Relying on Research: A Collaborative, School-Wide Approach to Adopting Educational Research

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Come inside Annapolis’ Key School, known for its rich and rigorous curriculum in science, mathematics, the humanities, the arts, and outdoor education, and here is a glimpse of what you’ll find: In the brightly illuminated Pre-School common room, my Learning Department colleague, Sally Trapp, sits at the table with a kindergartner, screening the young student for her ability to name letters and produce their appropriate sounds, to count from one to ten, and to name rapidly common animal pictures. These skills are all predictive of future success in learning to read, which will be taught directly in first grade. But prior to that time, Trapp will screen all kindergartners, once in the fall to make recommendations to kindergarten teachers about appropriate levels of instruction for reading preparation, and again in the spring to make recommendations to the Lower School Division Head (grades one through four) about appropriate first grade placement for reading instruction. Trapp herself will work throughout the academic year with selective students to reinforce their development of essential pre-reading skills, including auditory and visual perception and processing. Trapp's work with Pre-School students is predicated in part on the work of Gerald Duffy and George Sherman, two of her professors at Michigan State University. Their 1977 classic, Systematic Reading Instruction, breaks down reading into its two essential elements, decoding and comprehension, then helps the instructor pinpoint student mastery of and challenges with the various component parts of these elements. The work of Maryanne Wolf at Tufts University on rapid visual recall also contributes to this informal assessment. Trapp's kindergarten screening and instruction, which help her discern and buttress each student’s phonemic awareness, phonological processing, and working memory, correlate well with essential pre-reading skills identified in
Sally Shaywitz’s 2003 seminal work, *Overcoming Dyslexia: A New and Complete Science-Based Program for Reading Problems at Any Level.* Shaywitz’s conclusions about teaching reading confirm Key’s reading program, not only with its Pre-School students but with its Lower School students as well.

To observe the Lower School reading program, meander with me across campus to the Lower School Manse, and you’ll find another of my colleagues, Catherine Hudson, sitting on the floor, working with a group of eight first graders gathered around her in the “Parallel First Grade Reading Program.” In this beautifully renovated historic country house, where classrooms feel like cozy living rooms, students who have previously been identified as developmentally ready for first grade but in need of a more intense, multisensory approach to learning to read meet daily for seventy-five minutes of reading instruction. Although this specially structured instructional approach, built initially on the research of Naomi Zigmund at the University of Pittsburgh, uses different instructional materials and techniques from the other three first grade reading sections, by the end of the academic year, almost all students in the four reading sections perform within the same average to superior range on standardized reading test scores. To sustain and enhance reading performance, Hudson will follow up with last year’s Parallel First students in Second Grade “Language Training,” a daily workshop class predicated on further work of Tufts’ Maryanne Wolf and aimed at bolstering reading fluency or ease of reading as well as reading comprehension and writing skills. Trapp and Stephanie Beazley, another Learning Department colleague, will continue reading skills building and fluency work with third and fourth grade students identified through the results of annually administered standardized tests and through recommendations of Lower School Language Arts teachers. The goal here is to prevent reading problems wherever possible and, through intensive instruction and extensive practice and feedback, to nip in the bud those reading difficulties that do arise. This unique approach to reading instruction, in place at Key since the 1980’s, resonates well with the 2010 meta research of the Annie E. Casey Foundation, *KIDS COUNT Special Report: Early Warning! Why Reading by the End of Third Grade Matters.* In this report the Foundation recommends: “Develop a coherent system of early care and education that aligns, integrates, and coordinates what happens from birth through third grade so children are ready to take on the learning tasks
associated with fourth grade and beyond (Annie E. Casey Foundation 27).” Key’s reading program, which begins in Pre-Kindergarten Three, comes close to achieving the coherent system of instruction that this report so strongly recommends. It is supplemented by parent conferences to review standardized test scores as well as classroom assessments and observations. Parents are also invited to educational programs on brain development and on social, emotional, and academic skills cultivated in the Pre and Lower School classrooms and on the Pre and Lower School playgrounds. Trapp and Beazley will also consult with classroom teachers in Pre-School and Lower School on appropriate materials and instructional strategies for any student having difficulty with one or more aspects of the rich Key School curriculum. Lower School classroom teachers at Key can also consult and collaborate with content area specialists in mathematics and science.

Leaving the Manse, we can amble back toward the newly renovated Barn, replete with Middle School classrooms, offices, library, computer lab, and the appealing Learning Center, bathed in three walls of natural light. Here we can observe the continuation of reading instruction support for Key’s Middle School students (grades five through eight). In addition to working with classroom teachers on initiating and sustaining excellent habits of mind for all Middle School students, my Middle School colleagues, Sarah Judd and Lee Ann Havard, meet three times weekly in the Learning Center with at-risk readers in each Middle School grade for “Workshop,” where they address continuing issues with decoding skills, explicit and inferential reading comprehension skills, vocabulary development, and writing process skills. Wherever possible, they relate this instruction to the Science, Language Arts, and Social Studies curricula of the Middle School. A proficient reader may still need instruction about and practice with reading various genres and developing reading comprehension skills that go beyond the literal understanding of a text. This direct instructional approach provided in the Learning Center is supported by the work of Kurt Fischer at the Harvard Graduate School of Education who advises that students can expect to reach optimal academic functioning primarily with appropriate adult support. Consonant with Fischer’s advice, Key’s Middle School also makes available to its students “academic support labs” in mathematics and science.

