Marshall Memo 34

A Weekly Round-up of Important Ideas and Research in K-12 Education
April 19, 2004

In this Issue:

Quotes of the Week

"It is difficult to overstate the value of practice. For a new skill to become automatic or for new knowledge to become long-lasting, sustained practice, beyond the point of mastery, is necessary."
Daniel Willingham, *American Educator* (see item #1)

"They had no bad habits."
Donna Rodrigues, principal of University Park Campus School, on the new teachers she hired for her start-up school. (see item #2)

"If it's good enough for Phillips Exeter, it's good enough for us."
Jim McDermott of University Park Campus School, on curriculum expectations (see item #2)

"People keep talking and talking about race this, and race that, and I just keep thinking, why should it matter."
Tiffany Ratliff, 17, Wakefield High School student, Arlington, VA (see item #3)

"[E]ffective primary-grades instruction seems to be not as much about the teacher as a classroom manager as it is about the teacher as the developer of self-regulating students."
Catherine Bohn, Alysia Roehrig, and Michael Pressley (see item #5)

"You will *all* be able to read, and it will be very fun! You will be able to write fantastic stories about wonderful things!"
First-grade teacher to her students on the first day of school (see item #5)

1. A *Lot* of Practice Makes Perfect

"For a new skill to become automatic or for new knowledge to become long-lasting, sustained practice, beyond the point of mastery, is necessary." So writes Daniel Willingham, *American Educator's* cognitive scientist, in this provocative essay. But won't students get bored? How much should they practice? And is sustained practice necessary for everything we want students to learn?

First, how much practice is necessary? "Practice makes perfect" goes the old adage. But Willingham cites research that says this is not enough for the most important skills and knowledge. "Practice until you are perfect and you will be perfect only briefly. What's necessary is sustained practice. By sustained practice I mean regular, ongoing review of use of the target material… This kind of practice *past* the point of mastery is necessary to meet any of these three important goals of instruction: acquiring facts and knowledge, learning skills, or becoming an expert."

• *Acquiring facts and knowledge* – This requires *overlearning*. In order to protect learning from the ravages of forgetting, we need to practice beyond one perfect recitation.

• *Learning skills* – In order to bring a skill (like reading) to automaticity, where we can perform it without needing to attend to it consciously, we need a great deal of repetition. There is no substitute.

• *Becoming an expert* – True experts practice a lot. Benjamin Bloom did research on people who became masters at what they did best, and traced four stages of development, and practice was the common thread. What separated good violinists from the best violinists (for example) was an increment in the hours of practice.

But practice is hard work. Practice requires concentration and feedback on whether progress is being made. Given that, we can't practice everything to perfection; we don't have the time or the patient support from our teachers, parents, and mentors. What material merits this kind of serious overtraining? Willingham suggests these three categories:

- The core skills and knowledge that will be used again and again and must be learned to the point of automaticity (e.g., reading, writing, the rules of punctuation and usage, math facts);
- The type of knowledge that students need to know well in the short term to enable long-term retention of key concepts (e.g., key science facts about species, key facts of Supreme Court cases for studying the Constitution);

- The type of knowledge we believe is important enough that students should remember it later in life (e.g., telling time in first grade, learning the verb etre in French, the basic principles of evolution, the responsibilities of the three branches of the federal government).

Willingham concludes thus: "Exactly when to engage students in practice, through what method, and for what duration are educational decisions that teachers will need to make on a regular basis. But, that students will only remember what they have extensively practiced – and that they will only remember for the long term that which they have practiced in a sustained way over many years – are realities that can't be bypassed."

"Practice Makes Perfect – But Only If You Practice Beyond the Point of Perfection" by Daniel Willingham, in *American Educator*, Spring 2004 (Vol. 28, #1, p. 31-33, 38-39), no e-link available.

