

Validity and Value of Research on Reading Beyond the Early Years – What Parents Need to Know

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For the past several years, the reading and policy communities have been very effective in popularizing the importance of learning to read. In particular, they emphasized, first, learning to read by grade 3 (Bush 2001); then the talk turned to preschool and reading preparation, for example in programs like Head Start (Kornblut 2002). Only recently has there been much discussion of reading instruction beyond the third grade, the years when students will increasingly "read to learn" as part of their continuing development as readers (Alvermann 2001). All too often what has been lost is a depiction of reading as a complex set of skills – over, above, and just as essential as the ability to decode (Snow et al. 2001).

As I wrote in a recent commentary (Angelis 2001), "it is one thing to learn to read, quite another to become good at it." Once students leave third grade, expectations for their reading changes. For example,

- § As they progress through grades 4-12 and beyond, they will read longer literary works with more complex plots, characters, and conflicts. Analyzing such works is one way to help them understand their own increasingly complex world as well as worlds beyond their own – and to better understand the text through processes of analysis and discussion.
- § They will need to understand and use the specialized language and conventions of different school subjects – history, science, mathematics, etc. – and learn the different purposes for and ways of reading, writing, speaking, and thinking in each.
- § They will be expected to make connections from one body of knowledge to another, and use what they learn in one to deepen learning in another.
- § They must know where and how to find information, both for their own use and for their school work; and they must learn how to judge the reliability of their sources, including those they find on the Internet.
- § They should also learn how to read and interpret the information that comes to them from a variety of sources – print and electronic entertainment, news, and advertisements.
- § In studying all subjects, they should be able to read and learn from different kinds of materials and understand what kind of information can reliably be drawn from each. In

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history these might include primary sources, textbooks, historical novels, or film documentaries.

- § They must learn to form and express opinions and recognize the assumptions beneath the opinions and judgments of others.
- § And they need to learn how to use new technologies to both gather, organize, and share knowledge.

In short, teachers of older students need to help students become more fluent readers of more complicated texts, using an ever-expanding vocabulary and learning to distinguish how to read (and respond to) different kinds of texts in different situations. The instruction to help them accomplish this is different from that of helping them learn basic decoding and comprehension skills.

Research has informed us about some of these learning processes and the kinds of instruction that are effective in helping students develop these abilities. Although the context for most of the research is school and classroom rather than home, some findings clearly have application in the home, and I point out a few of these below. But it is also useful for parents to know about many of the findings, whether they use them to support their children's developing reading abilities, in informing their interactions with their children's teachers, or in selecting the right school or program for a child.

For most of the research I cite here, I draw on the studies of my colleagues at the National Research Center on English Learning & Achievement, although the interpretations – and any resulting inaccuracies – are my own. I am not one of the researchers; rather, for the past 6 years I have been working with them to interpret and publish results for a broad audience – e.g., through newsletters, research-to-practice booklets, research reports, both in print and on line.

My struggle in writing this paper was to write for the right audience: it's for parents, but its first readers will be those already familiar with the world of education research (attendees at the AERA Annual Meeting). I decided to organize the paper around a set of questions. Although these questions are primarily about classroom and school performance related to reading and related skills, in an ideal world, parents would be interested in these topics and asking questions about them. To formulate the questions, I drew on reports from organizations like the Public Agenda Foundation (www.publicagenda.org), my own experience as a parent and community activist, conversations with other parents, and parent questions that come into the Center's email. In response, I pulled relevant findings from the Center's research and put them into what I hope is fairly plain language, first describing briefly the study or studies on which the findings are based. I close by suggesting some implications that might be especially relevant for parents.

The questions I include are

- § What should parents know about the research on preparing students to perform well on high stakes reading tests?
- § What does an effective English class in today's middle or high school look like?
- § Why is there so much emphasis on reading literature in English classes?

- § Why does classroom conversation matter so much?
- § What about students who are learning English as their second (or third) language?
- § What can today's technologies do to help reading development?
- § What about reading in other subjects besides English?

What should parents know about the research on preparing students to perform well on high stakes reading tests?

