

## **Reading with Understanding: A Global Expectation**

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*This article outlines the complexity of reading with understanding, what is required for full and deep comprehension, the state of affairs with regard to reading comprehension in developed countries, possible etiologies for low performances, and suggestions for instruction in specific skills and strategies to improve students' demonstrated achievement in daily lessons as well as on global assessments. Recognizing the commonality of this concern among nations, a need to examine universally accepted tenets for successful reading comprehension as well as local etiologies that impede it becomes increasingly important. Such tenets are skills and strategies that address all of Irwin's micro and macro aspects of reading for understanding as well as Bloom's revised taxonomy for higher-level thinking.*

Written texts are intended as communication between an author and reader. For that to be accomplished, the reader must have constructed meaning with the composition, grasping ideas and information, analyzing and evaluating content for accuracy, and making connections with background knowledge and life experiences — including social, cultural, educational, and other demographics — to reach between and beyond lines in order to detect stated and implied meanings. Understanding (i.e., comprehension) will vary as readers dig for information in a text and synthesize it with personal schema in the process of constructing meaning.

*Reading* is characterized by understanding; although *understanding* is labeled in different ways (e.g., comprehension, meaning making), success with this language process requires that one fully comprehends the message expressed, interprets between and beyond the lines of text, and constructs personal meaning *with* the text (e.g., elaborating and extending). Those terms, although their interchangeable use could arguably be debated based on semantic differences, will be used in this discussion since they are all used in the literature when describing the same outcome.

All that it requires makes reading a cognitively complex activity. Initially, it involves decoding words, but reading also requires thinking about messages built with them. If the second

is lacking, reading hasn't occurred; the reader only said or viewed words. Keene and Zimmerman (1997) state, "teaching reading comprehension is mostly about teaching thinking" (47). Reaching full and deep comprehension of texts involves *close reading* (i.e., selected rereading of sections), thinking, analysis, evaluation, synthesis, and integration of ideas (Beers & Probst, 2013; Shea & Roberts, 2016). However, knowing these essential elements for full understanding hasn't always translated to classroom instruction that leads students to successful performance on international assessments of reading.

### **State of Affairs: Reading Comprehension Across Countries**

Two major surveys of students' performance in the area of reading are used internationally. The Progress in International Reading Literacy Study (PIRLS) measures reading performance of 4th grade students in participating countries. Results for U.S. students in 2011 showed an increase from previous results (14 points higher), placing the U.S. in the top 13 educational systems — with 5 ranking higher and 7 measurably similar (NCES, 2017a). Although the average age of 4<sup>th</sup> graders across Europe is 10-years-old, the age of 4<sup>th</sup> grade test takers varies from 9.7 in Italy to 11.4 in Luxemburg. The second survey is the Program for International Student Assessment (PISA). This test measures the knowledge and skills of 15-year-olds in reading, mathematics, and science with a focus in one area per year; the U.S. continues to fall in the middle of the group in reading, behind several other advanced countries (Desilver, 2017). As do most international authorities on the reading process (e.g., Harris and Hodges, 1995), these assessments describe reading as a complex process that requires the integration of active thinking and the use of skills and strategies in an effort to construct meaning from written text. Globally, many students appear to have difficulty in fully reaching that goal.

In 2009, an average of 19.6% (i.e., one in five 15-year-olds) across the 27 EU countries scored low in reading on the PISA, indicating difficulty with using reading as a tool for learning — a critical competency for success in secondary school, life, and careers. Analyses of data showed that 11% of the variation in students' performance is due less to differences among the EU's 27 countries and more to differences within countries — between individual schools and/or students in those schools (EACEA/Eurydice, 2011). Reflection on these conclusions draws attention to variables that may be contributing factors.

## **Possible Etiology of Lower Performance**

Focusing on Italy, where orthography is phonologically regular, an examination of the prevalence of reading difficulties in 623 Italian children, age 7-11-years-old, Cecilia, Vittorini, Cofini, & di Orio (2014) report that 11% demonstrated low comprehension levels. Although comprehension problems were identified with 17% of grade 2 readers, the difficulties appear to lessen for some as decoding (i.e., recognizing words) and fluency (i.e., reading pace, prosody, phrasing) improve, but remain despite improved reading accuracy with others. These findings echo the cautions of Samuelson & Braten (2005) that “Efficient word decoding may be a necessary but not sufficient condition for good reading comprehension in children and adults” (p. 109).

In languages with a consistent orthography (i.e., sounds are consistently matched with letters across words), children become accurate and fluent readers at beginning levels by the end of first grade. However, competency in reading fluency can lead to the assumption that comprehension is occurring when it is not. Overlooking the lack of understanding that some children experience with written texts can lead to larger problems with comprehension over time. Cecilia et al., (2014) found significant differences in reading problems based on demographics; children living in rural areas had significantly lower growth in comprehension. The researchers also found that, in the 7-10 age group, problems with reading fluency were more common than difficulty with word reading accuracy. Cecilia et al., (2014) also note that students with low comprehension are typically not identified until the end of elementary grades — around the age of 13-years-old; this finding coincides with over 25 years of research conducted in the U.S. and the U.K. reporting large groups of good decoders identified with comprehension problems after they move beyond primary grades. As many as 10-15% of students at ages 7-10-years-old fall into this category (Yuill & Oakhill, 1991; Cain & Oakhill, 2007; Hulme & Snowling, 2011).

With regard to the gender gap, it appears that, in most cases, girls outperform boys in reading on both PIRLS and PISA across the 27 EU countries and the U.S. (EACEA/Eurydice, 2011; NCES, 2017b; OECD, 2010). Background and home environment have also been determined to play a significant role in students’ achievement (Breen & Jonsson, 2005). PIRLS findings report a notable relationship between parents’ educational level and occupation with their child’s achievement (Mullis, Martin, Kennedy, & Foy, 2007). Home environment, life experiences, and opportunities provided by the family and community, particularly in pre-school

years, but continuing through a child's developmental years, have a powerful impact on the level of cognition, background knowledge, and vocabulary development that students bring to school as a foundation for learning.