2. An Urban Secondary School That Works

Last year, a Massachusetts research group published a study of effective schools and was able to identify only one "high-performing" non-exam urban secondary school: University Park Campus School in Worcester (a medium-size city an hour west of Boston). University Park is a non-selective Grade 7-12 public school in Worcester's poorest neighborhood. Seventy percent of its students qualify for free and reduced-price meals, 56 percent are minorities, and two-thirds of its students come from homes where English is not spoken. Entering seventh graders typically read well below grade level and some cannot read at all. Yet an astonishing 97 percent of University Park tenth graders scored at Proficient or Advanced on the challenging state MCAS math tests last year, and 87 percent scored at these levels in English Language Arts. This put the school in the top tier of student achievement statewide, above many affluent suburban schools. Since 2001, when Massachusetts introduced the requirement that high-school students must pass the 10th-grade MCAS exam to graduate from high school, all University Park tenth graders have passed the test on the first try. Student attendance is 96.2 percent, faculty attendance is 99.6 percent, and no students were suspended or expelled last year. Members of the first graduating class are now attending Brown, Georgetown, Tufts, and other top universities.

What made University Park so good? According to this article, the key elements seem to be:

• *Starting from scratch* – The school began eight years ago with 35 seventh graders and two teachers and added a new grade each year. Although it is a Worcester Public School with regular funding, it was able to establish a unique culture from the very beginning, creating much higher expectations and passing a positive student culture down to each new entering class of seventh graders.

• *Small size* – University Park has only 210 students in six grades. This has allowed a highly personalized culture and close relationships with families.

• *Hiring the best* – The founding principal and teachers were highly accomplished and energetic educators. When the school subsequently had to open positions to seniority bidding, the principal made such a forceful presentation about University Park's expectations that no teachers bid on the positions, opening them to teachers who were in synch with the school's mission ("They had no bad habits," said principal Donna Rodrigues of the teachers she hired). Veteran Worcester teachers have subsequently joined the faculty, but only those who met its high standards.

• *Strong leadership* – Rodrigues, the founding principal (who left with the first graduating class last year), was a dynamic and committed community resident and outstanding teacher who brooked no nonsense and drove a culture of very high expectations. Her successor was one of the founding teachers and has carried on in similar fashion.

• *A university connection* – From the beginning, University Park has had a close connection to Clark University. University Park students use many Clark facilities, Clark professors are heavily involved in curriculum development and training, student teachers do practice teaching at University Park, Clark students tutor University Park students on an almost daily basis, and the university awards full scholarships to top University Park graduates (five next year).

• *Early focus on reading and math* – Entering seventh graders must attend an August Academy the summer before they enter, and then plunge into two years of intensive catch-up work in the basics, moving from mostly below-grade achievement to honors level by the time they enter ninth grade. Seventh and eighth graders also get 90-minute math classes to overcome deficits in that area. The school offers no bilingual classes; instead, there are before- and after-school sessions to help improve fluency in English for second-language learners. Older University Park students tutor younger students.

• *Intensive instruction* – When University Park opened, it had 90-minute blocks of classroom time spread out over an 8-hour day, and teachers were paid extra for the

extended school day. Budget cutbacks have trimmed this schedule somewhat, but the school continues to fight for extra resources and give students more time-on-task than regular public schools.

• *High standards and expectations* – Students and parents are told in mandatory information sessions before enrolling that there will be two hours of homework every night, that there is no tolerance for street talk or fighting, and if students do not come to school, the administrators will call and, if necessary, visit the home. Students pick up on the behavioral expectations and police each other. If a seventh grader says, "Shut up," a 12th-grader is likely to remind him that "kids don't say that here."

• *A data-driven curriculum* – With help from faculty at Clark University, the school aligned its curriculum with state standards and MCAS expectations and sought out the best ways to teach content and skills. University Park staff constantly use assessment data to fine-tune instruction and identify students who need tutoring or additional support.

What kind of impact has University Park had on the Worcester Public Schools around it? There has been significant envy of the school's small size, start-up status, and ability to select top-notch staff, and the Donna Rodrigues, the founding principal, left the school partly because of the chilly vibes she got from colleagues in other schools. But James Caradonio, Superintendent of Worcester schools, praises the school and says the system has a great deal to learn from its successes. "The issue is creating the same personalization and motivation at the larger schools," he said. "People tend to canonize small schools" but making a learning community small means nothing if there is no culture change. "It's not just the new wineskin that's important. It's the new wine that goes in it."

"Worcester's Wonder: An Inner-City High School Sets a New Standard for Public Education" by Michelle Bates Deakin, *CommonWealth* Magazine, Spring 2004 (Vol. 9, #2, p. 60-69).

