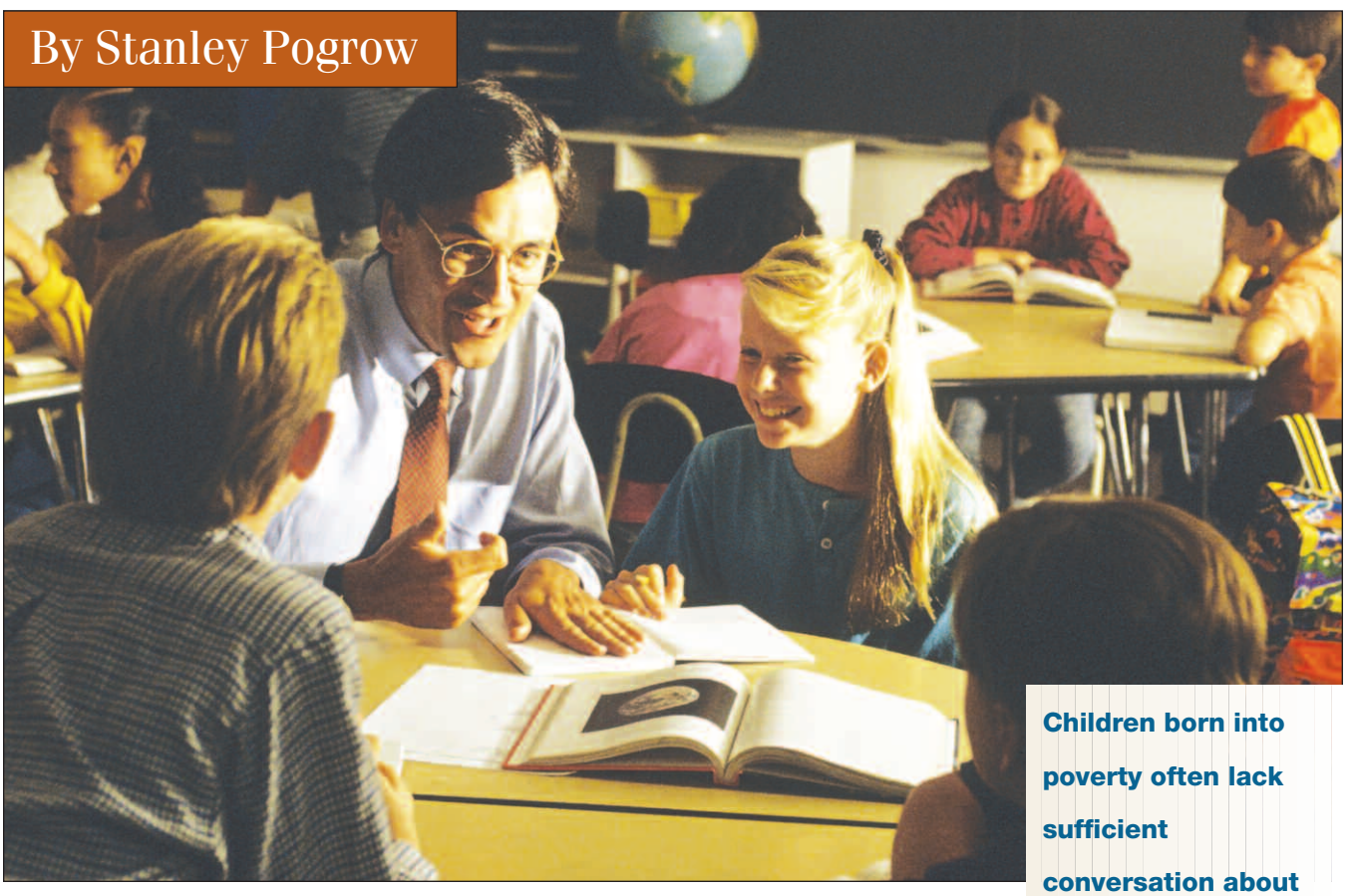
Accelerate the Learning of 4th and 5th Graders Born into Poverty

Schools that develop a "sense of understanding" in these students will see the benefit in more interested students and more retention of learning.

