With the beginning of a new academic year, we are pleased to provide you with the latest edition of Ideas in Action, which highlights the research activities of Vanderbilt University’s Peabody College of education and human development.

Although the title of the publication remains the same, you may notice it has a new look. We have sought in our redesign to offer information in a more accessible and concise format. In determining each issue’s content, we also hope to provide information that practitioners as well as scholars may find useful.

For example, the cover story for this issue is about a new assessment for principals developed by researchers at Peabody and the University of Pennsylvania. The assessment, VAL-ED, has been widely tested and is now being disseminated by Discovery Education. Other articles point to research findings and publications on gifted black student achievement, basic skills for student success, and strategies to improve writing. As well, there is an article, under my byline, on the final report of the National Math Panel. Do not look for articles by me to become a trend; as vice chair of the panel, I seemed the obvious choice.

In the coming months, we anticipate a renewal of the debate about NCLB along with continuing discussion of various trends in school reform and education policy, of how to strengthen teacher preparation, and of how to improve learning in math and science. We look forward to contributing to the public dialogue about these and other pressing issues in education and human development.

In order to deliver such information in a timely fashion, we plan to inaugurate an electronic version of Ideas in Action and to send periodic e-mails alerting readers to new content. I encourage you to sign up to receive these mailings at peabody.vanderbilt.edu/subscribe.xml. We look forward to updating you as the school year progresses.

With best wishes,

Camilla P. Benbow
Patricia and Rodes Hart Dean of Education and Human Development
SAN DIEGO SUPERINTENDENT RECEIVES DISTINGUISHED ALUMNUS AWARD

Terry B. Grier received Peabody College’s Distinguished Alumnus Award during Commencement ceremonies in May. Grier is the new superintendent of the San Diego Unified School District.

“In recent years, we have seen a growing emphasis on accountability in education, and the focus of this interest has begun to move up the chain of command—from the classroom to the principal’s and the superintendent’s office,” Dean Camilla P. Benbow said. “Throughout his career, Terry Grier has modeled the traits of an effective and innovative school leader. He is highly deserving of this award.”

A former classroom teacher and high school principal, Grier received his doctorate of education from Peabody in 1983.

“I am honored and humbled to receive Peabody’s Distinguished Alumnus Award,” Grier said. “The award is a clear reflection on the quality educators with whom I’ve worked over the years.”

The San Diego district serves more than 135,000 students and is the eighth largest public school district in the country. Grier, who became superintendent in March, previously was superintendent of Guilford County Schools in Greensboro, N.C., from 2000 to 2008. He has led school systems in Williamson County, Tenn.; Sacramento, Calif.; Akron, Ohio; Amarillo, Texas; Darlington County, S.C.; and McDowell County, N.C.

UNIVERSITIES CONVENE ON VANDERBILT CAMPUS TO DISCUSS STRENGTHENING EDUCATION DEGREES

Representatives from more than 25 universities met on the Vanderbilt campus in October 2007 to discuss strategies to improve education professionals’ training.

The event was part of the Carnegie Project on the Education Doctorate, a three-year effort to improve the quality of the education doctorate in the United States sponsored by the Carnegie Foundation for the Advancement of Teaching and the Council of Academic Deans in Research Education Institutions.

Peabody’s Ed.D. program, which is designed for mid-career professionals, is considered by some a national model for the degree. The 36-month, weekend-based curriculum offers doctorates in higher education leadership and policy or educational leadership and policy. The program is highly structured and includes a yearlong capstone project designed to integrate theories and tools learned in the program in a way that mirrors challenges and issues the students will face in education leadership roles.

One goal of the meeting was to give other universities the opportunity to closely examine the capstone idea and the ways it differs from researching and writing a more traditional dissertation.

FEDERAL PANEL DISCUSSES IMPACT OF ECONOMIC DOWNTURN ON COLLEGE ACCESS

The impact of the nation’s current economic downturn on low- and moderate-income students was the topic of an all-day national roundtable discussion held at Peabody in June.

The roundtable was hosted by the U.S. Department of Education’s Advisory Committee on Student Financial Assistance, which recently released data that show millions of college-qualified high school graduates encounter significant financial barriers that may worsen considerably over the next decade. The report projected a loss of between 1.4 and 2.4 million bachelor’s degrees this decade alone, despite rising academic preparedness.

