Settling into the 21st Century

Inside:

3
WNS Ville

Changing the Face of Learning: Perceptual Learning, the Path to Expert Pattern Recognition

4

Neruda’s Moon and a Bottle of Perfume: Firing Your Students Up About Poetry

7

Up With Which I Will Not Put

10

Effectiveness of TPR and TPR Storytelling with Elementary Students

12

Learning to Slow Down: How Technology Can Increase Content but Limit Thinking in the Classroom

15
We are now a decade and a year into the twenty-first century; and for the last ten years and a little more, educators have been questioning how teaching and learning will need to change in order that our students be prepared for the demands of this still relatively new century, many of which are not yet clear.

Under the sobriquets “21st Century Skills” and “21st Century Teaching and Learning,” organizations like Partnership for 21st Century Skills (http://www.p21.org) were formed in the first years of the century. Ian Jukes, similarly, established a collaboration of educators and entrepreneurs and business people, in an organization, called 21st Century Fluency Project (http://www.fluency21.com/) There are numerous others.

NAIS, (http://www.nais.org/) in 2007, created a forum called Schools of the Future, which is intended to encourage and support conversations about what a School of the Future should look like. The forum then published a guide available at (http://www.nais.org/files/PDFs/NAISCOASchools.pdf) In it, are included a compendium of projects and programs already underway as well as a robust annotated bibliography.

Prospect Sierra school, led by Katherine Dinh, is one of the model schools mentioned in the guide. Additionally, NAIS points out that a “There is a growing body of evidence that early adapters within the independent school community are embracing innovation and discovery as their primary strategy for school improvement.”

So, what’s so new about 21st Teaching and Learning? Popular business authors like Daniel Pink, who was a keynote speaker at the 2008 NAIS meeting in New York; and, subsequently, employed as a keynote speaker by a number of our schools, asserts that it is so-called right brain skills that will be primarily needed in the 21st century – successful people will need to be “creators and empathizers, pattern recognizers and meaning makers.” (A Whole New Mind)

Linear and logical left-brain skills, which were predominant in the 20th century, are still predominant in the 21st. Witness, for instance, the current emphasis put on testing. Pink says, however, that we are shifting from the “Information Age” to what he calls, the “Conceptual Age,” a time wherein business and education need to be mindful of three questions:

1. Can someone overseas do it cheaper?
2. Can a computer do it faster?
3. Is what I am offering in demand?

Answers, he says, will come from right-brain thinking, not left-brain.

This is not to say that left-brain thinking is no longer important. It will always be indispensible. The 21st century, however, needs both. It needs whole-brain thinking – left and right-brained thinking – in other words - a whole new mind. Applied to our business, this means it is no longer enough for teacher-centered lectures, i.e. direct instruction, to be the only, or even the primary, pedagogy. Yet, like left-brain thinking, direct instruction will always be an important tool. An important shift is occurring that lies in the fact that 21st century teaching needs to be student-centered, as well as teacher-centered.

This is not an entirely new concept. Westside Neighborhood School provides an example. The culminating project of first graders has, for twenty years, been student centered. Students create a town, called WNS Ville,
which is “conceived, designed, built, and run by first graders.” Students from other grades often visit the town, which is located for a period on time in the Multi-Purpose Room.

Pink mentions patterning as an important 21st century skill. Joe Wise from New Roads, and Phil Kellman, Ph.D. at UCLA, have written an article for us outlining a program in place at New Roads that was featured in an article in the New York Times in June. The article is titled, “Brain Calisthenics for Abstract Ideas. (http://www.nytimes.com/2011/06/07/health/07learn.html)

Alexander Trivas, from Brentwood School, employs two tenets of 21st century learning: technology and globalism. He has created a website called “One Billion Poets” that encourages teens “to post, share, and discuss their inner lives, deepest sorrows, and quirkiest moments that hits to the heart of the teenage experience.” (http://www.onebillionpoets.com). He adds an inventive list of idea generators to get us as well as our students writing poetry.

Grammar Sticklers (author Peter Brodie’s term) beware. 20th century Grammar Sticklers’ Rules, which are even less accurate now in the 21st century than they were in the 20th, should be tossed aside as unnecessary impediments to writing – both creative and analytical. Asks the author from Menlo School, if Shakespeare didn’t use them, why should an 11th grader writing a paper on Hamlet use them? Release the students from the strait-jacket of the Rules that aren’t really rules, and watch student writing improve, he tells us. Creative thinking is as vitally important in the list of necessary 21st century skills as critical thinking is.

One of the goals of education in the 20th century was the learning of a foreign language, says the next author, Carlos Zerzan. This remains an important goal of the 21st. However, Zerzan, who teaches at San Domenico School, tells us that “fewer than five percent of students actually achieved fluency in another language” in the 20th century. Then it was thought that “fluency begins with speaking;” and now, in the 21st, there is evidence that “when speaking appears, language learning has already taken place.” It is very important to begin teaching languages in the elementary grades. Embracing the professional development strategy of action research, Zerzan conducted an experiment using TPR Storytelling with fifth graders, and shares the results with us.

Finally, Amanda McClure from Sacred Heart Schools in Atherton, in an article that was first published last spring in the NAIS magazine, Independent Teacher, points out that in all the great benefits the Internet has brought us, there lies a liability. She says, “What our computers cannot do, and in fact hinder us from doing, is to facilitate thinking deeply about complex issues.”

Based on these kinds of initiatives in our school, it can be concluded that a number of our CAIS member schools, both elementary and secondary, “are embracing innovation and discovery as their primary strategy for school improvement,” as NAIS puts it. Also, in three cases, mentioned herein, our schools have received national, and most importantly, favorable, exposure. In the last analysis it’s comforting to be reminded that no technology ever replace the need for the “carbon-based” teacher.
The culminating project in first grade at Westside Neighborhood School is a grand finale: the creation of a town, fondly named WNS Ville. Its inception occurred twenty years ago when one of our team members noted children using their free choice time to set up a store in the corner of the room. This observation led to the idea of children creating their own town, conceived, designed, built, and run by first graders. Our school administration has been supportive since the beginning, setting aside our multi-purpose room for two weeks in May so the town can be built and visited by students in older grades who are eager to revisit a project that continues to engage them, no matter what the age.