3. A Virginia High School Works to Close the Achievement Gap

Wakefield High School in Arlington, Virginia was totally segregated before the *Brown* decision in 1954 and is now a rainbow of racial and economic diversity. The school's administrators have worked tenaciously to raise student achievement and close the achievement gap between racial groups and the school is making progress. Leaders have paid particular attention to staff expectations, attitudes, and interactions with students. "It's the message teachers convey through

their interactions, that they *can do this*," said Robert Smith, Arlington superintendent. Added Cheryl Robinson, the district's minority-achievement coordinator, "If you can't connect with the kids, all the other stuff is moot."

Race relations in the school nowadays are not without problems. Some of the divisions come from students themselves. Many feel pressured to socialize only with their own racial or ethnic group, and there is considerable self-segregation in the school's cafeteria. Some are offended when peers make assumptions about them based on race. For example, a Filipino-American girl says that many assume she is Chinese and therefore good at math, smart, quiet, disciplined, and not good at sports; a black student says, "If I had a dollar for every time someone asked me if I play basketball…"; a West African girl reports comments from black students about the way she talks: "'Oh, she talks so proper, she must think she's white.' Hispanic and white kids accept me more than black kids do."

Some students bridle at the race-consciousness of the adults around them. They say that adults are too quick to make race an issue. College applications ask for their race. Guest speakers stir up debates about race. Adults at home give them a hard time if they date someone of another race. All they want is to be allowed to be themselves. "People keep talking and talking about race this, race that," said Tiffany Ratliff, 17, "and I just keep thinking, why should it matter."

Four years ago, the school organized "The Cohort" to address the fact that virtually no black and Latino males were in Advanced Placement courses. This on-going discussion group tackles the academic, social, and emotional barriers to high achievement. Adult advisors help the young men problem-solve and plan, working with discussions, outdoor ropes courses, and overnight trips to college campuses. "We look past the grades, past the behavior, past the dress," said Alan Beitler, a social worker who is one of three advisors to the group. "I want to teach them that I believe in them, and that they can, also." The group now numbers 77 students and the number of black and Latino males in AP classes has more than tripled over the last three years.

Teachers are also working to uncover biases and weaknesses in their classroom practice, particularly in their interactions with low-achieving students. They learn how to do a better job asking probing questions, listen carefully to answers, and make emotional connections, using touch or eye contact. As part of this training, teachers observe each others' classes, noting differential treatment of different groups of students and giving each other feedback. Among the questions in the minds of

observers: Do they ask struggling students questions that demand higher-order thinking, or mostly simple yes-or-no questions? Do they "connect" better with the high-achieving students? Are they quicker to become angry with low achievers? The goal of the training is to convince teachers, as one said, to do whatever it takes to reach students.

"Mixed Messages" by Catherine Gewertz in *Education Week*, April 14, 2004 (Vol. XXIII, #31, p. 36-40)
http://www.edweek.org/ew/ewstory.cfm?slug=31Brown.h23&keywords=Mixed%20Messages

4. The Bad News About Bad High-School Grades

Most high-school students think they are going to college and that bad grades in high school won't stop them. Because of the dramatic increase in open admissions colleges, the first part of this statement may be true. But according to James Rosenbaum, author of a new book, *Beyond College for All*, the second part is false: low achievement in high school is highly correlated with failing in and dropping out of college. Many of these students won't even get past college remedial courses. The problem is that right now, most low-achieving high-school students don't get the connection. Here are the facts:

- 71 percent of the class of 1982 planned to get a college degree.
- Ten years later, 63.9 percent with A averages in high school had a degree.
- Only 13.9 percent of those with C averages in high school had a degree.
- Only 45-49 percent of students who enter college earn a bachelor's degree.
- For students with a high-school average of C or below, the chance of finishing college is less than 50-50.
- The single best predictor of college graduation is high-school GPA.

The problem is that many students are laboring under the following misconceptions, which secondary educators need to work on changing:

- Myth #1 – College success is not linked to high school preparation (wrong!).
- Myth #2 – College plans lead to increased school effort (wrong, if students think they can cruise through college after getting poor grades in high school).
- Myth #3 – High school homework doesn't matter for college success (wrong; the amount of homework is closely correlated with college success).
- Myth #4 – Going to college means taking college-level courses (wrong: many students have to take remedial courses in college, which seldom count toward graduation).

- Myth #5 – Going to college for a two- or four-year degree takes two or four years (wrong: a two-year associate's degree takes an average of 3.5 years to complete).
- Myth #6 – School counselors should not offer discouraging words about the hard work necessary for college success (wrong! they need to tell students the truth).