Peabody Welcomes New Faculty for 2008-2009

DEPARTMENT OF HUMAN AND ORGANIZATIONAL DEVELOPMENT

Valma McBride Murry Betts Professor of Education and Human Development; Ph.D. 1987, University of Missouri, Columbia. Previously: University of Georgia

Sandra Barnes Professor of Human and Organizational Development and Sociology of Religion; Ph.D. 1999, Georgia State University; Previously: Case Western Reserve University

Susan Saegert Professor of Human and Organizational Development; Ph.D. 1974, University of Michigan. Shinn Professor of Human and Organizational Development; Ph.D. 1978, University of Michigan. Previously: City University of New York

Marybeth Shinn Professor of Human and Organizational Development; Ph.D. 1978, University of Michigan. Ann Arbor. Previously: New York University

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Andy Van Schaack Assistant Professor of the Practice of Human & Organizational Development; Ph.D. 2006, Utah State University. Previously: Vanderbilt University (proposed)

DEPARTMENT OF LEADERSHIP, POLICY AND ORGANIZATIONS

Xiu Chen Cravens Research Assistant Professor and Assistant Dean for International Academic Affairs; Ph.D. 2008, Vanderbilt University

Jane Robbins Senior Lecturer in Organizational Leadership; Ph.D. 2004, University of Pennsylvania. Previously: Invision-Robbins Associates

Corbett Doyle Lecturer in Organizational Studies; M.B.A. 1987, Vanderbilt University. Previously: Aon Corporation, Franklin, TN

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GEAR UP TN SUMMIT OPENS DOORS TO COLLEGE FOR RURAL TENNESSEE STUDENTS

Improving access to college for rural Tennessee students is the aim of a partnership between Vanderbilt University and the state of Tennessee that brought more than 200 high school students, parents, and school administrators to Nashville June 1–5.

“We have one goal for this partnership—increasing the percentage of Tennessee students who attend college,” Timothy Caboni, associate dean for external relations and professor of education and chair of Peabody Professional Institutes, said. “Being a great state and a great university depend upon having a college-educated populace.”

Events included the Peabody Professional Institute for School Leadership, which brought 38 principals, assistant principals, school directors, school counselors, superintendents and teachers from nine rural Tennessee counties to campus to learn about preparing students to attend and succeed in college.

The institute coincided with the GEAR UP TN Youth Summit, a two-day educational and cultural enrichment experience for students, parents and school administrators focused on college access, the college experience and Tennessee’s local and state government. Attendees visited Vanderbilt, Nashville State Community College, Tennessee State University, Belmont University and the state capitol building.

The students and administrators represented schools participating in GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs) TN, a program funded by the U.S. Department of Education to assist state efforts to expand access and success for rural Tennessee students.

The conference, “Affordable Housing: What’s Next Nationally and in Nashville?” included panel discussions with local and national experts on new directions for housing low- and moderate-income families nationally and in Nashville and on organizing communities to support affordable housing.

GIFTED EDUCATION EXPERT TO HEAD UP VANDERBILT PROGRAMS FOR TALENTED YOUTH

National gifted education expert Tamra Stambaugh has been chosen as the next director of Vanderbilt’s Programs for Gifted Youth, which provide a variety of intensive learning opportunities for gifted youth, their parents and educators.

Stambaugh was previously director of grants and special projects at the College of William and Mary’s Center for Gifted Education.

“We are very excited to have Tamra Stambaugh join the Peabody faculty. Her appointment signals a commitment to strengthening Peabody’s intellectual leadership in this growing field,” Dean Paul Cobb said. “Professor Stambaugh’s expertise in research, curriculum and gifted policy will expand our ability to create and disseminate knowledge about the cognitive processes and educational needs of this important population.”

“I am thrilled to join the Vanderbilt Peabody faculty and to lead these important programs,” Stambaugh said. “There are endless possibilities for research, curriculum development and professional outreach opportunities that can positively impact work with gifted students.”

Stambaugh has enjoyed a variety of experiences in education, including classroom teacher, teacher of gifted students, coordinator of gifted services, professional development consultant and university faculty responsibilities.

With Joyce VanTassel-Baicka, she is the co-author of Comprehensive Curriculum for Gifted Learners and Overlooked Gifts: A National Perspective on Low-Income Promising Students.

Additional information related to these and other articles can be found at peabody.vanderbilt.edu/ideas.xm

Notes and Honors

Camilla Benbow, Patricia and Rodes Hart Dean of Education and Human Development, received the 2008 Distinguished Alumna Award from Johns Hopkins University in Baltimore in May. In August, Dean Benbow was a panelist at the National Science and Technology Summit in Oak Ridge, Tennessee.