## **Components of Reading for Meaning**

A child's lexical development and knowledge of word meanings is a variable that accounts for differences in students' reading achievement levels. Scarborough (1998) reported that vocabulary (e.g., expressive and receptive) level in Kindergarten is a predictor of reading comprehension efficiency in middle elementary grades. Ouellette (2006) concluded that vocabulary breadth (i.e., number of known words) was a predictor of efficient decoding while vocabulary depth (i.e., one's knowledge of various meanings for a word) was a significant predictor of comprehension for students in grade 4.

As texts become more complex, readers also need to understand text-cohesive terms or connectives (e.g., although, because, in spite of) common in academic texts; difficulty with such words impedes comprehension. Vocabulary gaps appear to only grow wider in time — especially without intervention (Baumann, 2009; Biemiller & Slonim, 2011). Understanding words heard may not automatically translate to recognizing them in print — especially when first encountered. Children need to know strategies for decoding words and how to use them effectively. Proficient readers are competent across a range of skills that they combine to execute particular strategies; weak readers lack skills and/or the ability to apply them consistently (EACEA/Eurydice, 2011).

Hoover & Gough (1990) show that variances in decoding account for differences in comprehension in grade 2 while linguistic comprehension accounts for variations in comprehension efficiency in grade 8. As decoding gradually becomes automatic, more cognitive focus is placed on linguistic comprehension that includes listening and oral language competencies in vocabulary, grammar, and verbal memory as well as higher-level thinking skills. Knowledge of grammar in an orthography becomes increasingly important as text density and complexity increases; this includes knowledge of morphology (i.e., understanding the internal structures that relate to word meanings) as well as syntax associated with structures within sentences and the relationship of words in and across sentences (Elwer, 2014); this knowledge is

also strongly connected to comprehension (Storch & Whitehurst, 2002; Vellutino, Fletcher, Snowling, & Scanlon, 2004).

Texts used become more academic in nature as children progress through the grades — that is, denser in content, structure, and domain-specific vocabulary (Shanahan & Shanahan, 2008). Students need to learn how to navigate complex grammatical structures, text formats, visuals, vocabulary, and other linguistic complexities of academic texts (Elwer, 2014). Reading comprehension beyond the primary level requires strategic integration and coordination of multiple language skills along with background knowledge and experiences (Elwer, 2014), giving meaning making a personal nature.

### **The Complexity of Full Comprehension**

Saying the words accurately and fluently does not guarantee understanding of an author's message. Smith (1985) contends that comprehension “lies more in the non-visual information that we supply from inside our head rather than in the visual information that bombards us from the print” (Smith, 1985, p. 95); such non-visual information is our full schema on the particular topic. As well, the general depth and breadth of one's background knowledge has been noted to be a critical factor in comprehension; these have a significant impact on readers' ability to make gap-filling inferences, predict, make logical connections, and perform other higher-level thinking skills when interacting with texts (Cromley & Azevedo, 2007; Samuelson & Braten, 2005). As students' experiences differ, so too will the meanings they construct when engaging with text — meaning shaded by personal connections and elaborations. In classrooms across countries, meanings constructed with text will naturally reflect the cultural, linguistic, social, economic, ethnic, racial, and family differences across readers.

Students with low comprehension levels have difficulty across decoding and/or understanding aspects of reading (Irwin, 1991, 2007). Catts, Compton, Tomblin & Bridges (2012) found that weakness in oral language (i.e., semantic processing, grammatical skills, inferring) accounted for variances in comprehension when decoding was not a problem; difficulty in any combination of these aspects negatively impacts reading comprehension (Catts, Hogan, & Adolf, 2005; Elwer, Keenan, Olson, Byrne, & Samuelson, 2013). To ameliorate comprehension difficulties, interventions applying research-tested strategies and instructional

approaches for increasing students' competence in both word and meaning processing hold promise (EACEA/Eurydice, 2011).

### **Skills and Strategies that Support Reading for Meaning**

Serravallo and Goldberg (2007) define skills as “competencies that are applicable to all reading texts and experiences” (p. 12). Readers who can activate prior knowledge, determine main ideas and significant details, efficiently decode words, make inferences, retell, synthesize, and visualize have developed a repertoire of reading skills. The way (i.e., how) a reader performs these skills in given situations constitutes a reading strategy (Serravallo & Goldberg, 2007). “Comprehension strategies are conscious, controllable processes used to self-regulate reading for the purpose of attaining a specific cognitive goal” (Samuelson & Braten, 2005, p. 107). Efficient readers select and apply multiple skills suited to a text, their level of background knowledge, and intended purpose as they construct meaning.

When children do not develop these skills and strategies independently, each can be taught explicitly in the classroom and followed by ample practice — guided and independent. Key strategies have been identified for comprehension instruction (EACEA/Eurydice, 2011). These include: drawing logical inferences using text content combined with background knowledge and life experiences, making text-to-text, text-to-self, and text-to world connections, reader's self-monitoring of comprehension, collaborative discussion about texts, use of graphic organizers, reader's self-questioning, visualizing, using text structures to organize and recall, and summarization (EACEA/Eurydice, 2011; NICHD, 2000; Zimmerman & Hutchins, 2003). Instruction in these strategies should begin early and remain an integral component of reading instruction across grades.