I begin with testing because testing matters so much today. Students, teachers, principals, superintendents, Congressmen, parents, real estate agents – everyone, it seems – cares about tests. Despite a recent survey showing that most students are comfortable with the increased testing (Public Agenda Foundation 2002), some are concerned about whether students will perform well enough (Orfield & Kornhaber 2001), others that the tests are dumbing down and narrowing the curriculum (e.g., Zernicke 2001, Hartocollis 2002).

Some research: I would want parents to know, first, that some English language arts programs are effectively preparing students to pass high stakes tests – and are doing so without narrowing the curriculum; rather, they integrate essential knowledge and skills into a rich curriculum. And since many of the current tests of literacy are asking students to do more – i.e., it is no longer enough for students to find information in what they read; now, they must be able to *do* something with the information – instruction that helps students do well can be neither superficial nor rote.

One set of studies in four states examined English programs in 25 schools (44 teachers over a two-year period for 88 classes total). The sample was diverse, including urban and suburban sites, but schools with poor and diverse student bodies predominated. The research team, led by Judith Langer (2001b, 2002a), sought to determine characteristics that were enabling students in some of the schools to outperform their peers in demographically comparable schools. This performance was measured, in part, on the language part of their state's high stakes tests. The researchers found several features related to curriculum, instruction, and professional climate that made a difference, one of which was effective test preparation.

Some results: In the “beating the odds” programs (as Langer calls the most effective programs), English teachers integrate test preparation into their instruction, inundating their classrooms with activities that target the skills, strategies, and knowledge students need in order to be successful. Rather than teaching students merely how to take a specific test, teachers and administrators have dissected the test to understand the underlying knowledge and skills needed to succeed not only on the test, but also in other academic and real-life situations. Thus test preparation occurs through a curriculum that is responsive to assessment demands. In contrast, in more typical schools, much of the preparation for high stakes tests of literacy and English takes place a few weeks before the test and focuses more on how to take the test rather than on how, over time, to actually gain and retain the knowledge and skills that underlie what is being tested (Langer 2001a).

My favorite example of this contrast comes from this research:

In one state where students were required to do persuasive writing on their 11th-grade test, two groups of schools followed very different approaches. One group's administrators mandated that persuasive writing be assigned and practiced for much of the students' junior year. Teachers duplicated old test assignments and developed or purchased new prompts that followed the wording and format of the test. Teachers in another group of schools focused on students learning the various purposes for writing – including but not limited to persuasion – and the ways in which those purposes affect organization, syntax, and word choice.

During the first few years, students in both groups of schools benefited from preparation, but those in the second group scored somewhat higher. In the fourth year, the state changed the testing prompt, and students were asked to do a different type of writing. The first group's scores plummeted, while the others' remained high. The students whose teachers focused on the concept of purpose in writing, not just on test preparation, were better prepared to understand and meet the demands of newly encountered writing tasks. (Langer 2001a, 6)

What does an effective English class in today's middle or high school look like?

Arthur Applebee has characterized the discipline of English as “something of a hodgepodge” of activities (in press), often ill defined and without focus. We expect English teachers to teach literature, grammar, composition, spelling, oratory, and research skills, of course; plus letter writing, word processing, Internet searching, critical thinking, and more.

Some research: For two years, a team of researchers studied the English classes taught by teachers in two very different high schools in two states. The teachers were all experienced and respected by their supervisors and peers. They each taught different grade and ability levels – from advanced to lower track as well as mixed – and organized their curriculum differently (e.g., chronologically, by topic, by sampling). The researchers observed classes, interviewed teachers and students, and analyzed documents such as curriculum guides and departmental booklists, as well as samples of student work, to develop 19 case studies. They were seeking to understand how the teachers structured their courses to give them coherence and continuity – a sense of purpose and direction – across a unit, semester, or year.

Some results: They found that what is most important to having an effective English curriculum is that it be more than a collection of lessons. It must engage students in what Applebee calls "significant conversations" – conversations that help students participate in the specialized traditions of the subject being studied (Applebee 1996). This means teaching students to practice doing the things the people in that discipline do – learning to use the vocabulary they use, the concepts they explore, the texts they read, the kinds of arguments they make and the evidence they will accept, the rules and conventions they follow. In English class, this means doing what readers, writers, listeners, and speakers *do*: they talk with others about important issues and ideas, study and write texts, ask and answer appropriate

questions, etc.