Another educational researcher whose work supports Key’s practices in our
Lower School’s Language Training program and in our Middle School’s Workshop program is Laurie Cutting, previously at Johns Hopkins University and now at Vanderbilt University. In her recent research, Cutting notes sharp declines in the reading comprehension of some students after grades three and four. This is a time when students are transitioning from learning to read to reading to learn. It is also a time when reading assignments, both in and out of class, move from more narrative to more expository prose, from an emphasis on phonics skills to an emphasis on comprehension and fluency skills, from more monosyllabic to more polysyllabic vocabulary, and from oral, monitored reading to silent, independent reading. While it is important that classroom and support teachers help late elementary and early middle school students make these transitions in their reading, Cutting’s research also suggests that executive function skills, especially the ability to plan and organize as well as to inhibit, initiate, sustain, and self-monitor, play a sometimes overlooked part in slumping reading skills in this age group. Judd’s and Havard’s two-prong approach, to work with Middle School classroom teachers as well as directly with some Middle School students, not only on reading and writing skills but on executive function skills – through the use of planners, checklists, and close contact with parents about assignments and teacher expectations – supports the continuing development of competent readers and academically successful students.

A recent school-wide presentation to Key faculty by Gerard Gioia, Director of Neuropsychology at the Children’s National Medical Center and Associate Professor at George Washington University’s School of Medicine and Health Science, extended our teachers’ knowledge of childhood and adolescent brain development and the crucial role of the late developing frontal cortex as “conductor” or “CEO” of the brain. Because of Gioia’s presentation and the ongoing work of Key’s Learning Department members in all four divisions of the school, Key faculty members have developed a common vocabulary and understanding of the developing brain, which help teachers and administrators implement best classroom practices for a variety of learners and frame appropriate interventions for learners with executive function and other learning skill deficits.

Our last division to visit at Key is its Upper School (grades nine through twelve), spread across several buildings on campus. Here the work of the
Learning Department emanates from the Writing Lab, where Lee Ann Havard and I work with individual students or small groups of students to understand the primary source texts, literary texts, and textbooks that students will write about in analytical essays, commentaries, and creative writing assignments. We teach students a number of active reading strategies: getting an overview of the assigned text by reading introductions, conclusions, chapter titles, subtitles, and/or graphic material; finding or developing questions before reading and answering them afterwards; predicting outcomes; making marginal notes when highlighting or underlining; and taking notes after reading. Since attending a presentation by the National Alliance for Excellent Education in 2006, I have emphasized to students the development of summarization skills, urging students to summarize on paper or in the text itself whatever the student has just read. It's a strategy for documenting work and requires reflection and the ability to put in one's own words the main ideas and essential supporting detail of any reading assignment. Learning to summarize has been found to be a powerful strategy for learning to write analytically (National Alliance for Excellent Education's 2006 meta-analysis, Making Writing Instruction a Priority in America's Middle and High Schools), the genre emphasized in Key's integrated Humanities Program. So in Writing Lab we practice summarizing, and our work in this regard is now supported by Humanities Department classroom teachers who urge — and sometimes require — European Civilization and American Civilization students to summarize an evening's reading assignment in preparation for the next day's class discussion.

In Writing Lab, where students can choose to sit on floor pillows or at computers, teaching powerful reading comprehension strategies goes hand in glove with teaching the writing process, an approach to writing based largely on the work of Peter Elbow (Writing without Teachers) at the University of Massachusetts and Eugene Hammond (Critical Thinking; Thoughtful Writing), formerly at the University of Maryland and now at Stony Brook University. Key's Humanities Department and Writing Lab teachers have collaborated for two decades to encourage students who undertake writing assignments to begin by making their thinking visible: think about and write down what you know about a specific writing topic, then link that knowledge back to specific textual passages. This can be a "messy" process, but order is not the goal, at least not yet. It's also important for students to reflect on and
write down what they believe to be true about an assigned topic, then see if they can link their beliefs or hypotheses or assertions with their knowledge of the facts and with textual support. An essay drafted with such forethought and exploration of ideas encourages critical thinking. Students sometimes balk at the process, preferring, instead, to focus on the product. But the many students who invest in the process, whether previously viewing themselves as outstanding, adequate, or weak writers, often return to Writing Lab to herald significant improvements in writing achievement. This includes numerous college students who return to Key as alumni, recounting not only personal success in college writing but success in coaching college classmates in the writing process they first learned at Key. Building on the success of Writing Lab, the Upper School has added academic support for its students in its Math Lab, Science Lab, and Foreign Language Lab.