However, data reveals that only one third of the countries in the testing group suggest or mandate instruction in these strategies in primary grades to improve students' comprehension. Several countries have insufficient emphasis on comprehension instruction at lower secondary level (EACEA/Eurydice, 2011). In Italy, drawing inferences is taught in lower secondary grades; teaching how to use background knowledge and self-monitoring for understanding are not noted in the reading curriculum. Although summarizing, making connections, and visualization are included in reading curriculum for primary and lower secondary grades, summarizing dominates, indicating that a single strategy is expected to suffice for efficient comprehension

(EACEA/Eurydice, 2011). Elwer's (2014) analysis of three studies on the nature of comprehension difficulties reported that many children with adequate decoding skills have been identified as having problems with comprehension as early as 8-9-years-old — after the first few years of schooling, yet comprehension instruction remains minimal.

In many countries, teachers have not been adequately trained to effectively teach the essential components of reading. Reading specialists are part of the teaching staff in only a minority of European countries (EACEA/Eurydice, 2011). In Italy 66% of students are taught by teachers without a tertiary degree (i.e., post-secondary education) (Mullis et al., 2007). This situation is changing; the number of teachers with university degrees is gradually increasing (EACEA/Eurydice, 2011).

### **Teaching Reading for Comprehension**

In a classic study on how much time teachers spent on comprehension instruction in U.S. schools, Durkin (1978-1979) concluded that in the 17,998 minutes in 14 schools with 39 teachers only 1% of the time was spent on teaching comprehension. Fifteen percent of time went to assigning work and 18% was spent on assessing comprehension — mostly through teacher-directed questioning. The remaining time involved students working on assignments. Pressley (2002) also concluded that there was insufficient instruction in comprehension strategies in schools and suggested the importance of teaching students to use strategies actively, in an integrative manner, and flexibly. Durkin examined the basal teacher manuals used by these teachers and found that suggestions for teaching comprehension were scant while many pages offered questions for assessing children's comprehension. Often the suggested assessment procedures were mislabeled as comprehension instruction, making teachers believe they were teaching comprehension (Durkin, 1986). There appears to be "...widespread confusion between teaching and testing comprehension. One consistent consequence of the persistent failure to make a distinction is that children are often tested on what was never taught" (Durkin, 1986, p. 417).

Seminal research and theory on comprehension (Harvey & Goudvis, 2000; Irwin, 1991, 2007; Tierney, Readence, & Dishner, 1995; Zimmerman & Hutchins, 2003) conclude essential components for full and deep comprehension and suggest effective strategies for reaching the goal. Irwin's (1991, 2007) model portrays the complexity of comprehension, outlining processes

in a linear fashion while not intending them to be hierarchical. When used proficiently, they operate simultaneously and interactively, depending on the characteristics of the reader, the complexity of the text, and the demands of the situation. When comprehension breaks down, there is a problem in one or more of these processes (Irwin, 1991, 2007; Samuelson & Braten, 2005). Irwin (1991, 2007) represents comprehension as involving the seamless integration of micro and macro processes. (See Figure 1). This model does not function in a unidirectional manner; readers move recursively as they navigate the micro and macro, weaving mental operations together in unique ways for particular texts. Students who have difficulty with comprehension have difficulty with some, many, or most of these aspects of reading.

Figure 1: Addressing Micro and Macro Aspects of Comprehension (Irwin 1991, 2007)

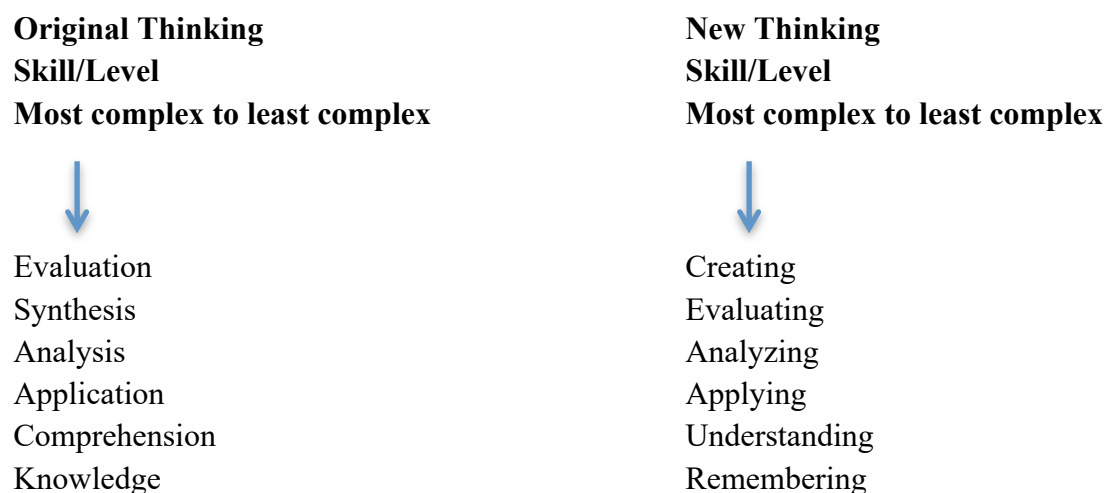
<b><i>Process</i></b>	<b><i>Behaviors</i></b>
<i>Micro Processes</i>	<i>Chunking words into meaningful phrases</i>
<i>Integrative Processes</i>	<i>Understanding vocabulary, figurative language, and word referents Building connections between sentences and paragraphs Making mini inferences</i>
<i>Macro Processes</i>	<i>Grasping the overall gist; constructing deep meaning</i>
<i>Elaborative Processes</i>	<i>Organizing and summarizing Connecting with schema Visualizing Making predictions Integrating prior knowledge Applying higher-level thinking</i>
<i>Metacognitive Processes</i>	<i>Self-monitoring understanding Self-initiating fix-up strategies</i>



## **Strategies for Reading Comprehension**

Reading with understanding requires attention to aspects of the micro and macro processes as well as all levels of thinking that apply. Before readers can move to such levels on Bloom's revised taxonomy, they need to initially acquire facts to work with — as grist for engaging in deeper levels of meaning making. The former literal level on the taxonomy is now expressed as a verb (i.e., remembering) rather than knowledge; the revisions recognize that this thinking involves cognitive processes (Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths, & Wittrock, 2001). (See Figure 2).