John M. Braxton, professor of education, has been appointed editor of the Journal of College Student Development.

Marisa Cannata, a research associate in the National Center on School Choice, received the Division L (Education Policy and Politics) Outstanding Dissertation of the Year Award from the American Educational Research Association.

Paul Cobb, professor of education, was appointed the first holder of a new endowed faculty chair. Cobb is the Peabody Professor of Teaching and Learning.

David Dickinson, professor of education and interim chair of the Department of Teaching and Learning, traveled to Brazil to advise its parliament and government leaders on early childhood education.

Janet Elyer, professor of the practice of education, received the Annual Research Award of the International Association for Research on Service-Learning and Community Engagement.

Lynn and Douglas Fuchs, Nicholas Hobbs Professors of Special Education and Human Development, received the Jeannette E. Fiechtnauer Award for Outstanding Contributions to the Field of Learning Disabilities from the Council for Exceptional Children.

Karen Harris and Steve Graham, Currey Ingram Professors of Special Education, will serve as chief co-editors of a new edition of the Educational Psychology Handbook, to be published by the American Psychological Association.

Dr. Joseph Murphy, professor of education and associate dean for special projects, will lead an initiative of the National Board for Professional Teaching Standards to develop an advanced certification program for educational leaders.

Kim Pauleen, associate professor of the practice of special education, was elected to serve as the Middle TN representative on the executive committee of the Tennessee Association of Colleges of Teacher Education (TACTE).

Camilla Benbow said, “Professor Stambaugh’s expertise in research, curriculum and gifted policy will expand our ability to create and disseminate knowledge about the cognitive processes and educational needs of this important population.”

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Kids May Learn More When Mom Is Listening

Kids may roll their eyes when their mother asks them about their school day, but answering her may actually help them learn. New research from Vanderbilt reveals that children learn the solution to a problem best when they explain it to their mom.

“We knew that children learn well with their moms or with a peer, but we did not know if that was because they were getting feedback and help,” Bethany Rittle-Johnson, the study’s lead author and assistant professor of psychology, said. “In this study, we just had the children’s mothers listen, without providing any assistance. We’ve found that simply listening, a mother helps her child learn.”

Rittle-Johnson believes the new finding can help parents better assist their children with their schoolwork, even when they are not sure of the answer themselves.

“The basic idea is that it is really effective to try to get kids to explain things themselves instead of just telling them the answer,” she said. “Explaining their reasoning, to a parent or perhaps to other people they know, will help them understand the problem and apply what they have learned to other situations.”

The research was published in the July issue of the Journal of Experimental Child Psychology.

Rittle-Johnson, along with co-authors Megan Saylor, assistant professor of psychology, and recent graduate Kathryn Swygert, set out to determine if 4- and 5-year-olds learn more when they have to explain the solution to a problem to someone else. They were shown a series of plastic bugs, and then had to say which bug should come next in the series based on color and type of bug, a problem that is challenging for 4- and 5-year-olds. The children were told to explain the solution to their moms, to themselves or to simply repeat the answer out loud.

The researchers found that explaining the answer to themselves and to their moms improved the children’s ability to solve similar problems later, and that explaining the answer to their moms helped them solve more difficult problems.

The researchers also found that children experience the benefit of explaining a solution at an earlier age than previously thought.

“This is one of the first studies to examine whether or not explanation is useful in helping children under 8 apply what they’ve learned to a modification of a task,” Rittle-Johnson said. “We found that even 4-year-olds can use explanation to help them learn and to apply what they’ve learned to other tasks.”

Aggression as rewarding as sex, food and drugs

New research from Vanderbilt shows for the first time that the brain processes aggression as a reward—much like sex, food and drugs—offering insights into our propensity to fight and our fascination with violent sports like boxing and football.

The research was published in April by the journal Psychopharmacology.

“Aggression occurs among virtually all vertebrates and is necessary to get and keep important resources such as mates, territory and food,” Craig Kennedy, professor of special education and pediatrics and chair of the Department of Special Education, said. “We have found that the ‘reward pathway’ in the brain becomes engaged in response to an aggressive event and that dopamine is involved.”

“Dopamine is involved in response to an aggressive event. It is well known that dopamine is produced in response to rewarding stimuli such as food, sex and drugs of abuse,” Maria Couppis, who conducted the study as her doctoral thesis at Vanderbilt, said. “What we have now found is that it also serves as positive reinforcement for aggression.”