The process begins when the first graders gather together to brainstorm what kind of businesses they would like to create. The only restriction is that they may not replicate any businesses from the previous year. Through discussion and voting the list is whittled down to twelve enterprises. There is always a bank and a post office to ensure that there are multiple opportunities to weave math and writing into the experience.

On the second day of planning, students sign-up to run one of the stores. Over the years we have had restaurants, nature stores, bakeries, smoothie shops, museums, flower shops, craft stores, golf courses, catering trucks, toy stores, bookstores, games shops, and more. Students are clearly influenced by the local events of the previous year. When a Hometown Buffet opened in our community the children wanted to include a buffet restaurant, cupcakes have been big over the last few years, and when LA experienced riots in 1994 the children were insistent that there be a National Guard.

The next week is filled with the work of designing the buildings (cardboard cargo boxes the size of a child’s playhouse); painting them (joyful but messy); making lists of materials needed, either made by the children, donated by families, or provided by mini-grants from our local Rotary club; and earning seed money by making or donating (our currency is color-coded and sports ink drawings of our administrative team). Students spend time each day in groups of four—planning, problem solving, and thinking out of the box. Teachers do not intervene or make suggestions, instead, they facilitate by asking questions in order for the children to find their own answers. Developmentally, children of this age think big and the possibilities are endless.

Six and seven year olds are confident about their abilities to be independent and when adults encourage this belief, exciting things happen. Over the years our teaching team has learned to get out of the way and trust that the children will make it work. Yes, it is messy and demanding, time consuming, and even exhausting, but the results are gratifying beyond measure. We know that we are contributing in lasting ways to their ability to trust in themselves, work as a team, and create something that will last in their memories for the rest of their school days.

New Roads has participated in the research and development of perceptual learning modules for the last ten years. At that time, the Center for Effective Learning (C4EL) was established to act as its educational research arm to address the problem of integrating research validated learning theory into the classroom. C4EL has three primary objectives:

- **Maintain an intimate knowledge of current educational and cognitive research**
  This provides opportunities for faculty to develop professionally while staying in the classroom, e.g., publication of articles and ties with the research community.

- **Develop classroom strategies to implement the positive results of this research**
  By taking advantage of the demographic diversity at New Roads, researchers are able to collect data from a representative range of ethnic, economic, and social strata within the student body. New Roads currently has working collaborations with researchers at UCLA, Loyola Marymount, and UC Berkeley.

- **Disseminate these results to the broader K-12 community**
  To date, the most widely disseminated results to come from these collaborations have been our work with UCLA in field testing and helping develop a plan for the distribution of perceptual and adaptive learning modules (see Photo 1).

The collaboration came about when the two authors met as Co-Principal Investigators on an National Science Foundation grant to study learning in intelligent systems. At that time, Dr. Kellman’s group had finished a perceptual learning module that trained airplane pilots. The results were astounding. Discussion immediately occurred about applications in K-12 education, and work on this has continued for the past fifteen years. These efforts have developed perceptual and adaptive learning techniques that have been field-tested at New Roads School (under research grants to the UCLA Human Perception Lab from the National Science Foundation and US Department of Education). Results have shown strong learning gains, and they indicate the promise and widespread applicability of the technology.

In early work done specifically at New Roads, we explored the use of perceptual learning to help students recognize patterns that would link word problems to equations to graphs in various combinations. For example, students were given a word problem and then asked to choose the graph that represented the word problem. Another example would be giving an equation with three word problems to see if the student could match the equation to a corresponding word problem. The results clearly indicated improvement. More importantly, when assessed at a later time, the learning was retained. In traditional settings, learning diminished rapidly. What is more exciting is that younger students intuited slope and intercept before formal training.

**What is Perceptual Learning?**

Perceptual learning techniques address areas of learning that fall outside of most conventional instruction. Traditionally, instruc-
An analogy would be if you were asked to bogged down in slow processing of basics. More automatic, allowing experts to focus pert information recall is also faster and new relations that novices do not see. Experts pick up larger pattern chunks than do novices, and they discover and ignore irrelevancies, whereas novices pick up both relevant and irrelevant information as they sift through irrelevant information. This confuses the novice and slows them down as they find areas of study easy – they see the pattern, and some find things to be hard – they are sifting through irrelevant information and forming meaningless lists.

While the importance of pattern recognition and information extraction has been recognized in high-level analyses of learning and education in the United States, such as

In problem-solving situations, experts recognize what kind of problem they are looking at, a prerequisite to effective use of facts or procedures. These experts selectively pick up information relevant to a task and ignore irrelevancies, whereas novices pick up both relevant and irrelevant information. This confuses the novice and slows them down as he sifts through irrelevant information. Experts pick up larger pattern chunks than do novices, and they discover new relations that novices do not see. Expert information recall is also faster and more automatic, allowing experts to focus on higher-level structure while novices get bogged down in slow processing of basics. An analogy would be if you were asked to list the parts of a bicycle. Most people picture a bicycle, and list the parts easily. On the other hand, what if you had been given a list of parts to memorize, and then asked to give the parts-same task, but without the picture, without the opportunity for pattern recognition. This explains why some students find areas of study easy – they see the pattern, and some find things to be hard – they are sifting through irrelevant information and forming meaningless lists.

While the importance of pattern recognition and information extraction has been recognized in high-level analyses of learning and education in the United States, such as

PLMs use many short interactive trials in which the learner classifies, discriminates, and extracts structure, or maps structure across multiple representations (photo 2). Opportunities to recognize patterns, not the passage of time, advance expertise. Since PLMs improve pattern processing and fluency outside of class, we are exploring the potential for them to make classroom time more useful. We anticipate that interactive learning techniques embodied in Perceptual Learning Modules may overcome many obstacles in traditional instruction as students are better prepared to participate in classroom discussions.

An important aspect of Perceptual Learning Modules is that they employ adaptive sequencing techniques to utilize the learner’s performance (accuracy and speed) on short interactive learning trials to determine when various items or categories recur. Learning is arranged for each individual to optimize efficiency and to direct learning effort and time where it is needed most. Using the New Roads Classroom Management Learning Tool, we distribute modules to individual students or groups of students as needed. Software routines track performance continuously, leading to mastery of all categories or items in a learning task for each individual.

