Concept-Oriented Reading Instruction (CORI)

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What is CORI?

- Instructional framework for students in grades 3-9 that combines **reading strategy instruction** and **inquiry science**. Goals of the program include:
  - increasing students’ **reading comprehension**
  - Increasing students’ **intrinsic motivation** to read
  - building students’ **conceptual knowledge** in science

- Began as a project sponsored by the National Reading Research Center (NRRC) at the University of Maryland and University of Georgia from 1992-1997.

- [https://www.youtube.com/watch?time_continue=19&v=6Yi5UfDeY1k](https://www.youtube.com/watch?time_continue=19&v=6Yi5UfDeY1k)
Theoretical Underpinnings on Motivation and Engagement

- **Self-Determination Theory (Zhou et al., 2009)** - When teachers encourage students to provide input into instruction, students’ motivation and engagement are expected to increase.

- **Expectancy–Value Theory (Eccles & Wigfield, 2002)** - A student’s value for reading predicts engagement and academic success.

- **Sociocognitive Theory (Bandura, 2001)** - Presents self-efficacy as an important motivational construct that influences an individual’s aspirations, resilience, and self-regulated activity.

- **Activity Theory (Leontiev, 1981)** - Collaborations among students are expected to influence students’ reading motivations and engagement.
Cognitive Processes in CORI

- **Observation and First-Hand Investigation**
  - Students observe natural and scientific phenomena in their neighborhood (e.g., measuring and recording readings at the weather station outside school, or dissecting an owl pellet to find animal bones).

- **Questioning**
  - Children asking their own questions about what's going on in their environment, and get those answers through their reading.

- **In-depth reading**
  - Students delve deeply into investigating their scientific topic via science trade books.

- **Collaboration**
  - Children collaborate with each other to understand what these books say.

- **Writing and communicating**
  - Children work to understand the topics through their reading activities, and then they share their understanding with others in their class through writing and presentations.
Connections to Course Readings

- One predictor of text comprehension is the amount and frequency that a student reads (Guthrie, Wigfield, Metsala, & Cox, 2004).

- Guthrie et. al. (2004) found that reading motivation (both intrinsic and extrinsic) increases reading amount, which then increases text comprehension.

- When meaningfully enacted, classroom discussions can develop students’ critical thinking and reasoning skills, as well as comprehension of texts and content learning (Garas-York & Almasi, 2017).
Research that compared CORI classrooms to traditional classrooms in the same schools found large benefits in three areas:

- **Reading comprehension**
  - CORI students comprehended new books better.

- **Motivation**
  - CORI students want to read and choose to read more books after being in CORI.

- **Scientific knowledge**
  - CORI students learn the concepts they study deeply, which is valuable for their general knowledge and valuable for their content learning.
Is CORI Effective?

  - **Purpose:** This quasi-experimental study examined the effects of a year-long integration of reading/language arts and science instruction in the CORI framework on students' reading engagement, in comparison with traditional instruction (TI).
  - **Participants:**
    - 53 fifth-grade students and 67 third-grade students completed a year of CORI.
    - 53 fifth-grade and 66 third-grade students served as comparison.
  - **Measure:** Week-long performance assessment was used to compare CORI students to TI students.
  - **Major Findings:** The CORI context increased strategy use, conceptual learning, and text comprehension more than TI, when background knowledge was controlled.

**Purpose:** This experimental study examined the extent integrated literacy/history instruction in the CORI framework increases information text comprehension, in comparison with (TI).

**Participants:** 615 grade 7 students attending four middle schools in a rural public school district of a mid-Atlantic state

**Measures:** (1) self-report survey that inquired about students’ reading motivations, (2) self-report questionnaire representing four constructs to assess students’ perceptions of their reading/language arts teachers’ classroom practices; (3) Woodcock–Johnson–III Reading Fluency Test, and (4) researcher-developed measure of informational text comprehension.

**Major Findings:** CORI increased informational text comprehension more strongly than TI.
CORI Principles

Each week’s activities are categorized according to the following engagement principles of CORI:

- **Relevance** – Designed to build background knowledge and to increase interest in the concept.

- **Collaboration** – Students will collaborate with peers and partners in whole-class settings to accomplish instructional and individual goals for learning.

- **Building Concepts** - Teachers build concepts with students when they provide opportunities to deepen scientific knowledge.

- **Connections** - Students will be able to make many connections between what they are observing, writing, reading, and creating in their literacy, science, and other instructional blocks of instructional time.

- **Choice** – Students are provided with daily choices to provide self-directed learning and autonomy.

- **Challenge** - Students will be able to choose tasks and take them to deeper levels of complexity for a challenge.

- **Explicit Instruction** – Teachers provide explicit instruction on comprehension strategies.

- **Scaffolding** - Scaffolded instruction will include teacher modeling of strategies and guidance on how to complete daily assignments, many of which will lead to the culminating project.
The Sun, Earth, and Moon

Concept-Oriented Reading Instruction for Grade 3

**Essential Question:** How does the Earth rotate in the sky?

- **Tier 1** — *Our Moon* by Michael Burgan
- **Tier 2** — *Our Solar System* by Bruce D. Cooper, *Space Rocks: A Look at Asteroids and Comets* by Aaron Waldeck
- **Tier 3** — *I Wonder...What Is the Man in the Moon?* by Remedia
Science

Relevance

- Teacher uses a globe to demonstrate rotation and an axis.
- Teacher uses a flashlight and globe to show day and night. Shine the light on the globe. Slowly turn the globe from east to west while having students observe where the light is falling. Mark your city with a tiny paper person held in place with tape or clay. Ask students to call out when they see their city begin daytime and when it begins nighttime. What would the tiny person see at sunrise, midday, and sunset?

Connections

- Students write a paragraph explaining how day and night occur.
Reading/Language Arts Tiered Instruction

**Building Concepts**
- Students create a class and individual list of questions they have about Earth’s rotation.

**Explicit Instruction/Scaffolding**
- Teacher models how to use leveled text to obtain information that will answer questions students have about their chosen topic

**Collaboration/Choice/Challenge**
- Students work with a partner to use leveled text to answer three to five of their own questions about their chosen topic.
Search and Retrieve Activity

Name: ___________________________ Date: ______________________

Search and Retrieve
What I read:

Write questions that you have about (topic you read about) __________________________.

Steps for Searching

1. Set your search goal: Ask your own question(s) of interest!

2. Locate texts and important sections to answer your question.

3. Read for important details. Make sure they connect to our question.

4. Put together information that answers your questions.

1. My favorite question(s) is (are):

2. Name of book(s): Page numbers:

3. Write important facts to remember:

4. Answer to my favorite question(s):
Debrief

1. What are the pros of using the CORI framework?
2. What are the possible cons of the CORI framework?
3. How can this be used in different contexts (e.g., social studies)?
Engaging Adolescents in Reading
  - Edited and co-authored by John T. Guthrie

Motivating Reading Comprehension: Concept Oriented Reading Instruction
  - edited by Guthrie, Wigfield, & Perencevich

Concept-Oriented Reading Instruction: Engaging Classrooms, Lifelong Learners
  - by Emily Anderson Swan