The same home mice were then treated with a drug that suppressed their dopamine receptors. After this treatment, they decreased the frequency with which they instigated the intruder’s entry.

The experiment is the first to demonstrate a link between behavior and the activity of dopamine receptors in response to an aggressive event.

“We learned that an individual will intentionally seek out an aggressive encounter solely because they experience a rewarding sensation from it,” Kennedy said. “This shows for the first time that aggression, on its own, is motivating, and that the well-known positive reinforcement dopamine plays a critical role.”
**NEW SMARTPEN AND PAPER TO HELP TEACH BLIND COLLEGE STUDENTS**

Subjects like physics, calculus and biology are challenging for most students, but imagine tackling these topics without being able to see the graphs and figures used to teach them. A new smartpen and paper technology that works with touch and records classroom audio aims to bring these subjects to life for blind students.

Mainstream approaches to teaching STEM (science, technology, engineering and math) courses all rely strongly on diagrams, graphs, charts and other figures, putting students with visual disabilities at a significant disadvantage," Andy Van Schaack, assistant professor of the practice of human and organizational development, said. "Our goal is to enable students and teachers to produce and explore diagrams and figures through touch and sound using a smartpen and paper technology that is low-cost, portable and easy to use."

Van Schaack and colleague Joshua Miele, a researcher at the Smith-Kettlewell Eye Research Institute who is blind, received a $300,000 grant from the National Science Foundation to apply the new technology, created by the company Livescribe, to this effort. Van Schaack is Livescribe’s senior science adviser.

"A new world of possibilities has opened for the rapid creation of portable, low-cost, high-quality accessible graphics enhanced with audio. For example, a visually impaired psychology student could learn neuroanatomy by exploring a diagram of the brain, with each lobe, gyrus and sulcus’s name spoken as the smartpen touches it," Van Schaack said.

The Livescribe smartpen recognizes handwritten marks through a camera inside its tip that focuses on a minute pattern of dots printed on paper. It captures over 100 hours of audio through a built-in microphone and plays audio back through a built-in speaker or 3D recording headset. Files are uploaded from the pen to a computer using a USB connection.

As for other uses of the smartpen, Van Schaack believes the possibilities are endless.

"It really is a new computer platform—it includes most of the technology found in a typical laptop, but gets its information from handwriting rather than from a keyboard and mouse," Van Schaack said. "One of the most immediate uses of it that I see will be for college students. It will allow them to spend more time listening in class while taking more of an outline or diagram, putting students with visual disabilities at a significant disadvantage, whereas I think it would be much more efficient to use the new technology.

"Our research shows that prevention and intervention programs that focus on improving students’ achievement ethic and self-image are essential to closing the achievement gap."

The research, one of the first to examine the concept of “acting black,” was published in the March issue of *Urban Education*.

Ford and co-authors Gilman Whiting and Tarek Grantham set out to determine how gifted black students achieve compared to their white counterparts, what can be learned about the achievement gap by studying these students, and how gifted students view “acting black” and “acting white.”

Gifted black students often underachieve in school because of efforts to “act black,” new research has found, offering insights into the achievement gap between black and white students in the United States and why black students are underrepresented in gifted programs.

"Part of the achievement gap, particularly for gifted black students, is due to the poor image these students have of themselves as learners,” study author Donna Ford, Betts Professor of Education and Human Development, said. “Our research shows that prevention and intervention programs that focus on improving students’ achievement ethic and self-image are essential to closing the achievement gap."

The authors argue for counseling to help battle peer pressure, stereotypes and poor self-esteem, and suggest promoting an achievement ethic in schools through posters, speakers, symposiums and mentoring programs.

Whiting is assistant professor of African American and Diaspora studies at Vanderbilt. Grantham is assistant professor of educational psychology at the University of Georgia.

Additional information related to these and other articles can be found at peabody.vanderbilt.edu/ideas.xml

**Corruption in former Soviet bloc universities increases, threatens value of higher education**

Graduates of universities in the former Soviet Republic may find their degrees losing value as corruption among higher education programs continues to rise, two Vanderbilt professors found in a study published in the February issue of *Comparative Education Review*.

"Education corruption is among the most serious new problems in economic development today," said Stephen P. Heyneman, co-author of the study along with Kathryn H. Anderson, professor of economics, and Nazym Nuralyeva, lecturer in sociology at a university in Kazakhstan.