For facts, or procedures, adaptive sequencing algorithms ensure that all items are learned and well retained. For complex classifications, these methods produce fluent pattern recognition, i.e. the ability to recognize and classify novel instances. Be-

We know that traditional instruction has had little impact in producing the expert pattern recognition, fluency, and intuition required in many learning domains.
about progress and directing effort where it is most needed.

Perceptual Learning Modules also allow multi-level, multipurpose assessment. Because student progress is continuously tracked, teachers are able to see overall progress, particular areas of success and difficulty for each student, and an aggregate picture of strong and weak areas for entire groups of students.

Perceptual Learning Modules, Changing the Face of Learning at New Roads

Though we have been testing and helping to develop PLMs for the past ten years, New Roads School is only in the beginning phases of integrating the full potential of Perceptual Learning. PLMs have been shown to be effective in the research lab and in field testing, but we are just now beginning to integrate them in a sustainable way into the classroom. Teachers are being trained and the New Roads School Learning Tool shows excellent promise for easy dissemination of PLMs. We know that traditional instruction has had little impact in producing the expert pattern recognition, fluency, and intuition required in many learning domains. Research results indicate, and we anticipate success, in reaching students who have struggled with learning in the past. We know of no developments in learning and learning technology that have equally broad implications for learning across many disciplines.

This past year, I (Joe) had a student struggling with the multi-rep PLM. Her accuracy was poor, and she was taking a very long time on each question. I asked her if she saw any patterns. Her response was yes, but she thought it was cheating to use them. Once she started allowing the patterns to form meaning, her accuracy met criteria as did her time on task. There was also clear evidence that she was able to transfer the learning to novel situations. We have found that the use of perceptual and adaptive learning modules enables students to tap into the natural way the brain works. Interestingly, 100% of our students can distinguish between a dog and a cat, but there is no text that can be written that completely differentiates one from the other. One can always find an exception to the “rule.” There were no tests, no lectures, and no board work to teach cat and dog. Kids were exposed to lots of examples over time with immediate feedback, i.e. perceptual learning. That model of perceptual learning is powerful, but it takes a long time to accomplish. With PLMs, we are able to greatly speed up the presentation of examples with feedback that establishes pattern recognition for high-level learning in many disciplines. Perceptual learning is “Brain Calisthenics for Abstract Ideas.” Welcome to the “new face of learning.”

The Center for Effective Learning has three primary objectives:
- Maintain an intimate knowledge of current educational and cognitive research
- Develop classroom strategies to implement the positive results of this research
- Disseminate these results to the broader K-12 community
Two moments hooked me on the sheer pleasure of poetry. One involved Pablo Neruda and the moon; the other, my wife and a bottle of perfume.

When I stumbled across Neruda’s odes, I read and reread a line that dazzled me: “the moon lives in the lining of your skin.” In nine words, he captured the essence of beauty, attraction, love. Nine words. No paragraph, essay, or book—just a line in a poem. A line in which there are no SAT words, no ostentatious word screaming, “Hey, look at me.” That’s when I realized how potent poetry was. One could take a handful of five-dollar words and combine them into a million dollar line. From that moment on, I read as much poetry as possible, always admiring how the best poets played with words and cut to the essence of an experience.

Which brings me to my wife. Preparing to teach a new poetry unit, I was looking for a hook for my students, so I turned to my wife. Now a novelist, she used to teach English, and poetry was her favorite unit. She smiled and moved to the bedroom bureau, returning with two bottles. She reenacted her lesson with the kids.

“What’s more expensive: perfume or l’eau de toilette?” she asked, holding up a tiny bottle of golden perfume no bigger than her thumb in one hand and another larger bottle of the l’eau de toilette in the other.”

The children shouted, “The bigger one.”

“Nope, it’s the perfume which is three times more expensive because it holds the essence—the undiluted, purest concentration. And that, my friends, is just like poetry. It distills everything to its essence which hits the reader hardest.”

I’ve been teaching poetry for fourteen years, and I always start the unit with the perfume question. We discuss Hughes, Williams, Blake, Soto, Sandburg, Oliver, and, of course, Neruda, but my favorite poetry prompt actually comes from a novelist. Inspired by Tim O’Brien’s classic story, The Things They Carried and its haunting, unforgettable first pages, I ask students, “What tangible and intangible things do you carry?” The responses are always some of the most honest, saddest, and funniest I’ve heard. Recently, I began thinking what do teens in other nations carry? And what if kids around the world began sharing these feelings through poetry?

Just last summer, I launched onebillionpoets.com, (http://www.onebillionpoets.com/), a social networking site for teenagers all over the planet to post, share, and discuss their inner lives, deepest sorrows, and quirkiest moments that hit to the heart of the teenage experience. Whether teens live in Tunisia or Detroit, Moscow or Mexico City, they all have something salient, humorous, and beautiful to say.

Both teens and adults are often resistant to writing poetry because they feel it has to be all metaphysical, ethereal—about the “deep” issues. However, stimulating inspiration for poetry is really an act of allowing: allowing ourselves to recognize the simple pleasures of being alive—the juicy tomatoes that Neruda honors, the cold plums...
Just last summer, I launched onebillionpoets.com—a social networking site for teenagers all over the planet to post, share, and discuss their inner lives, deepest sorrows, and quirkiest moments that hit to the heart of the teenage experience.

How to Get Inspired to Write Poetry

Recipe for a poet: one blank notebook, an open heart, an observant eye, an appreciative soul.

Buy yourself a camera and capture simple moments to write about.

Give cooking a try and incorporate your senses into your poetry.

Visit iTunes and listen to instrumental music.

Model a poem - chose a poet and emulate his or her work.

Read and listen to Pablo Neruda’s poems.

Do a “Thoreau” and spend some time outdoors.

Dust off some magazines and focus on the line breaks.

Be a tour guide for your own past and share your deepest self.

Read Tim O’Brien’s The Things They Carried.

Have a MIXED UP DAY and see things differently.

Share and publish your work.

that William Carlos Williams tantalizes us with, the “dust of snow” that Frost cherishes even on a terrible day.