Figure 2: Bloom's Revised Taxonomy: From Fact Acquisition to Creative Synthesis (Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths, & Wittrock, 2001)



Efficient readers select and use multiple skills deemed appropriate for a particular text and their purpose for reading. Such readers have been taught useful skills and strategies for using them, allowed ample time for guided practice, and have been provided with demonstrations of how these are integrated across different kinds of texts for comprehension. The following describe examples of strategies that can be used to teach each aspect of Irwin's (1991, 2007) model for comprehension as well as Bloom's revised taxonomy for higher-level thinking (Anderson et al., 2001).

## **Reading Fluency**

Reading fluency is strongly emphasized in schools today and continuously assessed. This attention is important considering that fluency is positively correlated with comprehension. “Fluency has been shown to have a reciprocal [growth in one supports growth in the other] relationship with comprehension” (Stecker, Roser, & Martinez, 1998, 306). However, the multi-faceted components of genuine fluency have often been neglected when the tools used to measure it have focused on one dimension — that is, speed or words read correctly per minute (Chard, Vaughn & Tyler, 2002; Kuhn & Stahl, 2000). Genuine reading fluency is marked by a synchronous combination of word recognition accuracy, confidence, appropriate pacing, and smooth flow (i.e., appropriate expression, voice pitch, intonation, word phrasing, and word emphasis) (Rasinski, 2003). Echo reading, paired repeated reading, and readers’ theater are strategies that can be used to improve all aspects of fluency and engage students in practice.

*Echo reading* is often used with students who struggle with fluency, but can be used with all readers; it starts at the sentence level (Cecil, 2007). A more fluent reader or the teacher models how the sentence should sound to be fluently read. The partner repeats the sentence, attempting to replicate the model. Partners reread the text chorally (i.e., together) as well. Recorded readings (e.g., audiobooks) also provide a scaffold and model for how reading should sound. Sometimes students’ partnering involves *paired repeated reading* (Nichols, Rupley, & Rasinski, 2009). During such reading, students reread a text, taking turns (e.g., reading paragraph-by-paragraph). The more fluent reader offers nonintrusive support to the partner only as needed or requested.

*Readers’ theater* is a versatile strategy that is highly motivating and easy to use. Any text can become a simplified readers’ theater (RT) as the teacher assigns pages for choral reading and dialog to individual readers. Students’ rereading and practicing of lines improves all aspects of fluency previously described (Clementi, 2010). Students often try out various roles, rereading different parts of texts or scripts numerous times to practice as each character, hardly realizing they are working on a reading skill while building confidence.

## **Building Knowledge of Words, Their Usage, and Word Referents**

As noted, students’ success with comprehension is closely connected to understanding the meaning (i.e., explicit and implicit) of the author’s words (Tompkins & Blanchfield, 2008).

Proficient readers notice complex or unusual words in a text; they examine them to discern meaning. Comprehending any message requires a repertoire of *receptive* (for messages received) language. Cain (1996) suggests, “It has generally been agreed that out of the various sources of comprehension failure, lexical-based problems with decoding or vocabulary are the most pervasive” (p. 170). Building such a repertoire requires direct instruction, modeling, practice, conversations, and supportive, guided feedback. These elements can be provided through a variety of activities.

Creating *word webs* or using other *graphic organizers* for word study allows readers to consider the meaning of words as used in a text as well as other uses for each. Webbing a few carefully selected words before reading allows students to demonstrate their background knowledge about the concept or topic that it labels. During reading, any web can be expanded, as clues to meaning are uncovered in the text. After reading, the web grows further during rich discussion that reveals further connections from experience, background knowledge, and other texts. Webs can remain as anchor charts in the room or published in class collections for students to reference. “Web creation that links new to known words, concepts, and images builds and expands schema on the topic as well as connects previously acquired background knowledge” (Shea & Roberts, 2016, p. 81). Clues for a word’s meaning can also be found within the text; readers need to be aware of embedded context clues.

Effective teachers enhance students’ vocabulary development by modeling their choice of precise words in conversations, instruction, and discussions about texts or content. Words in context provide clues to meaning; ones in isolation do not. New, interesting, or critical words for understanding a text need to be fully examined. Before reading, the teacher identifies a few new or difficult words — ones where context is insufficient to discern meaning from *content clues* (i.e., words around the unknown word).

*Frontloading* word meanings through instruction (i.e., teaching them before students read) builds background knowledge and facilitates word recognition; students anticipate finding these words in the text (Hoyt, 2002). New words are introduced in the context of a sentence; the teacher identifies the context clues and explains how they provide information on meaning. During reading, any words that appear to have been misunderstood are explained thoroughly and pre-taught words are discussed when met in the text. After reading, words that were examined and discussed are reviewed to solidify understanding.

A *dictionary* would be a primary and typically used resource when analyzing a word's construction, derivation, and multiple meanings. Today that resource comes in many forms, including print and digital (Allen, 1999). Each part of the dictionary's formatted entry has a purpose in providing a complete understanding of the word. The initial syllabic and phonetic representation assists pronunciation and identification of word parts. Details on derivation offer clues on any unique patterns or letter/sound associations the word may have. Learning such *distinctive features* for words aids recognition in reading (Kibby, 1989, 2004). The teacher explains how to discern the word's use in the sentence being read and decide which meaning best fits the situation (Roe & Smith, 2012). Recognizing words and understanding their meaning in a context are essential skills for grasping an author's message.