Heyneman, professor of international education policy, also presented the results of the article to a meeting of the Kazakhk cabinet.

"Although educational corruption existed under the Soviet Union, we hypothesize that it was modest by comparison to the level today," the authors said.

Among the immediate problems for the students is that a devalued degree adversely affects their earning power.

Devaluation of degrees has serious international policy implications, degrades the entire social system of those countries and decreases the likelihood that those graduates will be able to improve their economic standing, the researchers said.

Perceived corruption also could jeopardize funding from international development assistance organizations who might rethink their participation.

The study surveyed universities in Serbia, Croatia, Bulgaria, Moldova, Kazakhstan and the Kyrgyz Republic using the Transparency International Corruption Perceptions Index for 2005.

**Findings**

The authors found discrepancies between students’ attitudes and their behaviors—students expressed belief that school is important and a key to success, but may not behave that way in the classroom.

The authors also found that while black students agree that hard work in school leads to success, they do not necessarily believe that this holds true for black people.

The authors argue for counseling to help battle peer pressure, stereotypes and poor self-esteem, and suggest promoting an achievement ethic in schools through posters, speakers, symposiums and mentoring programs.

Below: Professors Donna Y. Ford and Gilman Whiting

**Transparency International Corruption Perceptions Index for 2005**
Assessing Educational Leaders: New Measurement Tool Aspires to Make the Process VAL-ED

For years, educational accountability has been associated with student achievement—and with the teachers who prepare those students. But as the No Child Left Behind act has singed out more and more schools for corrective action, attention has begun to move from teacher effectiveness in the classroom to the work being done in the principal’s office. A new assessment for principals developed by researchers at Vanderbilt University and the University of Pennsylvania has the potential to clarify what is meant by educational leadership and how it can be measured.

Discovery Education and Vanderbilt University are partnering to launch the Vanderbilt Assessment of Leadership in Education (VAL-ED), which is being exclusively distributed by Discovery Education.

“VAL-ED builds a picture of principal effectiveness by providing a detailed assessment of a principal’s perceived performance,” Camilla Benbow, Patricia and Rodes Hart Dean of Education and Human Development, said. “This assessment empowers administrators to effectively evaluate staff, diagnose strengths and weaknesses, and recommend pertinent professional development.”

 VAL-ED was developed by Peabody faculty Joseph Murphy, Ellen Goldring and Stephen Elliott, and by Andrew Porter, dean of the University of Pennsylvania’s Graduate School of Education, to provide detailed, evidence-based assessment of principals’ performance. It is aligned with the national leadership standards set by the Interstate School Leaders Licensure Consortium, which Murphy helped to formulate.

The design, testing and dissemination of the instrument have been supported with a $1.5 million grant from the Wallace Foundation of New York. VAL-ED has been field tested in 100 elementary schools, 100 middle schools and 100 high schools in 53 districts and 27 states.

The assessment measures principal performance in six core components related to student achievement, for example, setting high standards for student learning, creating a culture of learning and professionalism, and offering quality instruction.

There are already numerous measures available for evaluating principals’ performance, and VAL-ED’s authors reviewed 79 of these in the early stages of the assessment’s development.

One result is that the researchers have taken pains to incorporate psychometric properties in the measurement tool, and they have worked with principals to obtain their feedback. As part of the development process, they conducted cognitive interviews, where principals were asked to talk out loud about their thought processes as they completed the evaluation. In a nine-school pilot test conducted in 2007, the instrument was found to be highly reliable.

“VAL-ED is a clear improvement over previous evaluation instruments,” Discovery Education Assessment Director William Dycus explained. “Many school districts have created various instruments to measure the performance of principals, but few have been as meticulously researched and rigorously tested. By providing accurate and reliable data, VAL-ED aids administrators in making decisions that impact student achievement.”

The measurement’s developers acknowledge that VAL-ED still has its limitations. For example, it only measures perceptions of a principal’s performance. They urge that supervisors also consider factors such as actual student-learning gains or graduation rates in their evaluations of principals.

“VAL-ED is notable in that it gives 360-degree feedback. It can be used annually to facilitate a data-based performance evaluation, or it can be used more frequently to measure performance growth or provide principals ongoing feedback throughout the school year,” said Joseph Murphy.