By Stanley Pogrow



Children born into poverty often lack sufficient conversation about ideas in their homes, don't understand how to work with ideas, and have trouble retaining content.

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For students born into poverty, grades 4-5 are a boundary where their learning needs change dramatically and in ways that have been consistently misunderstood throughout the many waves of well-intentioned reform over the past century. As a result, these needs have remained unaddressed, and grades 4-5 have become the boundary line where they start to fall behind at an accelerating rate.

The good news is that these students have huge additional learning potential that remains untapped. In addition, once their learning needs are identified, specialized approaches can help accelerate the learning of these students — regardless of whether we're in a period of high-stakes test-

ing. However, the needed approaches are counterintuitive.

STOP THE ACADEMIC SLIDE

Since 1965, when Title I was enacted, gains in the early grades have leveled around 3rd grade and declined thereafter. Why?

The post-3rd-grade decline occurs because many acceleration techniques that are effective in K-2 stop working and even inhibit learning thereafter. The chief culprit is reliance on remedial basic skill/test prep instruction. In K-2, reteaching unlearned content is effective for building a reservoir of skills and raising test scores. But the widespread strategy of skill remediation/reteaching to the test is relatively ineffective after 3rd grade. Scores may go up initially but these gains quickly level off and don't transfer to other tests or tasks. (This problem is even more pernicious at middle school.)

Sole reliance on reteaching basic skills and test prep loses its effectiveness after 3rd grade because curriculum is becoming more complex, integrated, and content focused. Students are asked to create ideas, synthesize, and generalize information. These are more cognitively demanding tasks. Reteaching specific discrete skills all the time creates a sense that learning means memorizing. So more advanced learning skills and cognitive processes aren't developed, and these students never understand what learning actually is — even though they have as much potential for academic success as others.

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While most would agree with this assessment, the absence of internalized thinking skills has another effect that isn't understood — one that is so pernicious that it defeats the best of our well-intentioned efforts. When children born into poverty don't retain learned content, it's viewed as a knowledge deficit. Teachers say, "What I taught went in one ear and out the other." The reality is that this is correct. That's exactly what's happening. The mind retains new information only if it spontaneously links that new information to preexisting information. If this cognitive Velcro connection can't be established, "it goes out the other ear." But it isn't going out the ear because the student is lazy or unmotivated — it does so because students do not spontaneously generalize.

Gaps in content knowledge are not the problem, but are symptoms indicating a problem in how the mind processes new information. By 4th grade, *thinking skills are as essential for retaining new content as they are for applying it*, and reteaching content over and over again has little impact on retaining it in long-term memory.

A better approach to filling content knowledge gaps is to help students internalize the thinking skills necessary for imbedding new information in long-term memory; i.e., the cognitive Velcro. This will enable them to retain more content information the first time it's taught. A number of key thinking skills are essential for both retaining and applying content, the most fundamental of which is the instinct to generalize. So the fundamental question is: How do these key fundamental thinking skills get developed and internalized?

SPECIALIZED NEEDS

First, teachers must understand that children born into poverty are as bright as anyone and their apparent struggles to retain and apply content and ideas have

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nothing to do with their cognitive or intellectual ability. Second, teachers can't develop students' fundamental thinking skills for retaining and applying content by formally and directly teaching the skills or by providing curricula that emphasize thinking in content activities. While improving thinking in content is the ultimate goal, students born into poverty must first master an initial, specialized, thinking development stage — one that has been ignored. The periodic reform efforts that focus on thinking skill development generally benefit advantaged students who don't need this preliminary stage. That does little to benefit children born into poverty and probably widens learning gaps.

Many of these bright children don't understand how to work with ideas and have trouble retaining content largely because they haven't experienced sufficient conversation about ideas in their homes — conversation that typically occurred around the dinner table. The dearth of home conversation in low-income households is much worse than educators realize (Hart and Risley 1995). These conversations are critical for vocabulary development as well as general cognitive development. When parents challenge their children's ideas, ask them to speculate or come up with alternative ways of doing things, make comparisons, or explain why they did what they did, they are encouraging general cognitive development. This is how the young develop a sense of how adults expect them to deal with information and form ideas, or what I refer to as "a sense of understanding." Most children born into poverty reach 4th grade *without understanding what it means to understand*. Without such a sense of understanding, 4th and 5th graders are unable to deal with ideas or apply what they are learning in any sophisticated way and, as a consequence, have trouble retaining school content.