One of the greatest things about writing poetry myself and teaching it to both children and adults is that you are never too young, or too old to express your truth. Whether you are experiencing the wild highs and lows of high school dating or marriage, whether you are a child, or parent coping with divorce, or whether you are a child or a grandparent eating sticky popsicles in the summertime, through poetry you can capture what it means to love, feel fully alive, and be human.

How to Get Inspired to Write Poetry

Recipe for a poet: one blank notebook, an open heart, an observant eye, an appreciative soul. These are not fancy ingredients—it’s about imprinting the small moments, first in our senses and then onto the page, and knowing that life is unpredictable.

1) Buy Yourself a Camera

Great poetry often captures the simplest moments, the quiet loves of our lives: the patterns of raindrops on a window; the soft tread of a child’s feet after a bath; the cat warming itself in a sunbeam. In your poetry notebook under the chapter: “Capturing a Moment,” write down the shapes, lines, color, shadows as well as the memories, emotions, and ideas stirred by the photos you take. What captured, thrilled, and arrested you about the photos?

2) Give Cooking a Try

Great poetry evokes and uses the five senses. To get in touch with these smells, what better place is there than the kitchen? In your poet’s notebook in the chapter “Cooking a Poem,” jot down every spice, odor, and texture you love. You should list all verbs associated with your cooking which will help whisk up memorable poetry, e.g., baste (baste an idea), slice (slice the sky with rain), broil (broil a memory), knead (knead a friendship), and marinate (marinate a poem), etc.
3) Visit iTunes

Great poetry often has a musicality and cadence to it. Listen to music (preferably) WITHOUT WORDS, and see where it takes you. In your poet's notebook in the chapter: "Catching the Flow," write down not only the sounds of the music and the beats, but also the locations you are swept away to—describe in detail. One time in class, I played techno music for my students. When asked where they imagined themselves to be, a couple students stated, "I'm in a nightclub with booming bass." But another kid dove into the music and said, "I am neuron on a brain pulsing quest captured in the folds of the big gray cerebrum."

4) Get them to model (A poem, that is)

As Emerson said, "Tis the good reader that makes the good book." Beginning poets must read and emulate the best poets' work to internalize voice, rhythm, and structure. Just like an amateur athlete models the big league player's swing or jump shot, an inexperienced poet needs to learn from the best. Model William Blake's "Tyger" and get, perhaps, "Husband, Husband." Model Carl Sandburg's "Chicago" about your own hometown. Write down your examples in your poetry notebook in a chapter called: "My Modeling Career."

5) Be a tour guide

Be an emotional tour guide – for yourselves, your students, and your family. Tell your back-story. Revisit your mementos, photos, yearbooks, and your old love letters. In addition, by sharing your deepest selves, you are giving your children/students permission to tell their own most sacred stories. Take a walk through your old neighborhoods (or current ones as well) and write down what you see and feel in a chapter called, "The Long and Winding Road."

6) Read and listen to Pablo Neruda's poems (Il Postino cd is terrific)

Lie down on the floor and read (listen to a reading if you can) this great master poet's word play, humor, and love of the seemingly simple things of life: socks, tomatoes, lemons. Write your own odes to whatever is in your purse, car, closet, etc. and put them in a chapter called: "Ode to Odes."

7) Read Tim O'Brien's The Things They Carried

Great poetry balances the tangible with the intangible. You only need to read the first three pages of this classic book to see a master at work; now while it's prose and not poetry, it begs the question: what tangible and intangible things do you carry? What hopes, burdens, and dreams do you bear? In your notebook in a chapter called "Baggage", you should jot down a continuous list of what you "carry"—pressure from spouse? Responsibilities? Secret crushes? New ideas? Memories of a parent? etc.

8) Dust off some magazines—old issues of Sports Illustrated, National Geographic, and Vogue. One of the hallmark features of poetry is the focus on the line. Great poets play with line breaks to create word play, enjambment, visual drama, and emotional tension.

Scour through fun, colorful magazine writing and find the best nuggets of writing. Then reorganize them through line-breaking into your own poems that you keep in a chapter called, "Unearthed."

9) Do a "Thoreau"

Many great poets spend lots of times outdoors. Take a walk daily like the great poet Mary Oliver does. Clear your head in one sense, but at the same time fill your mind with the poetry of nature and life.

Get outside and into the woods, mountains, beaches, or trails. In your notebooks in a chapter called "Nature Calls," write down names of birds, trees, and plants (specificity is key). Observe how the light filters through the leaves, the textures and patterns of the bark. Maybe leaves swirling on the ground are actually "break dancing."

10) Have a MIXED UP DAY: See things differently

"There's a very tiny crack in which another world begins and ends."

Slavko Mihalic (Croatian poet)

Great poets see the world differently, through different lenses, angles, and filters. Generate as many possible uses for basic household things. Example: A toothpick could be a javelin for a grasshopper or a giant splinter. In your notebook, list numerous everyday object and then write down the uses in a chapter called, "Mix It Up."

11) Share and publish your work

Nothing will excite any writer to write deeply and thoughtfully than to know his words might touch, inspire, and make a difference to others.

Have your teens visit http://www.onebillionpoets.com/ and join in the global dialogue of poetry from teens all over the planet. Your kids can post and discuss poetry about the teenager experience in the 21st century.
Only once have I been a department head, and that year happened to be Accreditation Year, which meant filling out a lot of forms. I’m not so good at dealing with officialdom—as the philosopher manque said, “Somehow cheerfulness is always breaking in”—and it was hard not to answer questions like “Does your department make regular use of the library?” with “So zealous are they that the town has had to open a second branch.”

Now, what does this have to do with the teaching of English Grammar?

The various department reports were duly published and circulated around the faculty room for (dis)approval. A few days later, I was summoned by my own department for an emergency meeting. “You have embarrassed us, shamed us, in the eyes of our colleagues,” they intoned, as I began to rue my flippancies. “You have confirmed the stereotype of foreign language teachers as ignorant of Proper English. You have begun no less than six sentences with the word But.” (At least they didn’t say “fewer.”)

I had never heard of this prohibition. But as I began to poke around (and then to teach English), I discovered a host of these no-no’s, faithfully and uncritically passed on from generation to generation. And to find out more about them, I began quizzing my students.

I teach mostly Latin—which may be the best key to understanding English Grammar: the old test of an English sentence—“how will it translate?”—is especially well-served by Latin, even when we have lost the trick of translation.