An efficient reader, actively engaged in the reading process, continuously makes mini inferences and connections, understanding where *word referents* are used to stand for previously stated words, phrases, or figures of speech. Sometimes such connections are easily discerned in oral conversation, but confused when reading continuous text. Making such mini inferences and connections must be taught and discussed for clarity before readers are likely to effectively make them automatically and independently (Shea, 2006; Shea & Roberts, 2016). Assume the student read the following:

*On his way home after school, Tommy rode past an old house that a broken porch and peeling shingles. It also had several broken windows with boards nailed to them. The yard was messy, but an old swing still hung from a tree. Although that seemed out of place now, it made him think that this had once had been a family home.*

The reader would infer that the house was abandoned or the people living there weren't able to or couldn't afford to fix it. Peeling shingles lead one to infer that it needs a fresh coat of paint. Readers would need to understand that *it* in the second sentence refers to the house and *them* refers to the broken windows. Imagining a messy yard, the reader might infer that it has overgrown grass, weeds, and even junk strewn about. The author expects the reader to understand that the word *that* in the fourth sentence refers to the swing hanging from a tree and *out of place now* implies that the swing doesn't fit with the current condition of this house — with no one to use it. *It* in the fourth sentence also refers to the old swing in the tree that made him (i.e., Tommy) conclude that a family very likely once called this home — inferring that the swing was for a child living there. As the reader moves through the text these inferences and

connections are revised or expanded based on new information that's synthesized with his background knowledge and life experiences.

## **Grasping the Central Theme of the Text**

“The *main idea* is the overall point the author is trying to make — what the passage is mostly about. .... A *central theme* is a universal idea, message, or lesson related to everyday life that the author is conveying (Shea & Roberts, 2016, p. 37). Statements central to the main idea or central theme — ones that extend or clarify it — are *significant details*. Being able to discern the main idea, central theme, and significant details from what's less important increases readers' efficiency with understanding. Often, making these distinctions requires close reading.

*Close reading* involves “an investigation of a short piece of text, with multiple readings done over multiple instructional lessons. Through ... discussion students are guided to deeply analyze and appreciate various aspects of the text, ... and how it's meaning is shaped by context...and the discovery of different levels of meaning...” (Brown & Kappes, 2012, p. 2). Close reading requires readers to revisit text, dig deeper, analyze the author's ideas, consider different interpretations, argue perceptions, notice the writer's technique, and make connections with prior knowledge and experiences. Revisiting text improves comprehension. “Rereading is always the number one comprehension strategy...[one] most useful to readers of all ages” (Routman, 2003, p. 122). Rereading also gradually improves fluency. Genuine fluency — a side effect of rereading — enriches comprehension (Rasinski, 2008).

## **Reading Between and Beyond the Lines**

“*Summarizing* is when the reader is asked to restate what the author has said in a concise format” (Cohen & Cowen, 2011, p. 283). Shea (2012) states that when summarizing, “...the reader rephrases the gist of the text with a modicum of inference — or none at all” (p. 77). Students demonstrate the depth of their comprehension, ability to distinguish main ideas and significant details, and their ability to express what they've learned from the text. Summarizers select key ideas, set aside less relevant details, and paraphrase information in a logical sequence (Irwin, 2007). Readers capsule key ideas to make remembering easier and apply them when engaging in higher-level thinking. The process is multilayered and complex; it requires instruction, demonstrations, and ample practice (Cohen & Cowen, 2011). Summarizing becomes

a self-initiated metacognitive behavior used by readers to self-monitor comprehension (Gunning, 2010). After mentally organizing what has been read, readers naturally generate predictions on what will likely follow.

*Predictions* (i.e., what the reader expects will happen, what information will be presented) set and reset purposes for reading. They are logical when supported by evidence in the text, background knowledge, and experience — even when the text does not follow the reader’s expectations. Predictions involve connections (e.g., with personal experiences, background knowledge, or with other sources) that are confirmed, discarded, or revised as reading continues (Rog, 2003). New predictions can be formed at any point in the reading.

Readers are also *making connections* (e.g., with personal experiences, background knowledge, or with other sources) as they read (Rog, 2003) — ones that they can explain. Calkins (2000) calls it *grounding*; the discussant responds to a query such as, “On what grounds do you think that?” Students need to understand that their audience will expect to be provided with cogent explanations if they are to be persuaded by ideas.

This expressed understanding is dependent on the “points of contact” (Zimmerman & Hutchins, 2003, p. 45) or schema that a reader brings to text— before, during, and after reading. Personal schema on a topic includes the totality of prior knowledge, beliefs, feelings, expectations, and experiences related to it and similar events (Echevarria, Vogt, & Short, 2010). “Background knowledge is like Velcro. It helps new information adhere” (Zimmermann & Hutchins, 2003, p. 50). The teacher encourages making connections and elaboration of ideas with questions posed during group discussions — ones that call on discussants to clarify, support, and expand on ideas (Hoyt, 2002). Students evaluate content based on their personal, world, and text knowledge (Pinnell, 2000), making connections in each category of knowing. A stem that initiates a reader’s connection can be as simple as “This reminds me of ...” (Harvey & Goudvis, 2000, p. 69).

Text-to-self connections are those that relate information in the text to events in the reader’s life (Tompkins, 2010). Discussion of text-to-self connections helps students understand the foundation of perceptual differences among readers. As peers explain their grounds for thinking (Calkins, 2000), others become aware of the path that led to the association. Agreement isn’t necessary and may not be achieved, but respect for alternate views — and sometimes consensus — can be.

When making text-to-world connections, readers associate what is in the text with world knowledge they've acquired (Tompkins, 2010). These connections help students clarify thinking about big ideas, important themes, or perspectives on issues (e.g., war, friendship, culture, courage, or other such concepts). They influence students' identification of a central theme for the text. Here too, students learn to acknowledge differences of opinion, practice critical thinking, disagree with authors, and defend a position (Rog, 2003). They realize how information gleaned from texts relates to their acquired knowledge and lived experiences.