DEVELOP A SENSE OF UNDERSTANDING

Students can develop a sense of understanding through intensive, small-group, Socratic conversation. In other words, the development of the key thinking skills is an acculturation process that comes through intensive, interactive verbalization about ideas between the young and an adult who constantly questions their ideas and requests alternative and more sophisticated verbalization of their thoughts, ideas, and plans.

Underperforming 4th and 5th graders born into poverty probably don't get such conversation at home, and teachers can't make up for that with sufficient intensity in the regular classroom to overcome the huge home-conversation gap — no matter how skilled the teacher.

I've researched the process of developing a sense of understanding and its effects on 4th and 5th graders from a unique vantage point — as developer and director of the Higher Order Thinking Skills (HOTS) project, which has served close to a half million Title I and learning disabled students (Pogrow 1990, 2005). Schools that adopted HOTS reallocated their Title I and LD funds to provide daily, small-group (10 students per teacher) Socratic discussion sessions to these students instead of supplemental remediation/test prep. The key findings were that:

1. DAILY TIME

Despite the huge gap in home conversation, it's possible to develop a sense of understanding with only 35 minutes of daily small-group discussion for 1½ to 2 years in 4th and 5th graders — subject to the following conditions:

- It is not enough for teachers to ask good questions. Developing a sense of understanding requires extensive student verbalization of increasing sophistication.
- The learning environment requires good teachers who have been trained to talk to and listen to students differently.
- The conversations cannot be ad hoc. They need

to be systematically constructed so that student verbalizations reflect their use of the key thinking skills that underlie a general sense of understanding (Pogrow 1990, 2005).

2. MORAL REASONS

While a sense of understanding can be developed in grades 4-8, it's best done in grades 4-5 for moral reasons. Why let students struggle for longer than necessary? It also makes strategic sense. Developing a sense of understanding in grades 4 and 5 not only increases students' success at these grade levels, but also prepares them to tackle more sophisticated academic work in middle school. In addition, developing a sense of understanding in large numbers of elementary students in a feeder pattern provides the potential for the receiving school to upgrade its overall quality because a higher percentage of its students are able to learn content in more depth. The students born into poverty are now ready to successfully solve problems in the content areas.

3. IMPROVE LEARNING

Now for the most counter-intuitive — *and best* — part. What happens when you eliminate supplemental remediation/test prep and redirect the money and time to develop a sense of understanding? Intuition would say that scores would go down as students are getting less direct help learning content. But the opposite is true (Pogrow 1990, 2005). Reading comprehension increases three times as much, scores in reading and math on both national and state exams increase more substantially, and there is evidence that these gains transfer across the content areas. These gains occur even though HOTS students receive less help in reading and math than comparison students. In other words, today's universal, intuitive strategy of dramatically expanding the time devoted to teaching reading and math is wrong. Counter-intuitively, *less direct instruction time is better* — as long as the time savings are used to develop a sense of understanding.

Additional benefits from developing a sense of understanding are increases in students' verbalization and reflectiveness. They become very different individuals who come to appreciate ideas and the process of communicating about ideas.

INCREASE ENGAGEMENT

Once students develop a sense of understanding, their general level of engagement increases because they're now able to participate in learning and retain content as well as other students.

At this point, it becomes critical that students sense that school content is important and relevant to them, and that it's interesting and important to learn. Typically, this has been interpreted as making the learning "authentic." This generally means showing how content is used in the world of adults and work. Teachers tell students that they will use this content when they become adults (or that it's on the next test). This is inadequate for engagement and possibly counter-productive. Students at these grade levels feel they're immortal and start rebelling against "adultness." They're developing their own sense of style and music taste in opposition to adult tastes and they're developing new language codes. Certifying content as critical in the adult world can lead to more rebellion against learning "authentic" content.