But I also teach a couple of senior English electives, and I start off by asking them to reflect on their eleven years of reading and writing in school. I get some impassioned responses, and this is what I find: they’ve written a lot of “critical” papers, as though they were trainee gradstuds; they can crank out a five-para formulaic essay on a book they have barely or never opened; they’ve been assigned a bunch of grim stuff to read (almost nothing to make them smile); and the negative injunctions they’ve been hit with far outnumber the positive. One even said to me: “I can’t even begin to write a paper, as I know every sentence will be flagged.”

Worst of all, they have come to regard writing as a chore and a bore. Cruelly forbidden to use “I” or “you,” they cannot say what they think to an ideal audience; they are reduced to “the author states that”—as if the verb “state” ever passes their lips in everyday life. And they would never dare state what so many of them are dying to state: “The Scarlet Letter sucks. Big time.”

They are adept at BS and proudly so. When I assigned my Satire class a piece of BS plausible enough to get a five on the AP, they were eager to oblige, and the results were droll. One wrote a deft comparison of Huck Finn and Tom Sawyer, neither of which she had read; another did a Deconstructionist job on “Baa Baa Black Sheep,” complete with the requisite claptrap about dichotomy and juxtaposition, and sublime riffs on “black” and “sheep” and “sir” and “master” and “dame.” A heartfelt homage to Derrida, Lacan, Clouseau, etc.

But about the Grammar Rules they are less outspoken, largely because they don’t realize they are being conned. They have heard the Rules for years; their parents swear by them; they must be as fixed as the Law of Gravity.

Most of the Rules are Negative Injunctions. And that’s part of the problem; as lawgivers since Moses well know, you never forget what you have been told not to do. Only one of the Ten Commandments is wholly positive.

I needn’t list these injunctions, as everyone seems to know them. They are arbitrary shibboleths, often born of snobbery. According to a CAIS Faculty Newsletter article, they include “…a group of elements that English teachers typically expect students to avoid, such as contractions, second person pronouns, sentence beginners such as “and” and “but,” and exclamation points.” In other words, and for no discernible reason: Your writing should be formal, sapless, stiff, and dull.

William Safire, a hack speechwriter-turned—“language maven,” who knew little about language or languages or linguistics—was given to such ukases as a smug and lazy substitute for proper understanding. He published a collection of them he called Fumblerules: lots of tricks that make writing lively and effective—which are therefore to be condemned. They’re meant to be cute (Prepositions Are Not to be Ended With. Or Passives Used. Or the Verb “To Be.”);
but they are silly because they are wrong, and insidious because they have the fascist allure of all Commandments.

Nor have I found any of them to be true or useful. Don’t begin a sentence with And or But or Because?

“And God said, Let there be light: and there was light.”

“But soft! what light through yonder window breaks?”

“Because I could not stop for Death—He kindly stopped for me.”

You can read whole pages of the King James Bible—that rare example of a committee, tasked to produce a camel, delivering a beautiful horse—in which every sentence, jailed, executed, and (too late, alas) reprieved.”

Some teachers devise their own list of prohibitions: taboo words commonly include (I’m told) “to be,” “get,” “thing,” “stuff.” There goes the most famous quotation of all (which also has an “is”); and “Get thee to a nunnery!”; and “The play’s the thing/Wherein I’lI catch the conscience of the king.” and “We are such stuff as dreams are made on.” Shakespeare would struggle with freshman English.

Then, there are the crime-de-la-crime solecisms, courtesy of the Grammar-and-Stickie Brigade (Grammarians? Grammarmens?): it’s her, between you and I, who

and nineteenth centuries, and owe little to the study of Language and Linguistics—despite the efforts of the New Linguists (Steven Pinker, David Crystal, the Geoffreys Nunberg & Pullum, etc.) to show that these Rules are arbitrary, damaging, or wrong.

Nor do we need these Rules, especially as it’s almost impossible for a native speaker of English to make a grammatical error—such “errors” usually turn out to be variations of dialect or idiom. [By Rules, I mean those invented by self-styled grammarians out to make a fast buck from the newly, or would-be, literate. Of course, there are Real Rules of English: no native speaker would put the article after its noun, or rearrange

Instead of Rules, we should be offering Recommendations:

less red-penning, more green-lighting.

tence begins with And, except for the few that begin with But or For or Then.

Don’t use contractions? I regularly play a game with the four editorials in the New York Times. I bet myself that on any given day there will be a total of at least five contractions and sentences beginning with And or But. It’s usually closer to ten. The op-ed page is even easier meat: two recent articles, by Paul Krugman and Ross Douthat, had totals of twenty-three and twenty-six respectively—Krugman even slips in a “you,” and begins a paragraph with “And here’s the thing.” So, why deny our kids the license freely given by the Times to its columnists?

Don’t end with a preposition? Dryden, the great Latinist, should be ashamed of himself for crippling English with a Latinism, and obliging centuries of writers to pretzel their prose. Don’t split an infinitive? Irrelevant, when you discover that a one-word infinitive (not “to + verb”) can’t be split. Subject-Verb Agreement? Too many exceptions: England are playing badly; the United States is playing well; my family are always arguing; ten minutes is enough. Double Negative? Like a Double Whisky—twice as strong.

Whether we write “its” or “it’s,” the sense is always quite clear—and we never ask for clarification in speech. Like his contemporaries, Thomas Jefferson tended to write that his dog wagged its tail. As for the venerable “Don’t Use the Passive Voice” (one of Strunk and White’s Brahmin whimsies), why not? “Mistakes were made” is every pol’s mantra; and try making this Active: “The alleged suspect was spotted, chased, tackled, restrained, cuffed, arrested, charged, tried, did you talk to?, alright, alot, Girls Basketball, hopefully, irregardless, everyone has their faults, nine items or less, Drive Slow, Einstein’s genius made him famous. All of them kosher, because there ain’t nothing wrong with none of them. And the “correct” versions can sound prissy—“This is she,” “Nine items or fewer,” “To whom were you talking?”

I wonder: How is it possible to be a reader without noticing that no reputable writer has ever observed any of these Rules? (Except Dryden and his Final Prepositions.) You might as well randomly forbid the use of a word that has five letters, or ends with an “e.”