This "conversation" is also carried on in writing; and the more reading, writing, and talking are interrelated, the better students get at doing all three (Nystrand 1997). It also matters how the conversation is conducted and what it is about. In effective English classes, these conversations

- § are about a topic worth talking about. They draw on and refer to materials that are the best choices for the purpose and topic in question, are up-to-date and well written, are rich enough to provoke real discussion about the topic, and offer differing perspectives, where appropriate.
- § help students relate what they are learning in one lesson or unit to what they have learned elsewhere – in a previous unit, a different text, a contemporary movie, a community or newsworthy event. It is important for conversations to build on what students have learned before and lay the groundwork for future learning. It is also important that teachers make those connections clear to their students and not just hope that they discover them for themselves.
- § teach students how to take part in the conversation (by taking a position, making an argument, evaluating evidence), providing them with the knowledge, skills, and strategies necessary to participate on their own (Applebee in press).

Why is there so much emphasis on reading literature in English classes?

A mainstay of the middle and high school English curriculum is literature, and, indeed, research shows that having daily, thought-provoking experiences with literature helps children develop more varied and complex understandings of what they read. Their learning is further enhanced when those experiences include substantive discussions with others (Flood 1991).

Some research: The research of Judith Langer (1997) has helped us understand why and how literature discussions improve reading achievement. Over eight years, she and a team of 10 field researchers looked closely at classrooms that were helping students engage in deep understandings of literature. They worked with more than 50 teachers (15 of them for as many as five years) of grades preK-12 and into the first year of college to learn more about how readers think when they read and discuss literature and how teachers can help students use discussion to think more deeply. They also interviewed selected students and analyzed their work. The schools, mostly middle and high schools, were in inner cities and suburbs and served students of diverse cultural and linguistic backgrounds.

Some results: First, they learned that people read differently depending on what they are reading – a literary work or an explanatory or expository text. And the studies explain those differences. The research also describes what good readers do as they interact with a text: We take any one of four stances, depending on our understanding at the moment:

- § At first, we step in to a story ready to explore and learn, speculating about character and plot.
- § As we become more familiar, we move through the story, using momentary understandings to help us reach an evolving interpretation of the work. If we become confused, we move into our searching/speculating mode, and so on.
- § As understandings develop, we might step out of the story and, either alone or with others, rethink our interpretations.
- § We might even distance ourselves further to inspect the text (or other narrative form) to examine it critically, for example by comparing it to others we have read/seen. (Langer 2002b)

All the while, we are building an envisionment of the story.

Later in her study, Langer began working with classroom teachers to develop instructional strategies that capitalize on what they were finding. The classroom practices that were found to be effective are:

- § Students are treated as lifetime envisionment builders
- § Questions are treated as part of the literary experience
- § Class meetings are treated as a time to develop understandings
- § Multiple perspectives are used to enrich interpretation. (Langer 1998)

Overall, teachers in these classrooms were helping students learn both "ways to discuss" and "ways to think." Results indicate that students improve in reading, writing, and other language skills when teachers help students use what they envision as they read to build deeper understandings of the literature they read, write, and talk about in class. This is true for all students – high performing students, those who struggle with literacy, and those for whom English is a second language (Langer 1998).

More recently, a study of more than 1,000 students in 64 classrooms in urban and suburban districts in five states validated these (and other) findings. Over one academic year, gains were greater in classrooms where students were encouraged to ask questions, challenge and defend ideas from others and from texts, and to develop and expand their ideas through classroom discussion and debate. Achievement was measured on pre- and post-tests on literary works and on writing samples (Applebee 2001).

Why does classroom conversation matter so much?

Classroom discussion has been shown to improve student reading and writing development (Langer 1997, Nystrand 1996). However, in most English classrooms, real discussion is surprisingly rare (Nystrand 1996, 2001). In most English classes, students spend most of their time listening to a lecture, working silently at their seats, or reciting answers to teachers' questions (Nystrand 2001).