Rosenbaum makes the following recommendations:

1. High schools should gather and publicize the academic preparation and college completion rates of their college-bound graduates. Data can talk loudly.
2. High schools should require students aiming for college to take modified college placement exams during their concluding high-school years. Educators in Kentucky have developed the Kentucky Early Mathematics Testing Program (KEMTP) to assess Algebra I, Geometry, and Algebra II (information on this is available at http://www.mathclass.org/welcome-keptp.htm
3. High schools should clear up the misconceptions. The bottom line: Solid high-school preparation is the best predictor of college graduation. High-school grades matter! Homework matters! Math courses matter! Even if you don't go to college, your high school grade point average is still important because it predicts future income!
4. High schools should serve college- and work-bound students equally well.

"It's Time to Tell the Kids: If You Don't Do Well in High School, You Won't Do Well in College (or on the Job) by James Rosenbaum, in *American Educator*, Spring 2004 (Vol. 28, #1, p. 8-15, 41-42), no e-link available.

5. Classroom Management: Starting the Year Right

Based on careful observations of primary-grade classrooms, three education professors concluded that teachers' actions in the opening days of school had a major impact on how classroom management went for the remainder of the year. Students in the classrooms in which teachers skillfully handled the beginning of the year were more likely to be engaged, stayed on task and finish their work, were more cooperative with their peers, had fewer fights, participated more in classroom activities, consistently chose to read when they had free time, took risks and were willing to work on more challenging tasks, were more able to regulate themselves without constant nagging from their teacher, and had higher overall achievement than students in classrooms where the start of the year was less well managed. "[E]ffective

primary-grades instruction seems to be not as much about the teacher as a classroom manager," write the authors, "as it is about the teacher as the developer of self-regulating students. Our study emphasizes the importance of developing self-regulation in students both in behavioral and academic applications and sheds light on the value of what engages students (not simply whether they are engaged)."

The researchers focused on the way teachers handled eight tasks as they kicked off the school year, differentiating between highly effective teachers and those whose classrooms deteriorated during the rest of the year:

• *Establishing a classroom atmosphere* – Although all the teachers in the study had bright, colorful, well-decorated rooms, there were striking differences in the human atmosphere in the more well-managed classrooms. These teachers knew students' names from the moment they entered the door, listened carefully to students' thoughts and needs and responded compassionately, stressed community values, good manners, and respect, and were careful to involve all students in well-planned, compelling, enjoyable activities from Day One.

• *Providing instruction and covering content* – The effective teachers organized instruction so there was frequent student success and gushed with enthusiasm from Day One. "You will *all* be able to read, and it will be very fun!" said one of them to her students. "You will be able to write fantastic stories about wonderful things!" Another teacher said, "I have to tell you, I went home, and the first thing Mr. C. said was 'How was it?' and I said, 'I think this class is going to be my favorite, my best class ever.' I said, 'You should've seen how quickly they got those procedures down, pushed those chairs in, raised hands, lined up at recess, and walked down hallways as quiet as mice, my best class ever!" The long-term effects of this infectious enthusiasm were dramatic: observing the classrooms at mid-year, the researchers observed the students in these classrooms cheering when a new activity was introduced, whereas the students in the other classrooms groaned and complained.

• *Introducing high expectations* – The effective teachers consistently expressed high and positive expectations about behavior and academic achievement: "I know you can do it, and this is why…" The less effective teachers did not convey high expectations with any consistency.

• *Using praise* – The highly effective teachers gave frequent and *specific* praise, whereas the less effective teachers tended to use general praise ("Good job") and more frequent public criticism.

• *Establishing how much choice students had* – The effective teachers gave their students choices (e.g., whether or not to read their work aloud and which books to read) and let them know that they owned the classroom too. They gave students a role in creating classroom rules: "This is your classroom," said one teacher, "We should discuss how we want *your* classroom to feel."

• *Establishing procedures* – All the teachers in the study introduced classroom routines at the beginning of the year (for going to the bathroom, cleaning up, turning in assignments, etc.), but the more effective teachers made absolutely sure that all students understood the procedures by talking about them, demonstrating them, having students *practice* them until they got them right, and using passages in literature to drive the point home. The less effective teachers tended to announce the routines and then move on, or overdo the routines to the point of ignoring content. The key seems to be using procedures to get students engaged in content rather than getting bogged down in the procedures themselves.