Readers link information from other texts (e.g., books, movies, videos, TV, or conversations) to content in the text being read, making text-to-other-text connections. This can include comparing different books by the same author, other books on the topic, different versions of the same story (Rog, 2003) or visuals (e.g., theater productions, movies, documentaries, photos, and paintings). Such synthesis requires higher-level thinking and prior engagement with a range of literature and visual media as a basis for comparisons (Tompkins, 2010).

### **Metacognition: Moving Toward Independence**

Readers are taught to engage in constructing personal meaning with text through the prompts posed to them and by ones they pose for themselves. *Self-questioning* allows readers to monitor their understanding of texts. They become aware when meaning is lost and action needs to be taken to restore understanding. Such self-maintenance is essential for independence as readers — as learners. Question prompts are posed in an interrogatory format, typically starting with interrogative pronouns (e.g., who, what, when, why, or how); they end with a question mark. These prompts ask for information or explanations, seeking an answer. Teachers also use *petitions*. Petition prompts present a directive with words like *list, describe, outline, report, or explain* (Cole, 2009). Prompts can be thick or thin. Thick questions and petitions call for interpretations, critical thinking, conclusions, or connections made; thin ones require answers or responses that paraphrase information stated in the text (Harvey & Goodvis, 2000; McLaughlin & Allen, 2000; Tierney & Readence, 2000). Prompts direct students' attention toward finding information and constructing meaning. "Questions lead readers deeper into a piece" of text (Zimmerman & Hutchins, 2003, p. 73). The prompts that teachers pose become models for ones that readers eventually set themselves as guides for engaging meaningfully with texts.

## **Interventions for Struggling Readers**

Across the developed countries involved in international testing, reforms are periodically called for and implemented. The Common Core State Standards (CCSS) in the U.S. outline rigorous expectations (CCSSO & NGA, 2010) for learning and academic performance. Students are expected to read increasingly more complex text, particularly more in the informational category. The 2004 and 2007 educational reforms in Italy attempted to bring continuity to reading curriculum, introducing and reinforcing essential skills and strategies at appropriate levels. The 2007 curriculum guidelines for pre-K and first cycle primary call for a focus on reading practice. Recent reforms have further emphasized the introduction of emergent level reading skills at the pre-K level (EACEA/Eurydice, 2011). The EACEA/Eurydice (2011) report found that 9.5% of students in Italy receive remedial instruction in reading while another 4.4% of students need assistance, but are not getting it. Both percentages are significantly different from the EU mean. It also noted that at least one support person is always available to work with struggling readers 9.6% of the time while 32.8% of the time a support person is only sometimes available. These percentages for Italy are also significantly different from the EU mean. Data reveal that the person available for support in some EU countries, including Italy, is not a teacher trained as a literacy specialist; it may be another professional (e.g., speech therapist, educational psychologist), another teacher, a teacher assistant, or other adult (EACEA/Eurydice, 2011).

Continuity of instruction in Pre-K through secondary to meet the increasing complexity of oral language skills needed for listening and reading comprehension in academic domains and earlier intervention would help to reduce deficits that impede learning (Elwer, Keenan, Olson, Byrne, & Samuelson, 2013). Such instruction would focus on vocabulary development, reading fluency, and capsulizing the myriad of comprehension strategies described in research (Harvey & Goudvis, 2000; Tierney, Readence, & Dishner, 1995) to key ones that are inclusive in applying multiple skills in their protocols. Close reading is a tool for actively applying these previously mentioned (EACEA/Eurydice, 2011; NICHD, 2000; Zimmerman & Hutchins, 2003) key strategies — ones that align with Irwin's (1999, 2007) micro and macro processes.

Instruction in all aspects of reading across grades levels ensures a balanced, continuous approach to literacy instruction — one that addresses the complexity of learning to read well. It also facilitates an evolving use of reading and writing to learn with increasingly sophisticated texts and tasks.



## **Conclusion**

Reading with understanding is much more than merely decoding words. It's a highly complex activity that requires active thinking and assimilation of an author's message with interpretation, analysis, evaluation, and synthesis of its content — all occurring synchronously and generatively. Any short circuiting in understanding is recognized and dealt with by the efficient reader, using fix-up tools effectively and in-the-moment.

Prerequisites skills and strategies for such a task need to be explicitly taught, thoroughly and repeatedly modeled, and sufficiently practiced with guidance and independently. For too long, it has been assumed that once children could say the words, they would understand what was read. Comprehension has been widely assessed in lessons, but minimally taught. Changing the results in reading achievement requires changes in instruction and student practice; better input should yield improved outcomes. Students would successfully read to learn — and, perhaps, also choose to read for pleasure because they find it satisfying and rewarding.