And what is our motive for enforcing them? Is it just easier to spot the so-called infractions and direct offenders to section 48c in the Grammar Handbook? Is it the “Gotcha” mentality? Sometimes it seems that one half of the world wants to slap parking tickets on the other half.

If a scientist were to insist that the sun revolves around the earth—which is flat—they would be laughed to scorn (even if they murmured eppur si muove).

If a doctor started dispensing Victorian remedies—nostrums, cuppings, blood-lettings—and moved freely from corpse to newborn with unwashed, ungleved hands, they would be pilloried as a quack and a criminal.

But any teacher can hang out their shingle and paralyze the young with a list of hoary Don’ts and Nevers; and the young will later boast that they have never split an infinitive in their life. Most of the Grammar Rules we teach derive from the eighteenth the adjectives as “Scottish little five terriers.”]

Instead of Rules, we should be offering Recommendations: less red-penning, more green-lighting. Give our kids good writers as models, avoiding translationese and inimitable dialects (“Sup, bro? Why be the many-wiled Odysseus dissin the wine-dark sea?”)—seductive though such dialects are. Teach them diction and style, the rhythms and music of English as well as the motifs-n-metaphors—what Swift calls “proper words in their proper order.” This, of course, is daunting; but it’s worth a shot—rather than the easy out of trying young miscreants in the bogus Court of Correctitude.

Perhaps we weary of the elementary schooler’s “She is cute. And smart. But mean.” (Though I detect a budding Elmore Leonard.) But the culprits aren’t And & But, which are the staples of good persuasive writing. Of course it’s much harder to show what to do rather than what not to do; but you don’t cure a kid’s cold hands by chopping them off: you supply gloves and mittens, you turn up the heat.

What was the kid trying to say, how could it be said better? That takes time, perhaps a chat; and with seventy more papers in the pile, it’s tempting to just circle that big ripe Dangling Participle, even though its sense is quite clear. (Speaking of which, here’s proof.)

The question remains: Why do we continue to cramp our kids with all these artificial and random restraints? Writing is never easy; but it’s impossible in a straitjacket.
A noble goal of the twentieth century was acquisition of a second language. However, this was not achieved, since fewer than five percent of students actually achieved fluency in another language (Asher 1977, 2003). Researchers made a key discovery: language instruction was set back in the twentieth century by the myth that fluency begins with speaking. In actuality, the reverse is true: when speaking appears, language learning has already taken place. (Asher, 2009).

An executive summary of a national survey on foreign language teaching in U.S. schools recommends making foreign language classes a priority in the K-12 curriculum to promote long-term sequential programs that give students linguistic and cultural skills to better communicate. (Rhodes & Pufahl, 2009). In other words, to ensure success, start in the early years.

If we start early, we have a box of linguistic tools to ensure success. The primary tool for immediate understanding of any target language is James J. Asher’s Total Physical Response, known worldwide as TPR. TPR is a means of language instruction based on the way a child naturally learns their first language; by listening and physically responding to commands before speaking. After internalizing the language through comprehension, production begins to appear. Secondary tools help make a smooth transition from understanding the target language to reading, writing, and speaking through devices such as storytelling, role reversal, student skits, and games.

The primary tool of TPR has been thoroughly researched for decades with experiments in Japanese, Spanish, English, French, and German (Asher, 2009). A study in five different elementary schools in Knox County, Tennessee with graduate students teaching Spanish using Asher’s TPR resulted in strong parental support, enhanced student enjoyment and motivation, and a significant improvement in teacher satisfaction (Davis-Wiley, 1994). In another study comparing TPR with songs and chants, the writer concluded that when students use their bodies to express language, they internalize the language faster with listening skills that transfer to speaking, reading, and writing (Omarai, 2001).

**Definition of TPR Storytelling**

TPR Storytelling has not been studied much, especially when used in the elementary school years. TPR Storytelling, also created by Blaine Ray, often serves as a follow-up to TPR, after the basics have been learned - teaching students reading, writing, and speaking through conversational storytelling. Students are prepared for TPR Storytelling by hearing vocabulary and grammar through classical TPR, which they internalize before hearing a story using the vocabulary. The benefit: when students hear the story for the first time, they are listening to something familiar. Without prior preparation with classical TPR, a story that could be interesting to students sounds unfamiliar and difficult to understand.

**Research with TPR Storytelling**

Little research into the TPR and TPR Storytelling at the elementary level, especially TPR Storytelling, has been conducted. Since TPR Storytelling has not been explored much in systematic research studies, (with the exception of Todd McKay’s work), the intent of...
Researchers made a key discovery: language instruction was set back in the twentieth century by the myth that fluency begins with speaking. In actuality, the reverse is true: when speaking appears, language learning has already taken place.

my research was to evaluate the impact of TPR Storytelling with elementary school Spanish students in the fifth grade.

The Students

The sample group was thirty-seven students in my fifth grade Spanish class in the Fall of 2010. All students are English speakers, learning Spanish as a foreign language. Twenty-five of the students were girls and twelve were boys. All students had taken Spanish with me in the previous grade level(s) with the exception of seven students who were new to the school that year.

Here’s what my fifth grade students experienced.

Meeting 1:
The pre-assessment was a timed writing of five minutes done approximately a month and a half into the school year. This was done after the students had spent that time using classical TPR to build a vocabulary base and understanding of the structure of the language prior to starting TPRS. Students first heard a skit using familiar vocabulary they learned through classical TPR two times per week for the first month, and a half of the school year. Example of TPR in the target language: “Draw a city with a plaza in the center. Next, draw a bank to the right of the plaza. “Where is the bank?” The students would respond saying where the bank is. (See skit below.)

The instructor first read the skit aloud to the students. Next they read it with the instructor off the overhead projector, and then two students acted the skit out in front of the rest of the class. Students wrote as much of the skit as they could recall in the target language of Spanish within that five-minute period. This skit serves as a mini-story, and an introduction to the TPR Storytelling to come.