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Instead, I suggest "creative authenticity" or taking otherwise abstract or esoteric content concepts and linking them to the students' worldview (instead of the worldview of adults). Presenting existing content objectives in a way that is meaningful in terms of how students view the world and their role in it generally requires a curricular strategy that incorporates fantasy, adventure, suspense, fun, and drama.

Amid all of the silliness and immaturity in 4th and 5th graders, many intense positive emotions and values are lurking. Teachers can tap into those. For example, students have a heightened sense of fairness, justice, and helping others. In thinking about how to tap into their worldview, teachers have to come to grips with the reality of the YouTube generation: Much of their nonschool learning comes from on-demand entertainment and social networking. Rather than railing against these trends, teachers can build on these instincts to retool how to teach them what we know is important to learn.

In *Teaching Content Outrageously* (2008), I describe how teachers in grades 4-12 can use dramatic technique and humor to fashion alternative lessons and units around existing content to make even the most prosaic and esoteric content come alive for students. Instead of saving dramatic technique for reinforcement or enrichment, Outrageous Instruction uses dramatic technique at the beginning to teach the content richly.

So, for example, a teacher can do a conventional

lesson about the start of the miners union, or: When students walk in, the room is dark. Blues music is playing. There is someone in the front of the room with her head on the table, dressed in rags. The visitor (i.e., the teacher in disguise) raises her head, which is covered in dirt. The hair is askew. While coughing and crying, this visitor complains that she is sick and has to work 15 hours a day to make a few dollars, but now she is sick and doesn't have the strength to work, and her children are starving. She then looks in surprise at the students, notes how well fed and dressed they are, and asks for their help. She has been told that Chapter 3 of their book has some information that would help her but she cannot read. Would they please read it and share the information with her? She puts her head back down on the desk. Once students have read the chapter, they start advising her about how a union would help. The visitor plays devil's advocate, but in the end, she becomes convinced and thanks the students. Music rises . . . the bell rings.

Same content objective, taught in the same amount of time, but with a very different method. There is a high probability that the outrageous version of the lesson will produce deeper learning and greater retention. (And yes, in an outrageous lesson you can maintain discipline without looking at the class. The best way to improve discipline is to transfix students.)

Not every lesson needs to be taught outrageously. Rather, teachers should focus on reinventing those lessons and units that they know from experience will be the ones that students struggle with the most, or the ones that they feel are the most important and want to deeply ingrain in their students. Even a few such lessons go a long way toward making learning that content seem relevant to students, and there is anecdotal evidence that it increases content learning.

CONCLUSION

We can prevent and reverse the post-3rd-grade academic swoon that engulfs children born into poverty. We simply have to accept that our commonsense and intuitive approaches to helping these students are wrong and wasteful, and that these students have specialized needs that are different than those of advantaged 4th and 5th graders or students in K-2, needs that require very counter-intuitive approaches.

The biggest counter-intuitive need for children born into poverty is to reduce supplemental content reteaching/test prep in reading and math. Instead, the time and monies should be used to provide the type and amount of Socratic interaction needed to develop a sense of understanding in order to increase students' ability to retain and apply new content. This preliminary stage of cognitive development must be developed before the students can 1) fully and equally benefit from all other good instructional ideas, 2) successfully engage in content-based problem solving, and 3) succeed in more sophisticated forms of academic work. While it is counter-intuitive to believe that the best way to increase content learning and test scores is to reduce the amount of time spent reteaching content/test prep, especially in a time of high-stakes testing, there is extensive large-scale evidence from the HOTS program that, amazingly, this is the case.

As students begin to achieve success, it becomes important to provide a basis for them to come to understand that the content of the classroom is relevant to them. It is also counter-intuitive that the best way to engage these students, and indeed all students at these grade levels, in the importance of what is being taught is to link it to their sense of "kidness," as opposed to the world of adulthood.

While counter-intuitive, both the intensive, self-contained Socratic learning environment and outrageous content instruction can be implemented within the school day and within existing budgets. They merely require a reallocation of time and money and beliefs.

The two interventions together provide a basis for creating a renaissance of learning after 3rd grade for children born into poverty by enabling them to learn to their full potential, make sense and meaning around what they are learning and thinking, retain content, and increase their desire to engage in what is being taught. Their future is in our hands. ◼

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