Some research: Studying more than 1100 students in 54 ninth-grade classes in nine midwestern high schools, Martin Nystrand and colleagues used a software program they had developed especially to be able to capture classroom talk. They characterized classroom discussion as , for example, an exchange of ideas, or a lecture by one person (usually the teacher), or a question-answer format. Coupled with analysis of student written work, teacher assignments, and before and after tests of literature and writing, the researchers were able to see if there was any link between the nature of the classroom discussion and the students' writing development. The schools ranged from large city to small rural, and included both public and parochial schools.

Some results: Most English classes (61%) had no real discussion – that is, a genuine exchange of ideas between teacher and students or students and students about a book or topic they were studying. But in those that did, student knowledge of literature and writing improved over the course of the year. And an important factor in that discussion was the teachers' using a student comment or question to ask a related question or invite other students to contribute their ideas. Student writing performance was affected even more when teachers related classroom discussion to writing and reading assignments.

Some of the important things teachers can do to support student writing development include:

- § Asking (authentic) questions that encourage students to use their what they already know to develop their own interpretations, generalizations, and analyses.
- § Following up on students' responses, using what they say to help them go further – to think more broadly or deeply.
- § Demonstrating respect for what students say. Some ways to do this include writing it down and displaying it (e.g., on a chalkboard, overhead projector, or computer) so that others can refer to it and talk about it.
- § Assigning writing to help students anticipate (e.g., what might happen next in a play), think through their emerging ideas, or reinforce discussion.

Teachers' use of authentic questions to orchestrate discussion also correlated with higher achievement in the recent study of more than 1,000 students in 64 classrooms in urban and suburban districts in five states mentioned earlier (Applebee 2001).

What about students who are learning English as their second (or third) language?

We've all heard the demographic reports that US classrooms are today more diverse than ever, with substantial numbers of children, especially in the “inner suburbs” learning English as their second language (Hodgkinson 2000/01). Such linguistic diversity presents a real challenge to schools, a challenge complicated by current disagreements over the utility, length, and format of bilingual education (e.g., WAMC National Productions 2002, Vaishnav 2002).

Some research: Earlier, I mentioned Langer's eight-year study of effective literature instruction (1998). As part of that research, after identifying the features of effective literature instruction, Langer

and her team sought a school with large numbers of English language learners so that they could learn how literature might "support students' acquisition of literacy using their knowledge of their first language, literature, and culture" (Langer 1997, 3). The site they chose was a middle school on Manhattan's lower east side, serving a community 80% of whose residents were recent immigrants from the Dominican Republic and 83% of whose students were categorized as low income (Langer 1997). After familiarizing themselves with the school and its community, the researchers worked with two teachers, their classes, and many others in the school and community to engage the students in writing and publishing a "story from home." That is, they asked students to learn a story that they had heard from someone (grandmother, parent, friend) and learn first to tell it so that it was understandable to others and then to write it in both English and Spanish.

Some results: Once the students understood what kind of story the researchers and teachers were looking for, they engaged with the assignment, and their engagement grew over time. Working in peer groups, they learned to clarify, reorganize, eliminate redundancies, and hone their stories until they were understandable to listeners. They wrote the stories in the language of their choice, then translated them into the other language. They read each others' stories, as well as those of authors like Sandra Cisneros, Nicolassa Mohr, and Danny Santiago, shared their interpretations, and critiqued them. Overall, the students improved in Spanish literacy and made gains in English literacy; they learned to reflect on their own and others' writing; they learned to communicate, to listen to others' points of views, and to defend their own interpretations; they learned to recognize and discuss differences – in interpretation, in idiom between their two languages, in types of stories; they learned about the critical relationship between writer and reader and how to construct a text to get their message across (Langer 1997).

By tapping into something students already knew – their own language, experience, and culture – their teachers were able to engage them in extended reading and writing activities that helped them develop their literacy abilities in both their first and second languages. (An added benefit is that the collection of stories was published in a book, *Tales from Home/Cuentos de mi Herencia* 1994), which is itself a literary text available for other students to read and discuss.