Meeting 2:

A period of approximately four weeks went by as we focused on conversing through storytelling, reading, and writing using the classical formula of TPRS. The post-assessment was then administered after fifth grade students had experienced approximately four weeks of TPRS. The post-assessment was also a five-minute writing activity in the target language. Students did not use a mini-skit as in the first meeting. After reading together as a class a TPRS mini-story from Blaine Ray’s Look I Can Talk! through classical TPRS, students were instructed to do a free-write. Here students were told to write as much as they could in Spanish about whatever they choose. They could make up a story similar to the ones we had been reading, writing, and creating together during the past four weeks with TPRS, or focus on a story we just read.

This is how I scored the five-minute written output from my students.

The categories measured were: (a) sentence fluency, (b) conventions in grammatical structure, (c) conventions in grammar and verb agreement, (d) vocabulary or word choice. These are each measured on a scale of one to four, with four being the highest. A total of sixteen points is the highest possible score. There is also an initial and final word count for the pre and post assessments.

Finally, here’s how students did as a whole.

In only four weeks, 84% of students received a higher, or maintained the same overall total score. Just 16% of students dropped in overall score. Overall, students made gains in every single category. Another striking result in the change of overall scores between the two assessments was the number of students who moved to higher echelons. The number of students in the low performing category was nearly cut in half on the post-assessment, the number of middle performing students slightly dropped, and the number of high performing students nearly doubled. (See Table 1 below.)

Explanation of Results

Two significant reasons for gains in the overall score were demonstrated by the categories of sentence fluency and vocabulary use/word choice. By the time of the post-assessment, the number of students improving in these two areas skyrocketed. The number of students with a score of four in sentence fluency category more than tripled, and almost tripled in the vocabulary use/word choice category.

The implication of such dramatic improvements in only four weeks can be explained by the main purposes and hallmarks of TPR and TPRS. The students had lower anxiety, were motivated, and focused on comprehension before production. Through reading, writing, and speaking when ready with TPRS, students gained fluency in a low stress environment. The rise in scores of sentence fluency can be attributed to focusing on grammar only in context through the stories. The rise in scores for vocabulary use can be attributed to internalizing a wider vocabulary selection that they not only understand, but can now produce in writing.
Gains in Writing Fluency and Word Count

Students also made significant gains in their overall word count. During the pre-assessment, there were no students who could write in the 50-59 word range during the five minute period. By the post assessment four weeks later, 15 out of 37 students were writing above 50 words all the way into the 80-89 word level. 92% of students improved their word count. Over 50% more than doubled their word count.

It is important to put these word count numbers in context with the previously mentioned gains in vocabulary and word choice category. Students were not solely focused on the mechanics and rules of correct writing. Since they were uninhibited by strict adherence to grammar rules and encouraged by writing on topics of interest, their word counts greatly increased, as did their demonstration of an expanded vocabulary base in the target language.

References

This is the skit that was presented to the students. It used familiar vocabulary in a comical format to put students at ease in lowering anxiety while increasing motivation.

La Turista y Señor Zerzan en el Metro.

Turista: ¿Perdón? ¿Dónde está el museo?
Señor Zerzan: El Museo está en el centro, al lado de la famosa Plaza Zerzan.
Turista: ¿Cuál línea de metro?
Señor Zerzan: Tome esta línea a la estación Plaza Zerzan.
Turista: Gracias. Hmmmm…..tú pareces muy familiar.
Conductor de Tren: ¡Proxima Estación, Plaza Zerzan!
Turista: ¡Ay, es mi parada! Gracias. ¡Adiós!
Señor Zerzan: De nada. ¡Adiós!

Table 1: Difference in Overall Score on Pre-Assessment and Post-Assessment

<table>
<thead>
<tr>
<th>Student Performance</th>
<th>Pre-Assessment n=37 students</th>
<th>Post Assessment n=37 students</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW Performing (Overall Score 0-7)</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>MIDDLE Performing (Overall Score 8-12)</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>HIGH Performing (Overall Score 13-16)</td>
<td>9</td>
<td>16</td>
</tr>
</tbody>
</table>
A tech-savvy teacher in a 1:1 classroom values the gifts of technology while pointing out what it cannot do.

Learning to Slow Down: How Technology Can Increase Content but Limit Thinking in the Classroom

I teach in a 1:1 classroom, that is, every student has a laptop and I have one, too. Technology is great for incorporating art, music, and film into our curriculum. It also helps with homework, revisions, and readings. I like many aspects of our 1:1 program: images of art from around the world can be shared to enrich the lesson, my students enjoy listening to traditional music while they work on projects, and with our current setup, short movie clips can make a great impact fitting seamlessly into the lesson plan.

In addition to these benefits, there is also the great advent of No Lost Homework. Since all assignments are completed online, nothing is misplaced. Reviewing, returning, and revising work is so much easier on the computer than it was in the Age of Paper. Of course, there are issues with cheating, but that is the same old game played on a new platform; it is a topic unto itself. There is, however, a downside — this same technology diminishes contemplative thinking.

What our computers cannot do, and in fact hinder us from doing, is to facilitate thinking deeply about complex issues. Computers create the expectation of a quick answer, of immediate feedback; they offer endless visual and aural stimulation. For lightning-round test-prep this is a great medium, and for single answer questions, electronic polling is fun. But, because the computer brings this kind of fast response into the classroom, it starts to crowd out thoughtful, slow-response work.

My students are treasure hunters who delight in finding some gem of a fact, plucking it from its location and placing it on their screen. When I asked my students to develop and answer discussion questions about Vikings, for example, the results were free-floating data. Though they were instructed to ask why and how questions that required complex answers, my students preferred to use pat responses that showed up first in their searches. These answers then influenced the quality of their inquiry and our discussion. Because the answers have been harvested by searching instead of reading, some students lacked an understanding that the answers were related to a broader topic. This confusion shows how difficult it is for these students to recognize context in their reading and to create it in their writing. They are skilled with using a narrow focus to retrieve a particular fact but are not skilled at using those facts to build a broader understanding.

When my students write an essay, there comes a time when they must slow down their thoughts to the speed of composition. For most students, this is an uncomfortable situation. They are still looking at their machine, but now it is their minds that are providing content, and it is achingly slow compared to the speed with which the computer provides content to them. At this unfamiliar pace, students must place one word in front of another to create a whole thought. No longer can they rely on some texting half-thought; they must hold the arc of an idea in their minds long enough to see it from one end to the other. Then they must peck it into their machines.

In some aspects, creating content on the computer is easy. Compared to writing prose, brainstorming and outlining are a snap.