The instrument takes about 20-25 minutes to complete in either online or pencil and paper formats. To provide the 360-degree perspective on performance, teachers, the principal and the principal’s supervisor complete the evaluation. The assessment instrument is composed of 72 questions, in which each respondent is asked to evaluate the principal’s performance on 72 behaviors. Respondents rate performance on a scale from 1 for “ineffective” to 5 for “outstandingly effective” after considering data on which the evaluation is based, such as school documents or personal evaluation.

The instrument then reports results in two ways. First, it shows how the principal compares with a nationwide peer-group. Second, it portrays a principal’s performance as basic, proficient or distinguished, as determined by experts. The developers envision that districts using the measure will determine how much weight to give the instrument, or the scores of certain types of raters, as well as whether to emphasize performance against peers or performance against a standard.

To learn more, visit peabody.vanderbilt.edu/ideas.xml.
Of course, we did not come together merely to condemn U.S. mathematics education but to suggest the means by which it can be improved. This was our charge from the president, whose Executive Order also urged us to make use of the “best available scientific evidence.” Our final report contains 45 recommendations, covering content, learning processes, teacher preparation, instructional practice and materials, assessment, and future research directions.

Most critically, we sought to suggest a focused and coherent mathematics curriculum aligned across grades, schools, and districts and connected to the National Assessment of Educational Progress (NAEP) and state assessments. The goal of this curriculum is to prepare students to study algebra by eighth grade. The panel urged that we “streamline” the mathematics curriculum in grades PreK-8, building it around a “well-defined set of the most critical topics.” We sought to delineate these in our Major Topics of School Algebra, the Critical Foundations of Algebra (proficiency with whole numbers, fractions, and particular aspects of measurement and geometry), and a set of Benchmarks for the Critical Foundations. The benchmarks should be used to guide curricula, instruction, textbook content, and state assessments in grades PreK-8.

THE IMPORTANCE OF EFFORT

We also sought to dismantle one of the greatest impediments to mathematics success: the widespread belief that students either have mathematical talent or they do not. There is one critical ingredient for success in mathematics study and that is effort. We observed studies that have shown improved performance when children’s beliefs are changed from a focus on ability to a focus on effort. With African-American or Hispanic students, who start with a lower sense of efficacy, the gains can be even greater. Students, teachers and parents all need to understand that effort is crucial when it comes to mathematics achievement.

TEACHER PREPARATION

With regard to teachers and teacher education, the panel encountered a dearth of high-quality research. We know, for example, that we can identify teachers who produce gains in student mathematics achievement, and that achievement is compounded when students are taught by a series of effective teachers. We cannot say with certainty, however, what it is that these teachers do to generate achievement. We do know that teacher content knowledge is related to student achievement, but to date this knowledge has mostly been measured using proxies. More direct measurement of specific content knowledge, instructional skills, and student learning is required. A lack of rigorous research on teacher preparation also precluded our drawing conclusions about effective professional training. We need to learn so much more if we are to increase student achievement, and this need loomed large in our recommendations for future research funding.

BEYOND THE NATIONAL MATH PANEL

Of course, the National Math Panel is not alone in its concern about the current state of mathematics education. The National Council of Teachers of Mathematics and the National Science Board have separately reached similar conclusions. NCTM released its “curriculum focal points” in 2006, and these were influential in our recommendations. The NSF’s National Action Plan for Addressing the Critical Needs of the U.S. Science, Technology, Engineering, and Mathematics Education System (2007) called for “national STEM content guidelines that would outline the essential knowledge and skills needed at each grade level” and for “metrics to assess student performance that are aligned with national content guidelines.”

As we move forward, it will become increasingly important to build consensus about the content of math curricula and its alignment from grade to grade, district to district, and state to state. NAEP, if revised in accord with the panel’s recommendations, can provide the yardstick by which we measure our improvement. Should we fail to develop a set of national guidelines, we risk further degrading U.S. competitiveness and the future well-being of our nation’s children. My hope is that the National Math Panel has offered a direction that is sound, scientific, and straightforward.

Camilla P. Benbow is Patricia and Rodes Hart Dean of Education and Human Development. She served as vice chair of the National Mathematics Advisory Panel and is a member of the National Science Board.