What can today's technologies do to help reading development?

Both the popular and the trade press run frequent articles about the role of technology in schools. They question what is reasonable for communities to spend and if technology can do the job better than traditional instruction (Guernsey 2000; Borja 2001; Johnston, 2001). Often, computers are seen as having the potential to help those students most in need of extra attention (Gordon 2002).

Some research: Several of the Center's studies have investigated the uses of classroom technology to foster literacy. One, in particular, has examined the use of electronic texts (e-texts) to promote English language learning. Drawing on the knowledge base about optimal conditions for language learning as well as the unique features of electronic texts, researchers first conducted a survey of how ESL teachers in New York State are using e-texts in the classroom (Meskill & Mossop 1997). From the 100+

teachers who took part in that survey and identified themselves as having developed model applications, they chose two to study in depth. Both teach in the same upstate New York district. Researchers interviewed the teachers, their students, and district administrators and observed, videotaped and transcribed the interactions in their classrooms extensively over a two-year period, seeking to determine what features of their classroom environments support language and literacy development in a second language (Meskill, Mossop & Bates 1999).

Some results: Using mostly commercially available, "regular" software (e.g., *Sim City*, *Oregon Trail*), the teachers found that e-texts stimulate their students to talk. They frequently paired their students at a computer so that the only common language was English (e.g., a Spanish speaker and a Korean speaker at the same computer). They assigned tasks that required reading, writing, speaking, and thinking, and since there is only one mouse and the common language for the pair is English, the students must use English to work together. Another advantage that fostered English language use and acquisition is the fact that the student controls the mouse and is therefore in control of her or his work. The teacher is forced into the role of facilitator. A computer can diagnose a student's strengths and weaknesses, and capture and record a student's progress. Yet e-texts are also very unstable, and the constant change forces more conversation among users. A classroom can be arranged so that the teacher can monitor a whole class of students working at computers – and see their work. Student work in such a setting is very public, with what is on screen available for comment by others, including the teacher. An unexpected benefit of the use of e-texts in these ESL classes was that the students acquired technical skills beyond that of most of their English speaking peers, bringing requests for assistance, especially from mainstream teachers – leading to more (English) language use, and a respect often lacking for ESL students (Meskill, Mossop & Bates 1999).

What about reading in other subjects besides English?

As I mentioned earlier, today's reading assessments now ask students to *do* something with the information they read – something beyond answering a few multiple choice questions about a particular passage. So, too, assessments in other subjects (e.g., science and mathematics) are asking students to read longer questions and write extended responses that reveal their reasoning. In many cases it is no longer enough for a student to do the computations for a set of problems and select the correct answer.

Some research: One group of researchers at my Center has been investigating changes in assessment and instruction in mathematics and science as a result of national and state standards that call for inquiry-based instruction. This group has analyzed a variety of materials, including national and state standards, NAEP (National Assessment of Education Progress) items and responses that require students to show their reasoning, and teacher-developed test items and student responses to them. They have also worked extensively with teachers both in the field (as part of a National Science Foundation-funded Local Systemic Change Initiative) and in graduate course work for teachers on both coasts focused on helping teachers use assessments to improve instruction that aligns with their state standards (Kouba et al. 2001).

Some results: While most of this research and the resulting findings are of most interest to the profession – it involves nitty gritty details about teaching and assessing both student (and teacher) content knowledge and ability to reveal reasoning – a few examples can illustrate for parents the importance of students learning to read in disciplines other than English or language arts. Let me share an example from mathematics to illustrate how on one test item a child's background knowledge made the mathematics "invisible":

A second grade boy, who previously had responded correctly to multiplication and division tasks in similar "word problems," was asked to answer the following:

"You have 18 apples that you want to have 3 horses share fairly. You want to use up all the apples. How many apples does each horse get?"

The answer: "One."

The interviewer: "One? Are you sure?"

"Yes," he said, "one, because if you give a horse more than one apple at a time it could get sick."

During this study investigating students' understanding of multiplication and division (Kouba 1991), this child had already shown that he understood multiplication and division. "The youngster, who lived on a horse farm in rural New York, had a knowledge base about horses quite different from that held by the item designer. No amount of coaxing on the interviewer's part could get the boy to violate the 'one apple to a horse' principle" (Kouba 1999). He could not get beyond that principle to read the mathematics in the question.

