.  

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**What are at least two significant factors that cause comprehension difficulty?**

Improved vascular definition in radiographs of the arterial phase or of the venous phase can be procured by a process of subtraction whereby positive and negative images of the overlying skull are imposed on one another.

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**On the Limits of Comprehension Strategies: Building Knowledge is the REAL Key!**

In the final analysis, how should we think about reading strategies? Teaching reading strategies is a low-cost way to give developing readers a boost, but it should be a small part of a teacher’s job. Happily, students can learn them quickly and they are effective, but they appear to deliver a one-time boost. Acquiring a broad vocabulary and a rich base of background knowledge will yield more substantial and longer-term benefits but doing so is more difficult and time consuming. This knowledge must be the product of years of systematic instruction as well as constant exposure to high quality books, films, conversations, and so on, which provide students with incidental exposure to a great deal of new vocabulary and knowledge.

-Daniel Willingham  
The Usefulness of Brief Instruction in Reading Comprehension Strategies, American Educator, Winter 2006/07

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What is a Comprehension Strategy?

“A Plan for Thinking”

What Does It Mean to “Teach” Comprehension Strategies’?

Is having students read an appropriate level passage followed by answering literal & inferential questions “teaching comprehension”?

Yes - No - WHY?

Provide 2 reasons to support your view… What is your evidence? Be prepared to convince your partner!

Plans for Thinking

✓ “cognitive apprenticeship” in literate thinking across ALL 6-12 classrooms/content areas
✓ teachers explicitly structuring - teaching thinking: “I/We/Ya’ll/You do it”- guided instruction
✓ make these covert processes OVERT
✓ teaching students how to think:

Testing or Teaching

What’s the Difference?

Testing Vs. Teaching

✓ after reading
✓ focus is on assessing/testing of comprehension
✓ focus is on right/wrong answers - end result
✓ assigns tasks (e.g. summarize the story)
✓ thinking process is covert

✓ before/during/after reading
✓ focus is on the “how to” of extracting & constructing meaning
✓ focus on the process, how you arrive at the end result
✓ teaches discrete strategies (e.g. steps in how to summarize)
✓ thinking process is overt - via thinking aloud/modeling

Process for Explicit Teaching of Comprehension Strategies…

I do it - modeling, explaining why, when, & how

We do it - supported practice, - lots of feedback & remodeling as needed

Y’all do it - partner/small group practice using clear routines – cue cards/GOs, etc.

You do it - independent practice

Gradual Release Model: Scaffolding

- David Pearson, 2007

With any luck, we move this way (→) over time.

Or… I do it

We do it

Y’ all do it

You do it

Gradual Release of Responsibility

Student Responsibility

Teacher Responsibility
Many researchers think that it is not the specific strategy taught, but rather the students' active participation in the comprehension process that makes the most difference in students' comprehension. (Gersten et al., 2001; Pressley et al., 1987)

Alaska 2013 NAEP 8th Grade Reading

<table>
<thead>
<tr>
<th>Achievement-Level Percentages and Average Score Results</th>
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<tbody>
<tr>
<td>State</td>
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<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>Average Score</td>
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<tr>
<td>Proficient</td>
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<tr>
<td>Advanced</td>
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31% Proficient or Advanced – New Standards Level

8th Grade NAEP Passage:
Ellis Island - Gateway to America

Why does the author say "the land of the free" was not so free to everyone, after all? Why does this passage contain the actual words of some of the immigrants? If you could ask one of the immigrants a question, what else would you want to know about their experience on Ellis Island? If you had lived in Armenia in 1892, would you have immigrated to America? Use information from the passage to explain why or why not.