Principle Messages of the National Math Panel

- The mathematics curriculum in Grades PreK-8 should be streamlined and should emphasize a well-defined set of the most critical topics in the early grades.
- Use should be made of what is clearly known from rigorous research about how children learn, especially by recognizing:
  - a) the advantages for children in having a strong start;
  - b) the mutually reinforcing benefits of conceptual understanding, procedural fluency, and automatic (i.e., quick and effortless) recall of facts;
  - c) that effort, not just inherent talent, counts in mathematical achievement.
- Our citizens and their educational leadership should recognize mathematically knowledgeable classroom teachers as having a central role in mathematics education and should encourage rigorously evaluated initiatives for attracting and appropriately preparing prospective teachers, and for evaluating and retaining effective teachers.
- Instructional practice should be informed by high-quality research, when available, and by the best professional judgment and experience of accomplished classroom teachers. High-quality research does not support the contention that instruction should be either entirely “student centered” or “teacher directed.”
- NAEP and state assessments should be improved in quality and should carry increased emphasis on the most critical knowledge and skills leading to Algebra.
- The nation must continue to build capacity for more rigorous research in education so that it can inform policy and practice more effectively.


Benchmarks for the Critical Foundations
The Social Skills Improvement researcher and co-author of the newly these skills make you more amenable skills make you smarter; it means that “If we increase social skills, we see learning these skills in the classroom. as important to children's academic Elliott and co-author Frank Gresham Pearson Assessments, 2007 Reading, writing, 'rithmetic and… good manners? Researchers have found that need to succeed based on surveys of more than 8,000 teachers and more than 20 years of research in classrooms across the country. They are: 1. Listen to others 2. Follow the steps 3. Follow the rules 4. Ignore distractions 5. Ask for help 6. Take turns when you talk 7. Get along with others 8. Stay calm with others 9. Be responsible for your behavior 10. Do nice things for others Elliott and Gresham present a detailed 10-week program that teachers can use to incorporate teaching of these skills into pre-school through middle school curriculum. The program devotes a week to each of the 10 skills, with each section building upon what is learned in the previous unit. In addition to the guide for teachers, the program includes student workbooks, videos and other supplemental materials. Elliott believes that rather than adding to a teacher's already heavy workload, the program will in fact help them teach children more effectively. “Many teachers feel pressured by the demands of the No Child Left Behind Act and see this as an add-on,” Elliott said. “But we have found after this program they can teach these skills at the same time as they are teaching science and math, and it will help them be more effective across the board.” The program includes a simple screening tool that teachers use at the beginning of the year to assess their individual students’ social and basic academic skills. The tool allows them to provide specific assistance in a particular area based on the student’s needs, and to assess progress. It includes communication with parents throughout the process to encourage their involvement in supporting these skills at home. Stephen Elliott is Dunn Family Professor of Educational and Psychological Assessment and director of Vanderbilt’s Learning Sciences Institute. Frank Gresham is professor of psychology at Louisiana State University’s Department of Psychology. STRATEGIES TO IMPROVE STUDENT WRITING Powerful Writing Strategies for All Students — Karen R. Harris, Steve Graham, Linda H. Mason, and Barbara Friedlander Brookes Publishing Co., 2007 Co-authored by Vanderbilt Peabody professors Karen Harris and Steve Graham, along with Linda Mason and Barbara Friedlander, Powerful Writing Strategies for All Students seeks to reverse the downward trend in the quality of student writing. The book presents a detailed program that teachers can use to help students master writing and improve their self-confidence. “Writing is discouraging and frustrating for many students, which can lead to an avoidance of writing and contribute to poor overall academic achievement,” Karen Harris, Currey Ingram Professor of Special Education, said. “This book offers teachers a guide for giving students the skills and strategies they need to learn how to write while boosting their enthusiasm and confidence in their ability to write independently and well.” The book outlines how to implement writing instruction approach called Self-regulated Strategy Development, or SRSD, which was designed by Harris and co-author Steve Graham, also Currey Ingram Professor of Special Education. The approach has been developed through 25 years of research and its effectiveness shown in more than 40 studies, including randomized field trials. “SRSD focuses on five areas that research has found are particularly difficult for students learning how to write: generating content; planning and outlining composition structure; creating goals and big-picture plans for compositions; quickly and effectively executing the mechanics of writing; and revising text and goals as needed,” Harris said. “While doing all of this, students need to be able to stay focused and to feel confident about their ability.” The book lays out the SRSD approach for teachers in six stages: develop background knowledge with students about the writing genre and about powerful writing strategies; discuss the students’ current strategies and abilities; model effective writing strategies and the composing process; help students memorize it because it helps them learn how to do a task. These strategies help to give students the perseverance they need to get through demanding tasks such as writing an essay.” Harris and Graham’s co-authors are Linda H. Mason, professor of educational and school psychology and special education at Pennsylvania State University; and Barbara Friedlander, a special education teacher in Montgomery County Public Schools, Potomac, Md. USING DATA TO IMPROVE SCHOOLS Leading with Data: Pathways to Improve Your School — Ellen Goldring and Mark Berends Corwin Press, 2008 Data can help school administrators boost student achievement, support teacher performance and improve parent-school relations. Leading with Data: Pathways to Improve Your School, written by Ellen Goldring, professor of education policy and lead- ership, and Mark Berends, associate professor and director of the National Center on School Choice, outlines how administrators can and should use data to improve their schools. “School administrators, now more than ever, are bombarded with demands to be accountable and to raise student achieve- ment,” Goldring said. “Too often, policy decisions are made without any reference to what is shown to be working, or not working, at a particular school or in the larger educational system. We wrote this book to give school administrators guid- ance on how to use data to make decisions based on their students’ and teachers’ per- formance and needs, and to help identify, collect and analyze the most useful data.” Standards-based reform continues to be a primary driver of education policy in the United States, and all of its components—content and performance standards, curriculum and instructional alignment, assessments and accountability—assume that data will be collected, reported and used. However, these standards vary from state to state and often miss school-level conditions, complicating administrators’ abilities to meet calls for reform and to use the data in a manner that meaningfully impacts student achievement. “The uses of data extend beyond test scores to community, school and class- room conditions that support positive student outcomes,” Berends said. “Being able to support your decisions with a variety of verifiable data, and make mid-course corrections based on those data, will help administrators build stron- ger and more meaningful relationships with all of their various stakeholders. And in an era of increasing school choice, good data is essential to marketing your school to parents of prospective students.” The book details how to collect and analyze relevant data for school improve- ment and student learning and how to use it to guide decisions. In addition to test scores, data can include student and program information, student work, portfolios, performance reviews and more. The authors outline four key reasons for using data to drive decisions: to work toward continuous improvement; to meet accountability requirements; to focus efforts and monitor progress; and to develop a sense of community through organizational learning.
Opinion: Money as a Motivator for Students