Another example illustrating how background knowledge can "interfere" comes from a 1996 NAEP item that asked students to tell the dimensions of the largest area that can be built for a dog enclosure with 36 feet of fencing (with 4 sides that are whole numbers and 4 right angles) and to tell why. Some students, of course, read the mathematics question correctly and argued for a 9-foot square. Others, understanding that dog runs need to be long, failed to read it mathematically and opted for less area but more length (e.g., 5 x 13). While this answer is practical, it is not mathematically correct (Kouba 1999). And since the students were asked to show their reasoning, the researchers were able to see how individuals had failed to read the question mathematically.

Some implications for parents

Implications for parents fall in two general areas: a) information that might help them understand what today's effective classrooms look like and the kind of assignments they should expect their children to be working on and b) ideas of what they might do to help develop reading and related literacy abilities with their children.

One thing that this research makes pretty clear is the importance of discussion to learning – and to developing reading and writing abilities. In effective English (and other) classes, students are *talking* – with the teacher and with each other – about the subject at hand. As Applebee reminds us (1996), the purpose of that talk should be to bring students into the *conversation* of that discipline. As I think about this acculturation into the disciplines (science, mathematics, history, English) that in the western world has long been formalized in the school setting, I remind myself that family traditionally played this role – and in some areas still does. In my case, growing up on a dairy farm, my brothers and sisters and I learned the ways of the farm – we became literate in farming – from our parents and grandparents. We not only worked side-by-side with them, but the talk was often of farming, and family outings were sometimes to agricultural events (e.g., Grange fairs, the Eastern States Exhibition in Springfield, MA). In rural areas where hunting is still a way of life, the young still learn the necessary skills from their elders (Bigler 1994). Or consider how often the children of physicians or professional musicians become physicians or musicians themselves.

If we focus on the importance of conversation, all parents, no matter their own levels of literacy or language use, can engage their children in meaningful discussion about literary works. A literary work need not be written; indeed, the modern American family most likely interacts around non-print literary works most if not all of the time – TV programs and movies offer the prime examples. (In fact, Langer explains how we "read" literary works using the example of what people talk about as they leave a film [Langer 2002b]). Parents can help children develop envisionments (Langer 1997) by talking with them, starting with what questions *the child* has about a particular movie, story, poem, song. Parents can share their own questions and together with the child explore what it might mean when their interpretations differ. (Indeed, given how little the middle and high school literature canon has changed over the years [Applebee 1993], many parents and teenage children are likely to have read the same books in English class, decades apart.) They can go deeper by comparing one movie to another movie, or the movie to the book. Such explorations, even if not directly "reading," help developing readers understand that interpretations vary and change, and help them develop strategies for interpreting a text in whatever form they encounter it.

Conversation – especially conversation that respects the child's point of view and asks questions that encourage the child to think deeper or more broadly and to make connections to other knowledge and events – helps the child clarify her or his thinking and ideas. These are important language skills that can positively affect reading comprehension (Langer 1995). As for leading (especially reluctant) children to written works that they can read and enjoy, conversations like these can help parents, librarians, book store staff, aunts, uncles, or friends, get a sense of children's interests and encourage them to read more and to take up more challenging works.

Parents who want to do more can read the same book as their child and discuss it, encourage their children to write letters – to distant relatives, to friends, to on-line friends – to keep a journal, to put together and annotate a family (or personal) album, to use writing to clarify thinking, to make their own greeting cards, to express their feelings about a person or event. They can play word games (both orally and on paper [e.g. crossword puzzles]), discussing new words and their meanings (Center on

English Learning and Achievement 2001). Hirsch and others (National Research Council 1998) have pointed out how the lack of vocabulary hinders achievement for some students. Is there anyone of any age who cannot benefit from adding to their working vocabulary? Rich language experiences – whether oral or written – are important for developing readers. Overall, the most important advice for any parent is to draw their children into the rich world of language use – as rich as any parent can make it.

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