Q: What do you notice about the nature of these questions? Implications for EVERY teacher across the grades/content areas?
Critical Academic Literacy

√ Ability to critique, analyze, defend, unpack, explain, think deeply - not just “on the surface” – handle complex texts
√ Make a point and support it with evidence and clear evidentiary thinking, beyond opinion/idiosyncratic experience
√ “Argumentative literacy” (Graff, 2003)
   - ability to persuade, to debate, argue multiple perspectives
   - explain why/how, cite examples, evaluate, make judgments
√ Use appropriate Academic Language – sophisticated prose to explain, articulate… communicate understanding
√ No longer just what you know (bubble in “b”) – but can you explain why/how b is a better answer than a, c, d
And this language/thinking must be TAUGHT – (not just assigned/tested)

Goal: Make Thinking Visible

Wow, in this class I not only have to think, I’ve got to explain my thinking!!

EVERY student explains their thinking & receives feedback from peers and the teacher – multiple times in Every lesson!

Yes - No - Why?

Thematic teaching, project based learning, & teaching to different student learning styles are examples of proven methods to improve student achievement."

Yes, I agree with this assertion because_________.

No, I do not agree with this assertion because_____.

Perspectives for Thinking in this Lesson:

1) Subjective – personal & professional experiences
2) Empirical – research evidence/support
3) Rhetorical – words themselves, logical relationships, explicit & implicit connotations

Analysis

Specific ways your teacher structured the:

- Time – Task - Purpose
- Engagement
- Academic Language
- Critical Thinking
- Helpful Feedback

Applications-Implications?
**Summarization**

What Must a Reader Do in Order to Summarize a Segment of Text?

- Identify the gist/topic/main idea
- Identify related details
- Determine relative importance of the details
- Separate trivial from essential
- Put information into own words – paraphrase
- Combine – synthesize – consolidate
- "cook it down" – extract the essence

**Paragraph Shrinking: One Ex. of Teaching a Summarization Strategy or Process**

Paragraph Shrinking (summarize/paraphrase)
1. Name the "who/what" the paragraph is about
2. Identify the 1-3 most important details about the who/what
3. State the "gist" in 10-15 (12) words or less
4. Record each "gist statement" in notes

**Teaching Students to Generate and Answer Their Own Questions**

Justification? Useful/Sensible – Why or Why Not?

**Benefits of Students Asking/Answering their Own Questions**
- Slow down, read differently than a casual text
- A specific process or strategy for comp. – evidence it works
- Visible evidence of what is being thought/focused upon
- Generates info to share/compare/justify w/peers – teacher

* Additional benefits:
  - learning about questions/thinking – generalizable cognitive benefits beyond the immediate text/task
  - possible motivation/fun – help create the test etc.
  * Others??

**QAR: Question - Answer – Relationships**
- Raphael & Au, 2005

Why? - research validated framework for teaching students how to think about question types & the relationship between questions & the kind of thinking/acting required to answer them.

<table>
<thead>
<tr>
<th>In the Book (literal)</th>
<th>In my Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right There (underline it)</td>
<td>Author and Me – inference, combine text info &amp; prior knowledge to infer a reasonable answer</td>
</tr>
<tr>
<td>Think &amp; Search (put together from more than one location in the text)</td>
<td>On My Own – don’t require reading of the text (e.g. imagine, opinion)</td>
</tr>
</tbody>
</table>

\ students learn the relationship between the kind of question and the kind of thinking/acting they need to do as learners/critical thinkers
\ move from teacher generated to student generated questions…

**Close Reading Annotation Key**

“Visible Thinking”

- Underline key ideas – essential details (2)
- Star – the most essential idea
- Circle any essential vocabulary terms (not more than 2)
- Triangle around words you are unsure of...
- Ask a question – make a comment, connection, application, agree/disagree…. 

**Where to Begin? – Learning About Questions**

**Your experience?**

Do you teach students to ask questions?

If so, what is your strategy or plan?

Do you have a system or framework for teaching how to differentiate Question types?

Do you explicitly teach how different types of questions require different kinds of thinking? Describe please… effectiveness? issues?
Annotation is a note of any form made while reading text.

"Reading with a pencil in hand!"

The Power of Teaching Student to Annotate During Content Reading

- Zywica & Gomez
2008, 52 (2), JAAL

Why does structured annotation help comprehension?