Why We Need Time and Scientific Inquiry

By Matthew G. Springer

Our consumer and professional lives long have been defined by incentives, from zero-money down financing to employers’ use of performance bonuses as rewards. Perhaps then we should not be surprised by the latest education policy innovation: financial incentives to motivate students.

Initiatives that reward students with cold hard cash for performance are underway nationwide. The Texas Advanced Placement Initiative Program pays students in select schools for taking advanced placement exams and receiving scores of 3 or higher. The National Math and Science Initiative pays students for scores on AP exams in select schools and districts in seven states. Experiments are also underway in Coshocton, Ohio, New York City, and Washington D.C.

There are philosophical considerations that need to be explored and debated as we contemplate offering students financial incentives. What types of incentives, if any, are appropriate for students? When we offer money to low socio-economic status and minority students, are we implying that kids from disadvantaged backgrounds can only be motivated by money, whereas middle class students are assumed to understand the long-term benefits of education?

Some believe financial rewards to students will spur parental involvement. A forthcoming report on the New York City student incentive program—which also rewarded families for attending parent-teacher conferences, for high attendance rates, for maintaining a full time job, and for carrying health insurance—will hopefully provide some answers.

First, any incentive program needs to be aligned within a broader set of systemic goals. As Richard Posner has argued, reforms can yield data that look promising but may actually mask a problem. For example, offering students monetary incentives to attend school may decrease high truancy rates. Yet, if their schools are filled with sub-par teachers, what’s the point? We need benchmarks that align with our long-term strategy, not short-term initiatives that tinker with the teaching and learning environment because a stakeholder believes it novel.

Second, experiments with student incentives should be scientifically rigorous. Without random assignment and careful design, other factors are likely to contaminate study outcomes. The Texas incentive program, for instance, provided teacher incentives at the same time as student incentives. While the program yielded more passing AP grades, we cannot say definitively why the reported outcomes were realized.

Third, experiments need to track students long-term, after the incentive is gone. Will the effects persist? For many students, the next step in their education likely will not include short-run monetary incentives.

As we consider the utility of student incentives, we need scientific inquiry and time. We need to test ideas while resisting advocacy. Public education is a multi-product, multipurpose venture very different from other sectors. As we work to improve public education, we must remember that what looks promising in the short-run may ultimately be damaging.

Matthew G. Springer is director of the National Center on Performance Incentives and research assistant professor of public policy and education.