## References

- Allen, J. (1999). *Words, words, words: Teaching vocabulary in grades 4-12*. Portland, ME: Stenhouse.
- Anderson, L.W. Krathwohl, D.R. Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., & Wittrock, M.C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives (Complete edition)*. New York, NY: Longman.
- Baumann, J. F. (2009). Vocabulary and reading comprehension: The nexus of meaning. In S. E. Israel and G. G. Duffy (Eds.). *Handbook of Research on Reading Comprehension*. New York: Routledge, 323-346.
- Beers, K. & Probst, R. (2013). *Notice & note: Strategies for close reading*. Portsmouth, NH: Heinemann.
- Biemiller, A., & Slonim, N. (2001). Estimating root word vocabulary growth in normative and advanced populations: Evidence for a common sequence of vocabulary acquisition. *Journal of Educational Psychology, 93*, 498-520.
- Breen, R., & Jonsson, J. O. (2005). Inequality of opportunity in comparative perspective; recent research on educational attainment and social mobility. *Annual Review of Sociology, 31*, 223-43.
- Brown, S., & Kappes, L. (2012). *Implementing the Common Core State Standards: A primer on "close reading of text"*. Washington, D. C.: Aspen Institute.
- Cain, K. (1996). 'Story knowledge and comprehension skill.' In: Cornoldi, C. and Oakhill, J. (Eds). *Reading Comprehension Difficulties, Processes and Intervention*. New Jersey, NJ: Lawrence Erlbaum. 167-192.
- Cain, K., & Oakhill, J. (2007). Reading comprehension difficulties: Correlates, causes and consequences. In K. Cain and J. Oakhill (Eds.), *Children's comprehension problems in oral and written language: A cognitive perspective*. New York: Guildford. 41-75.
- Calkins, L. (2000). *The art of teaching reading*. New York, NY: Longman.
- Catts, H., Hogan, T., & Adolf, S. (2005). Developmental changes in reading and reading disabilities. In H. Catts & A. Kamhi (Eds.). *Connections between language and reading difficulties*. 25-40. Mahwah, NJ: Erlbaum.
- Catts, H. W., Compton, D., Tomblin, J. B., & Bridges, M. S., (2012). Prevalence and nature of late emerging poor readers. *Journal of educational Psychology, 104*(1), 166-181.
- Cecil, N. (2007). *Striking a balance: Positive practices for early literacy*. Scottsdale, Az: Holcomb Hathaway, Publishers.
- Cecilia, M. R., Vittorini, P., Cofini, V., & di Orio. (2014). The prevalence of reading difficulties among children of scholar age. *Styles of Communication, 6*(1), 18-30.
- Chard, D., Vaughn, S. & Tyler, B. (2002). A synthesis of research on effective interventions for building fluency with elementary students with learning disabilities. *Journal of Learning Disabilities 35*: 386-406.
- Clementi, L. B. (2010). Readers theater: A motivating method to improve reading fluency. *Phi Delta Kappan, 91*(5), 85-88.
- Cohen, V. & Cowen, J. E. (2011). *Literacy for children in an information age: Teaching reading, writing and thinking*. Belmont, CA: Wadsworth Cengage Learning.
- Cole, A. (2009). *Better answers: Written performance that looks good and sounds smart (2<sup>nd</sup> ed.)*. Portland, ME: Stenhouse.

- Council of Chief State School Officers (CCSSO) & National Governors Association (NGA). (2010). *Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects*. Washington, D.C.: Common Core State Standards Initiative.
- Cromley, J. G., & Azevedo, R. (2007). Testing and refining the direct and inferential mediation model of reading comprehension. *Journal of Educational Psychology, 29*, 603-625.
- Desilver, D. (2017). U.S. students' academic achievement still lags that of their peers in many other countries. *Facttank*, Pew Research Center. Retrieved 2/21/2017 from <http://www.pewresearch.org/fact-tank/2017/02/15/u-s-students-internationally-math-science/>
- Durkin, D. (1978-79). What classroom observations reveal about reading comprehension instruction. *Reading Research Quarterly, 16*(4), 515-544.
- Durkin, D. (1986). Reading methodology textbooks: Are they helping teachers teach comprehension? *The Reading Teacher, 39*(5), 410-417.
- Echevarria, J., Vogt, M., & Short, D. (2010). *Making content comprehensible for secondary English learners: The SIOP model*. New York, NY: Allyn & Bacon.
- Elwer, A. (2014). *Early predictors of reading comprehension difficulties*. Linköping, Sweden: Linköping University.
- Elwer, A., Keenan, J., Olson, R., Byrne, B., & Samuelson, S. (2013). Longitudinal stability and predictors of poor oral comprehension and poor decoders. *Journal of Exceptional Child Psychology, 115*(3), 497-516.
- European Commission. (2011). *Teaching reading in Europe: Contexts, policies and practices*. Brussels: Education, Audiovisual and Cultural Executive Agency (EACEA)/Eurydice.
- Gunning, T. (2010). *Creating literacy instruction for all students (7<sup>th</sup> ed.)*. New York, NY: Allyn & Bacon.
- Harris, T. L., & Hodges, R. E. (Eds.). (1995). *The literacy dictionary: The vocabulary of reading and writing*. Newark, DE: International Reading Association.
- Harvey, S., & Goudvis, A. (2000). *Strategies that work: Teaching comprehension for understanding and engagement*. York, ME: Stenhouse Publishers.
- Hoover, W., & Gough, P. B. (1990). The simple view of reading. *Reading and Writing, 2*, 127-160.
- Hoyt, L. (2002). *Make it real: Strategies for success with informational text*. Portsmouth, NH: Heinemann.
- Hulme, C., & Snowling, M. J. (2011). Children's reading comprehension difficulties: Nature, causes, and treatments. *Current Directions in Psychological Science, 20*, 139-42.
- Irwin, J. (1991). *Teaching reading comprehension processes (2nd ed.)*. Englewood Cliffs, NJ: Prentice Hall.
- Irwin, J. (2007). *Teaching reading comprehension processes (3rd ed.)*. New York, NY: Pearson, Allyn & Bacon.
- Keen, E. & Zimmerman, S. (1997). *Mosaic of thought*. Portsmouth, NH: Heinemann.
- Kibby, M. (1989). Teaching sight vocabulary with and without context before silent reading: A field test of the focus of attention hypothesis. *Journal of Reading Behavior, 21*(3), pp. 261-278.
- Kibby, M. (2004). *Research-based strategies for teaching meaning vocabulary*. Presentation for the Graduate School Continuing Professional Education Series, Buffalo, NY March 18.