1. broke up and read in small amounts
2. read content selectively
3. gained clear understanding
4. important facts or main ideas
5. supporting ideas (evidence)
6. Annex = precluded words
7. Def. c definitions provided in the text
8. R = other points of transition/words
9. Cond = major conclusions drawn
10. Inf. = inferred information
11. ○ = important formula or equation
12. ? = confusing information

ALL “Close” or Strategic Content Reading Strategies Have a Common Architecture

They ALL teach/cause students to:

√ slow down, read more carefully, strategically – clearly different compared to casual reading

√ apply some specific process or routine that activates thinking while reading (e.g. asking Q’s, annotating, paraphrasing, outlining and so forth) – Visible Evidence

√ read the selection/section more than once – different purpose/task/question each time

√ explain why/how, compare, explore meanings w/peers & their teacher to deepen grasp, clear up confusions, challenge assumptions, argue, debate, cause greater learning, etc.

Sourcing...

or developing our “BS detectors!”

What Questions Are Helpful to Ask When Reading/Watching/Listening to New Info?

- When/Why was this written/created/posted? What do I know about the author, time period? Possible biases?
- Where was it published/posted? Possible biases?
- Intended audience? Goals of the author?
- What are their claims? Evidence presented? Left out?
- What are the counter arguments/points of view?
- Predict what will be said BEFORE reading/viewing!

Writing Identified as Crucial to Comprehension

Types/Genres of Writing Required in College/Career, And for Citizenship??

http://sheg.stanford.edu/rlh

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Reflect: Expository Writing Across Disciplines/Grades at Your School

1) On the “radar screen” – everyone is aware of the import of these 3 types of writing, it’s a clear focus.

2) We are implementing a plan – the school/dept/PLC has a clear plan using evidence based tactics to address the instruction of these 3 types of writing.

3) Evaluation/Improvement – teachers look at student writing together to figure out what is working/not working for various types of students – use these data to guide instructional plans, improvement – model/observe/video etc.

Great Examples of Brief Non-Fiction Content Specific Writing

- Kinsella, Kinsella/Ward-Singer

1) Power Sentences (Vocabulary & Thinking Structured = Power)

2) 5 min paper (Topic 1-2 detail sentences)

3) 10 min paper (Topic 2-3 detail sentences)

Tons of resources FREE to download from Dr. Kate:
http://www.sccoe.org/depts/ell/kinsella.asp

Structuring language is a key aspect of developing critical thinking & comprehension skills.

Accountable Talk Prompts

- I wonder why...
- I have a question about...
- I agree with ___ because...
- I disagree with ___ because...
- That reminds me of...
- I don’t understand...
- I predict...
- My idea is similar to ___, I also think:
- I liked/disliked… because...


Accountable Talk in Reading Comprehension Instruction

- Resnick et al. 2006

“…this study provided supportive evidence that a classroom discourse including listening to others, questioning other’s knowledge, and exploring one’s own thoughts has a positive relationship with the academic rigor of reading comprehension. Additionally, if one attempts to assess the quality of instruction such as in the IQA toolkit, the quality of classroom talk should be considered as a lens to look at the classroom culture.”

Putting It ALL Together

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We Have a Metaphorical “Berlin Wall” in Education

“I’ve been teaching high school math for 6 years and, student teaching aside, I have NEVER observed a colleague teaching.”
- Adam, Central OR Literacy Project Participant, 2011

Note the irony here, the enterprise dedicated to human learning, Education, routinely leaves out the most essential variable in the learning process for it’s own members… FEEDBACK!!

As Leaders We Must....

Create a Culture of Valuing the Giving/Receiving of Feedback

Feedback is the breakfast of champions!

Building a Culture of Giving AND Receiving Actionable Feedback

√ Humility – no single person (coach, principal, consultant etc.) knows it all, we need a “pit crew”!

√ Collaborative Partnership is the path – coaches and consultants need to forge these relationships tied to agreed upon FOCUS, or “Collaborative Coherence”

√ Creating a safe environment for honest, open, inquiry...