In Key’s Learning Department, divisional learning specialists often work across divisions. Sarah Judd and I have collaborated to share our understanding of the developing adolescent brain and its implications for learning and behavior with Middle and Upper School colleagues and parents, Key’s Board of Trustees, and Key students themselves through Power Point presentations honed for each audience. Much of what we have learned and synthesized comes from our own graduate education, at Northwestern University and Michigan State University, respectively, and from our continuing non-formal education. The Key School Professional Development Day with Gerard Gioia not only informed our colleagues about the developing brain and executive function issues but extended our own knowledge on this topic. The Association of Independent Maryland Schools workshop with Rick Wormeli grounded us in our understanding of differentiated instruction. Since that workshop, Wormeli has worked with the Differentiated Instruction Study Group at Key and will address the entire faculty this academic year on linking backward design for curriculum development with differentiated instruction. And members of the Learning Department have, since its inception, annually attended The Learning and the Brain Conference, where presentations draw on the latest work of leading educational researchers, neuroscientists, physicians, psychiatrists, and psychologists. Ronald Dahl, Professor of Psychiatry and Pediatrics at the University of Pittsburgh, for example, has given us a clear definition of adolescence: “The transition from ‘child’ status (requires adult monitoring) to ‘adult’ status (self-responsibility for behavior).” His research has also alerted
us to the importance of a sufficient amount of sleep for the adolescent brain to function optimally – at least nine hours nightly. The neuro-imaging of Jay Giedd, Chief of Brain Imaging at the Child Psychiatry Branch of the National Institute of Mental Health, allows us to show, through a time lapse image, how the brain matures from back to front. Giedd’s work also informs our audiences that in the crucial pruning of brain synapses that occurs in adolescence, young people are developing fast, hard-wired connections within their brains for the activities they practice frequently, whether it is playing soccer, the cello, or video games.

There’s one more underlying reason that the six members of Key’s Learning Department mentioned in this article have honed their knowledge and skills about how children learn with relevant, on-going educational research: vision. When Emily Legum joined Key’s Lower School faculty as a first grade teacher more than a quarter of a century ago, she was a relative novice in teaching but well schooled in helping young students overcome obstacles in learning. She convinced her Division Head to let her use her knowledge by working closely with struggling first grade readers. Her success with them eventually segued into the multi-faceted approach to the teaching of reading in Key’s first grade, grouping and regrouping students according to pre-assessments and formative or on-going assessments and using the results of these assessments to determine appropriate materials and methodologies for reading instruction. The program has expanded to include a curriculum that follows students from Pre-School through eighth grade. As the program evolved, so did Legum’s responsibilities: from first grade teacher to Lower School Reading Consultant to Lower School Learning Specialist to all-school Learning Department Chair and, most recently, to Lower School Division Head. In the role of Learning Department Chair, she grew the department from two members to six, now working across all four divisions at Key. More important, she couched her work and the work of her departmental colleagues in sound educational research, not bandwagon hot topics. Today Key’s Learning Specialists make themselves available to work with classroom colleagues, students, parents, and administrators, drawing upon cutting-edge research undertaken by some of the best minds in the world and translating that research into applications for students and teachers alike. The effect has been a school that stays true to its fifty-two year old mission of nourishing and guiding children’s “... natural exuberance, energy, and delight in the search for meaning, so that each student may develop into an informed,
thoughtful and constructive member of society, with a lifelong commitment to learning (from The Key School Mission Statement).

So what is the take away message offered by Key's consideration and adoption of current educational research, especially the provocative and ever expanding realm of brain research? Several principles emerge:

- Transformative teachers have to be continuing learners, challenging ourselves not only to use the knowledge we already have about student learning but also to keep abreast, through selective reviews of the literature and attendance at selective conferences, of emerging investigations into learning and the brain.
- As practitioners and continuing learners, we need the courage to challenge long held, sometimes cherished, assumptions about teaching and learning.
- At the same time, we need to employ a healthy dose of skepticism as we explore new ideas, because not all new ideas are equally valid or reliable.
- We need to respect the expertise of others, including colleagues within our own institutions of learning, for their specialized knowledge and experience, and colleagues beyond the realm of our own educational institutions, for their rich educational backgrounds and insightful current work, which can contribute to our own better understanding of the learning process.
- Furthermore, we need to pursue collaborative relationships, within our own departments, because true collaboration can yield better work and insights, and with colleagues outside of our own departments, so that we can be informed by their experiences and so that with their help we can disseminate valuable applications in the development of sound instructional strategies and materials.
- Simultaneously, we need to seek administrative support so administrators can share our vision for educational excellence and help make possible our own continuing education.
- Adoption of innovation takes time, but if we believe in, use, and explain sound educational practices based on sound educational research, the innovations will prevail, and early skeptics to change in practice can be won over when improved results emerge.
- Last, but hardly least, we need to believe in the ability of the children we teach to learn, respecting their differences, their struggles, and their achievements.
References


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