• *Encouraging self-regulation* – The effective teachers taught students to do things for themselves (e.g., a kindergarten teacher encouraging her students to think about how to open their snack containers before asking for help), to perform routines without reminders or nagging, and to use learning strategies independently (for example, the effective first-grade teacher taught her students to use strategies to find answers to questions when reading or writing). "These teachers encouraged students to be responsible and take ownership of their behaviors, from cleaning up after themselves to searching independently for answers to questions." The less effective teachers rarely stressed self-regulation, and as a result, their students were highly dependent on them and needed constant reminders and hand-holding for the simplest tasks.

• *Modeling behaviors* – All the teachers in the study modeled behaviors, from using scissors to reading a book. The highly effective teachers "modeled enthusiasm, self-regulation, and being kind to other people." They told their students that they loved reading ("I love reading, and you will too. It's a fantastic way to learn, and it's exciting!"), and their attitude rubbed off on students. They also praised students when they did the right thing, telling other students (implicitly or explicitly) that they too could do as the model students were doing. Less effective teachers tended to point out negative models in the classroom; for example, when a student didn't know how to wash his hands, she pointed it out to the entire class, showing how the way he was washing his hands was exactly how not to do it.

"The First Days of School in the Classrooms of Two More Effective and Four Less Effective Primary-Grade Teachers" by Catherine Bohn, Alysia Roehrig, and Michael Pressley, *Elementary School Journal*, March 2004 (Vol. 104, #4, p. 269-287), no e-link available.

6. Short Items:

• ***Don't forget grammar!*** A recent study asked high-school teachers and college instructors what they considered the most important writing skills. Here were the results:

- High-school and college teachers were in exact agreement on sentence structure (very important) and punctuation (less important);
- High-school teachers considered writing strategy, organization, and style somewhat more important than did college teachers;
- The two levels *completely disagreed* about grammar and usage: college instructors rated it the most important of all student writing skills and high-school teachers rated it the least important.

"Don't Forget Grammar!" in *American Educator*, Spring 2004 (Vol. 28, #1, p. 4) National Curriculum Survey is at http://www.act.org/activity/winter2004/survey.html

• ***Writing exemplars*** – This website gives samples of actual student writing at different levels of skill on NAEP assessments at grades 4, 8, and 12. These can be very useful for giving teachers, students, and parents a clear sense of the level of writing proficiency expected at these three grade levels: http://nces.ed.gov/nationsreportcard/ITMRLS/search.asp?picksubj=Writing

• ***High-school graduation standards*** – An earlier Marshall Memo mentioned the American Diploma Project, a joint venture of the politically-diverse consortium of Achieve, Inc., The Education Trust, and the Thomas B. Fordham Foundation. The full report on proposed graduation standards is available at http://www.achieve.org .

• ***The retention debate rages on*** – A lively debate has been touched off by New York City's recent, stormy implementation of a tough non-promotion policy for third graders. This *Education Week* article cites two new studies by the Consortium of Chicago School Research asserting that many Chicago students held back in grades 3, 6, and 8 did not benefit from retention. "Another approach is needed for students who are struggling," said Jenny Nagaoka, who led the study for students in grades 3 and 6.

"One thing that becomes really clear is that CPS [Chicago Public Schools] really needs to be focusing on kindergarten and earlier education for 3- and 4-year-olds, before they start school." The second study found that 78 percent of eighth-graders who were retained dropped out of school by the time they were 19.

The crux of the matter, said one of the studies, is that many teachers don't know methods for helping very low-performing students, and often misdiagnose these students' difficulties as learning disabilities.

Chicago school officials dispute the study, but are in the process of modifying their 1996 retention plan. Math scores were recently dropped as a standard for promotion, and officials are adding an intensive reading program at elementary schools with high retention rates. Kindergarten through Grade 3 students in these schools will undergo literacy assessments, full-day kindergartens will be added, class sizes reduced, mandatory summer programs added, and teachers may "loop" (keep the same students for consecutive years).