√ Become a Model of Adult Learning – Walk the Talk!

√ Establish Feedback for ALL as clear professional goal for your school/district/region

Public Practice: Formats: Creating a Culture of Respectful Giving & Receiving of Actionable Feedback

1) Peer to Peer Coaching – PLC Debriefing – 1 teacher from each PLC team is observed by other team members during 2 week period, team debrief and discussion during PLC.

2) Learning Walk Team Coaching – 4-8 teachers plus a coach/VP, or P observe a teacher for 20 min. – immediate debrief for 5-7 min. in hall while class is covered by a team member – later detailed discussions in PLC.

3) Classroom Video Clips – others at first (e.g. Archer/Feldman) then shoot your own & self view, - clips run 2-10 min. edited to focus on a common issue/interest.

4) Mini-lesson demonstrations – 3-10 min. modeling some portion of a recent lesson, focused on a common issue.

5) Principal Walk Throughs – brief observations & feedback from site admin.

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My Extrapolation of These Meta-analyses: Essential Attributes of ROBUST Instruction Across the Grades and Content Areas

1) Engagement: Everyone Does Everything
2) Language: Structured use of academic vocabulary in speaking/writing.
3) Thinking: Structured use of HOTS/LOTS (higher/lower order thinking skills)
4) Scaffolding: Support necessary so ALL are becoming more competent

* Of course, plus each teacher’s essential content area info!

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Providing Effective Feedback as An Instructional Colleague

1) Respect – respect – respect: Think Aretha!!
   ** Should is banned! No “shoulding” on anyone!
2) Specific – actionable – detailed – unambiguous...
   “It appeared effective when you _____”
3) Begin with affirmations – build on what is positive/productive – what’s working and why?
4) Frame suggestions as actions to be checked out:
   “In my experience it is even more effective to _____
   and see how your students respond…”
5) Tie the feedback directly to our shared “lens” –
   how is the teaching structuring or causing student engagement/academic language/critical thinking, etc.

Learning the Language of Respectful – Actionable Feedback

“If it appeared effective when you _____
I appreciated how you _____
I thought it was really (your fav. positive adj.) when you _____
because this caused the students to _____
The students were _____ when you _____
I noticed the students were _____, I wonder what would happen if you _____?
I’ve found it works great to _____, give that a go and see what you find.
Where are you going next in this lesson?
I wonder how you might have _____?

Ordinary Practices (little-no useful feedback)
Will Never Produce Extra-ordinary Results!!

The Extraordinary Impact of Video Feedback

From Teachers:
“The videotaping is what really drew me in, I wanted to see not only what I’m doing but what my students are doing. I thought I had a pretty good grasp of what I was doing as a teacher, but it is eye opening … I honestly felt like this is one of the best things that I have ever done to help me grow professionally. And my kids really benefited from it, so it was very exciting.”

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http://www.metproject.org/
Reflect – Imagine - Speculate

◆ How much video analysis/critique happens at your school routinely – all teachers?
◆ What is your vision for 1-2 yrs from now?
◆ What might this process look like?
◆ How could you scaffold this for yourself and your colleagues?
◆ What would be the first steps you could begin 2nd semester?

Everyone Grew, Especially Those MOST In Need

High School: Reading

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</tr>
<tr>
<td>Female</td>
<td>66%</td>
<td>66%</td>
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What caused this HS to improve?

“While there were no doubt many factors that account for the significant improvement in student achievement at Madras HS, we are convinced it was our laser like focus on increasing student engagement, brought to life by instituting learning walks across our entire faculty, that allowed us to truly become a ‘learning community’ – specific feedback linking our teaching to student learning was the key.”

- Melinda Boyle, Jefferson Co Schools, Madras OR

Value Created Today?

What? Identify 2-3 ideas, strategies, concepts you think are worthy remembering/acting upon

So What? Analyze/explain – why these, elaborate..

Now What? Apply – what will you do? How will you take action? What will it look like?

Thanks for Attending!

Please send along any questions; kfeldman@scoe.org

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