| Core Function | Personalized Learning: Cognitive Competency | Effective Practice | Intentionally addressing students' accessible background knowledge to facilitate new learning |

Indicator: All teachers assign rich reading and the application of the reading in written work and discussion. (5327)

Explanation: Personal learning models emphasize a number of instructional strategies to enhance students' cognitive competency, including intentionally accessing and building upon students' background knowledge through reading and application of rich and varied texts. The research indicates that students should spend significant time reading authentic texts and applying what they have learned through writing and high-quality discussions in order for deeper learning to occur. Literacy-rich content reading instruction is discipline-specific and is essential to promoting higher-level learning required for college and career.

Questions: What types of instruction promote "rich" reading that enhances students' cognitive competency? What are characteristics of literacy-rich instructional practices that promote cognitive competency?

What Types of Instruction Promote "Rich" Reading That Enhances Students' Cognitive Competency?

Learner-centered, or personalized learning refers to "a teacher's relationships with students and their families and the use of multiple instructional modes to scaffold each student's learning and enhance the student's personal competencies" (Twyman & Redding, 2015, p. 3). The student is actively involved with the teacher in co-constructing their individualized learning pathway, and the location, time and pace of learning may vary from student to student (Redding, 2016). Cognitive competency, one of four personal competencies within recent personalized learning frameworks[1] refers to "prior knowledge which facilitates new learning" (Redding, 2014, p. 4). Research shows that a key component of building students' cognitive competency involves ample time reading and responding to rich texts. Not surprisingly, the ability to read and critically analyze information from textbooks and other classroom materials strongly influences students' educational success (Berman, 2009). A good deal of research has found that providing students with frequent opportunity to read a variety of rich and engaging texts is essential to support growth in reading, whether at the elementary or secondary level. For example, the volume of reading has been linked to higher-level literacy proficiencies (Allington, 2012), and independent reading supports learning and school achievement (Cullinan, 2000). However, research has also consistently demonstrated that students must be explicitly taught strategies (e.g., prediction, summarization, etc.) that proficient readers use in order to effectively navigate these texts independently in ways that lead to deep learning of the material (Duke & Pearson, 2002; Teachers College, 2014). In fact, exemplary teachers frequently provide direct, explicit demonstrations (modeling) of cognitive strategies that good readers use during reading, then gradually scaffold these strategies by providing practice and feedback to students (Allington, 2002). In their review of balanced comprehension instruction, Duke and Pearson (2002) summarized the literature and suggest that supportive classroom contexts for building effective reading skills include: 1)

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[1] Other personal competencies are Metacognitive, Motivational, and Social/Emotional. For a complete description of a personalized learning framework see Redding, in press: http://www.centeril.org/2016handbook/resources/Redding_chapter_web.pdf)

lots of time spent actually reading independently and applying knowledge, skills and strategies; 2) plenty of experience reading authentic texts for clear and compelling purposes; 3) ample time spent writing texts in order to establish connections between reading and writing; and, 4) an environment rich in high quality discussion about text, including teacher-to-student and student-to-student talk.

Recent meta-analyses have revealed that writing instruction and writing about what is read improves reading comprehension, fluency and word recognition at both the elementary and secondary levels; increasing how much students write also enhances students' reading comprehension (Graham & Hebert, 2011). As Graham and Hebert explain, "Writing about text…provides students with a tool for visibly and permanently recording, connecting, analyzing, personalizing, and manipulating key ideas in text" (p. 712). Additionally, both typically developing and struggling students benefit from instruction in how to apply self-regulation strategies such as goal setting and self-assessment within the writing process (Graham, McKeown, Kiuhara, & Harris, 2012). Writing about text may provide opportunities for higher-order thinking and learning. For example, some researchers have advocated the teaching of argumentation as a reading and writing tool, because "when composing an argument, students need to read and think critically and evaluate multiple perspectives in order to measure the strength of their own claim, and draw conclusions." (Teacher College, 2014). These types of skills involved in making arguments based on reading have been touted as essential for college and career readiness (Hillocks, 2010).

High-quality discussions about the meaning and interpretation of text in various content areas also promote reading and learning. In their review of the literature Kamil, Borman, Dole, Kral, Salinger & Torgeson (2008) concluded that discussions that promote student comprehension of complex text:

> …Are those that focus on building a deeper understanding of the author's meaning or critically analyzing and perhaps challenging the author's conclusions through reasoning or applying personal experiences and knowledge. In effective discussions students have the opportunity to have sustained exchanges with the teacher or other students, present and defend individual interpretations and points of view, use

text content, background knowledge, and reasoning to support interpretations and conclusions, and listen to the points of view and reasoned arguments of others participating in the discussion. (p. 21)

Kamil, et al recommend that teachers prepare for instruction by using engaging reading selections that can have multiple interpretations, and preparing questions that will stimulate higher-level thinking. They should also ask follow-up questions that help provide continuity and extend the discussion, and provide a discussion format for students to follow when they discuss texts together in small groups. A recent meta-analysis also suggests that these instructional strategies positively impact students' critical thinking skills as well (Abrami, Bernard, Borokhovski, Waddington, Wade, & Persson, 2015).

What Are Characteristics of Literacy-Rich Instructional Practices That Promote Cognitive Competency?

Literacy-rich instruction can help build student motivation and their use of higher-level reading and writing strategies specific to the various disciplines they will encounter in college and careers. In fact, instruction addressing these strategies is critical to the Common Core Standards implemented by many states (Chauvin & Molina, 2012). Berman (2009) argues, "Though content area teachers in middle and high schools are not expected to be 'reading' teachers, they do need to know how to teach their students the reading and writing skills of their disciplines." (p. 4). This may be particularly true at the secondary level, where the literacy demands of specific subjects (e.g., how to interpret a historical document) must be articulated, and content area teachers need to know how to teach these skills. Literacy-rich content area instruction has been shown to increase students' strategy use, conceptual learning and text comprehension (Cervetti, Pearson, Barber, Hiebert, & Bravo, 2007). Urquhart and Frazee (2012) provide several examples of characteristics of literacy-rich science classrooms in which reading, writing and discussion occur daily:

• Students read a variety of texts, including academic journal articles and scientific websites,

• Student comprehension is also supported through access to electronic media, film, and lab experiences;

• Students actively construct science-specific vocabulary and use reader aids to enhance their under-

standing of science texts; and,

- Students often discuss, present, and write about their hypotheses, predictions, analyses, and findings.

Literacy-rich content instruction enables students to develop the deep and higher-level critical thinking skills that will allow them to become critical readers and life-long learners (Chauvin & Molina, 2012).

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