"Studies Fault Results of Retention in Chicago" by Andrew Trotter, *Education Week*, April 14, 2004 (Vol. XXIII, #31, p. 18)
http://www.edweek.org/ew/ewstory.cfm?slug=31Chicago.h23&keywords=Studies%20Fault%20Results%20of%20Retention%20in%20Chicago

• ***Students as substitutes?!*** Eighth-grade math teacher Bob Brems writes in *Education World* that he prepares his students to act as substitute teachers when he is absent. Unhappy with the results when subs handle his class, he has found that students, supervised by the adult substitute, do a far better job. http://www.educationworld.com/a_curr/voice/voice110.shtml (spotted in *PEN Weekly Newsblast*, April 16, 2004)

• ***Defining giftedness*** – This website answers questions like: Who are the "profoundly intelligent?" What are some of the characteristics of profoundly intelligent children? How many profoundly intelligent young people are there? When and how should students be tested for giftedness? What are some of the developmental issues of profoundly intelligent children? What about schooling for profoundly intelligent young people? How do you parent a profoundly intelligent child? http://www.didt.org/Public/article.aspx?cid=39 (spotted in *PEN Weekly Newsblast*, April 16, 2004)

• ***Working smart in small schools*** – In his *New York Times* education column, Michael Winerip reported on Science in Motion, a creative solution used by a number of small high schools (supported by the National Science Foundation) to pool their resources to buy expensive science equipment and rotate the equipment from school to school in a pickup truck. Using advanced equipment is key to turning on students and taking their learning to a higher level. "When you have 10th grade kids and the results glow in the dark – is there anything better?" asks biology teacher Kevin McCloskey of Hollidaysburg High School in Pennsylvania. But analytic balances go for $2,000, polymerase chain reaction machines cost $6,000, and a gas chromatograph is $3,500 – well beyond the budget of most small schools, but putting their budgets together and sharing the equipment is the solution. McCloskey got his sophisticated equipment from Science in Motion, and his kids took off.

Unfortunately, the federal funding for this program may be cut.

"Taking Science Lab on the Road, and Bringing Some Magic, Too" by Michael Winerip, *New York Times*, April 7, 2004, p. A18
http://query.nytimes.com/gst/abstract.html?res=F00A13F63D5C0C748CDDAD0894DC404482

Do you have feedback? Is anything missing?

If you have comments or suggestions, or if you saw an article or web item in the last week that you think should be covered, please e-mail: kim.marshall8@verizon.net

About the Marshall Memo

Mission and focus:

This weekly memo aims to keep busy principals, teachers, and other educators very well-informed on important research, ideas, and developments in K-12 education. Kim Marshall, a former Boston teacher and administrator, is your "designated reader," searching through a wide range of publications the week they come out, zeroing in on the articles that are most relevant and useful to improving teaching and learning at the school level, and summarizing them in a brief e-mail. Target topics include the following:

• *School leadership* – Building a professional learning community; effective teamwork; effective schools practices; supervision and evaluation of teachers; time management.

• *Effective teaching* – Key variables associated with high student achievement; professional development of teachers; teacher leadership and career ladders; multiple intelligences and brain research.

• *Curriculum* – Alignment and planning with the end in sight; teaching for understanding; new ideas in reading, writing, and math.

• *Assessment* – Aligned formative and summative assessments; using data and student work for continuous improvement; graphic display of student achievement data; standardized testing and the debate on standards.

• *Closing the gap* – Effective strategies to close the racial/economic achievement gap; the innate-ability/intelligence/effective effort debate; safety-net programs.

• *Positive school culture* – Student discipline; social-emotional learning; moral development; parent involvement; and community partnerships.

• *And…* – New areas of research; upcoming television and radio programs on education.

Publications covered:

(those read this week are underlined)

American Education Research Journal
American Educator
American School Board Journal
ASCD SmartBrief
Atlantic Monthly
Bay State Banner
Boston Globe
Commonwealth Magazine
Curriculum/Education Update (ASCD)
Ed. Magazine (Harvard School of Education)
Education Digest
Education Gadfly
Education Next
Education Week
Educational Leadership
Educational Researcher
Elementary School Journal
Harpers
Harvard Business Review
Harvard Education Letter
Harvard Education Review
Middle School Journal
New York Times
New Yorker
Newsweek
PEN Weekly NewsBlast
Phi Delta Kappan
Principal Magazine
Psychology Today
Reading Research Quarterly
Reading Today
Review of Educational Research
Teachers College Record
Teacher Magazine

E-links will be provided whenever possible to give access to the full article. If you would like to suggest additional publications, please be in touch.

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