- Kuhn, M. & Stahl, S. (2000). *Fluency: A review of developmental and remedial practices*. CIERA Rep. 2-008. Ann Arbor, MI: Center for the Improvement of Early Reading Achievement.
- McLaughlin, M. & Allen, M. B. (2000). *Guided comprehension: A teaching model for grades 3-8*. Newark, DE: International Reading Association.
- Mullis, I. V. S., Martin, M. O., Kennedy, A. M., & Foy, P. (2007). *PIRLS 2006 international report: IEA's progress in international reading literacy study in primary schools in 40 countries*. Chestnut Hill, MA: TIMSS and PIRLS International Study Center.
- National Center for Education Statistics. (2017a). *Progress in International Reading Literacy Study*. Washington, D.C.: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved 2/18/2017 from <https://nces.ed.gov/surveys/pirls/pirls2011.asp>
- National Center for Education Statistics. (2017b). *Reading literacy: Male-female score gap*. Washington, D.C.: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved 2/18/2017 from [https://nces.ed.gov/surveys/pisa/pisa2012/pisa2012highlights\\_5c.asp](https://nces.ed.gov/surveys/pisa/pisa2012/pisa2012highlights_5c.asp)
- National Institute of Child Health and Human Development (NICHD). (2000). Report of the national reading panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. *Reports of the subgroups (NIH Publication No. 00-4769)*. Washington, D.C.: U. S. Government printing Office.
- Nichols, W.D., Rupley, W. H. & Rasinski, T. (2009). Fluency in learning to read for meaning: Going beyond repeated readings. *Literacy Research and Instruction, 48(1)*, 1-13.
- Ouellette, G. P. (2006). What's meaning got to do with it: The role of vocabulary in word reading and reading comprehension. *Journal of Educational Psychology, 98*, 554-566.
- Organization for Economic Co-operation and Development OECD (2010). *PISA 2009 Results: Learning to learn: Student engagement, strategies and practices, (Volume III)*. Paris France: OECD.
- Pinnell, G. S. (2000). The guided reading lesson: Explaining, supporting, and prompting for comprehension. In C. C. Block., L. B. Gambrell., M. Pressley (Eds.). *Improving comprehension instruction: Rethinking research, theory, and classroom practice*, San Francisco, CA: Jossey-Bass, 106-134.
- Pressley, M. (2002). *Reading instruction that works: The case for balanced teaching*. New York: Guilford.
- Rasinski, T. (2003). *The fluent reader*. New York: Scholastic Professional Books.
- Rasinski, T. (2008). *Evidence-based instruction in reading: A professional development guide to fluency*. Boston, MA: Allyn & Bacon.
- Roe, B. & Smith, S. (2012). *Teaching reading in today's elementary schools (11<sup>th</sup> ed.)*. Belmont, CA: Wadsworth.
- Rog, L. (2003). *Guided reading basics. Organizing, managing, and implementing a balanced literacy program, K-3*. Markham, Ontario: Pembroke Publishers Limited.
- Routman, R. (2003). *Reading Essentials: The specifics you need to teach reading well*. Portsmouth, NH: Heinemann.
- Samuel, M., & Braten, I. (2005). Decoding, knowledge, and strategies in comprehension of expository text. *Scandinavian Journal of Psychology, 46*, 107-117.

- Scarborough, H. S. (1998). Early identification of children at risk for reading disabilities: Phonological awareness and some other promising predictors. In B. K. Shapiro, p. J. Accardo, & A. J. Capute (Eds.). *Specific reading disability: A view of the spectrum*. Timonium, MD: York Press, 75-119.
- Serravallo, J. & Goldberg, G. (2007) *Conferring with readers: Supporting each student's growth and independence*. Portsmouth, NH: Heinemann.
- Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy, *Harvard Educational Review, 78(1)*, 40-59.
- Shea, M. (2006). *Where's the glitch?: How to use running records with older readers, grades 5-8*. Portsmouth, NH: Heinemann.
- Shea, M. (2012). *Running Records: Authentic instruction in early childhood education*. New York, NY: Routledge/Taylor and Francis.
- Shea, M. & Roberts, N. (2016). *The FIVES strategy for reading comprehension*. West Palm Beach, FL: Learning Sciences International
- Smith, F. (1985). *Reading without nonsense*. New York, NY: Teachers College Press.
- Stecker, S., Roser, N, & Martinez, M. (1998). Understanding oral reading fluency. In *Forty-seventh yearbook of the National Reading Conference*, (Eds.). T. Shanahan and F. V. Rodriguez-Brown, 295-310. Chicago, IL: National Reading Conference.
- Storch, S. A., & Whitehurst, G. J. (2002). Oral language and code-related precursors to reading: Evidence from a longitudinal structural model. *Developmental Psychology, 38(6)*, 934-947.
- Tierney, R., J. Readence, and E. Dishner. (1995). *Reading strategies and practices*. Needham Heights, MA: Allyn and Bacon.
- Tierney, R. & Readence, J. (2000). *Reading strategies and practices: A compendium*. Boston, MA: Allyn & Bacon.
- Tompkins, G. & Blanchfield, C. (2008). *Teaching vocabulary: 50 creative strategies, grades 6-12*. Upper Saddle River, NJ: Merrill, Prentice Hall.
- Thompkins, G. (2010). *Literacy for the 21<sup>st</sup> century: A balanced approach (5<sup>th</sup> ed.)*. New York, NY: Allyn & Bacon.
- Vellutino, F. R., Fletcher, J. M., Snowling, M., & Scanlon, D. (2004). Specific reading disability (dyslexia): What have we learned in the past four decades? *Journal of Child Psychology and Psychiatry, 45*, 2-40.
- Yuill, N., & Oakhill, J. (1991). *Children's problems in text comprehension*. Cambridge: Cambridge University Press.
- Zimmerman, S. & Hutchins, C. (2003). *7 Keys to comprehension: How to help your kids read it and get it!* New York, NY: Three Rivers Press.