Amanda McClure
Secondary History Teacher
Sacred Heart Schools
amcclure@shschools.org

Learning to Slow Down: How Technology Can Increase Content but Limit Thinking in the Classroom

A tech-savvy teacher in a 1:1 classroom values the gifts of technology while pointing out what it cannot do.
Students in my class are quick to suggest and write bullet points. It is easy for them to follow along with the lesson by comparing their work to their neighbors’, or the example on the board. Here, the computers are helpful, as they permit students to insert ideas into place and to rearrange lists. Outlining is similarly painless, in part because those very notes made in brainstorming can be cut and pasted into a well-defined form. It is at this point that the writing process for an analytical essay can grind to a halt. Now the shared work and quick responses are finished and students must proceed individually to create something new. They are not using the skills they know best: group work, paraphrasing, and summarizing. They are not writing what they read most: informal personal opinion. Instead, they must use reason to link discrete facts in a logical manner to make a coherent point. They must also create a context for their content. Not only are there no more quick answers, there isn’t even the comfort of the “right” answer.

Challengers might ask why this process is even necessary anymore. The reply is simple: students must still learn to communicate complex ideas. They must be able to create entire thoughts that run together in recognizable patterns in order to function in school and at work. Most importantly, they must be able to master this skill to participate as informed citizens in our shared civil discourse. Students who are flooded by facts think that the best way to answer a question is to search for more facts instead of organizing and marshalling the information they already have to develop a strong case. As long as the Internet is readily available, a search is faster and easier than engaging in a thoughtful and challenging discussion.

Another related lesson that is negatively impacted by ubiquitous technology is discussion based on reading a text. By text, I mean some significant portion of a book that is predominately text and not images, captions and multicolored sidebars. Just looking at an entire page of ciphers is daunting to my students. They have had few encounters with this much abstraction, uninterpreted by image. Then they must slowly and carefully lift the meaning from the page and express it through language, while pausing to allow their classmates to run through the same process. Much of the challenge of this process is the same as that which faced previous generations of students. However, my students are faced with the frustration that the very machine that is displaying the text can be made to display a hundred hits on this topic that would surely tell them the answer to whatever questions were posed. But in their rush to answer, they haven’t carefully read the question, which more often than not requires a nuanced response and not a quick data point.

I expect students in my classes to interact with a text, and with each other with no intermediary (except the teacher). They must move forward with their own limited knowledge. At the same time, they must find a way to work with those people immediately present in order to wrestle some meaning out of the topic. All of this is a slow process. Of course, it can be lively and funny too. But it is essentially a human task: a fundamental skill needed to participate in human society. When my students learn to be nuanced, when they learn to listen carefully and find agreement, those are human tasks. When they learn to disagree carefully and logically, those are human tasks. These interactions that take place at the speed of conversation are essential building blocks for survival in the twenty-first, or any other century.

Information input can come from many sources, and electronic sources are not inherently privileged or discounted. However, as teachers, we must allow our students time to ponder at their own speed. We must give them time to build understanding among themselves as a group, especially if they have no experience working at human speed. Later, of course, we’ll dive back into the pace of modern communication and zap messages back and forth, but I know that even as I send them a great link on our current topic, I will also have to work against that very urge to instantly find “it” online the next time I ask them to read, write and discuss.
The Professional Services Committees help CAIS plan the Regional Meeting and the Professional Days. This year the Southern Committee (SPSC) is planning the Southern Regional Meeting and the Northern Committee (NPSC) is planning a slate of Professional Days. CAIS thanks the committees for their invaluable service.

<table>
<thead>
<tr>
<th>Northern Professional Services Committee</th>
<th>Southern Professional Services Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>Administration</td>
</tr>
<tr>
<td>Gwen Rino</td>
<td>Kevin Newman</td>
</tr>
<tr>
<td>San Francisco Friends School</td>
<td>Windward School</td>
</tr>
<tr>
<td>Counseling</td>
<td>Counseling</td>
</tr>
<tr>
<td>Kent Grelling</td>
<td>Nancy Anderson</td>
</tr>
<tr>
<td>Bentley School</td>
<td>The John Thomas Dye School</td>
</tr>
<tr>
<td>Early Childhood (PreK-2)</td>
<td>Early Childhood (PreK-2)</td>
</tr>
<tr>
<td>Barbara Kraemer-Cook</td>
<td>Jeninne Rodriguez</td>
</tr>
<tr>
<td>Marin Country Day School</td>
<td>PS#1 Elementary School</td>
</tr>
<tr>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>Margaret Ramsey</td>
<td>Diane Church</td>
</tr>
<tr>
<td>Menlo School</td>
<td>St. Mark’s Episcopal School – Upland</td>
</tr>
<tr>
<td>Intermediate (3-6)</td>
<td>Intermediate Grades</td>
</tr>
<tr>
<td>Victoria Trevor</td>
<td>Heidi Riemann</td>
</tr>
<tr>
<td>St. Andrew's Episcopal School</td>
<td>Westside Neighborhood School</td>
</tr>
<tr>
<td>Languages</td>
<td>Languages</td>
</tr>
<tr>
<td>Kelly Giddings</td>
<td>Néstor Géronimo</td>
</tr>
<tr>
<td>St. Mark’s School</td>
<td>Besant Hill School of Happy Valley</td>
</tr>
<tr>
<td>Library Sciences</td>
<td>Library Sciences</td>
</tr>
<tr>
<td>Jenny Andrus</td>
<td>Elaine Cardenas</td>
</tr>
<tr>
<td>Live Oak School</td>
<td>St. Matthew’s Parrish School</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Marian Ferrara</td>
<td>Megan Holmstrom</td>
</tr>
<tr>
<td>Drew School</td>
<td>Chadwick School</td>
</tr>
<tr>
<td>Performing Arts</td>
<td>Performing Arts</td>
</tr>
<tr>
<td>Tony Angelo</td>
<td>Lisa Byrne</td>
</tr>
<tr>
<td>The Branson School</td>
<td>Mayfield Junior School</td>
</tr>
<tr>
<td>Physical Education</td>
<td>Physical Education</td>
</tr>
<tr>
<td>Whitney Sutak</td>
<td>Warren Stewart</td>
</tr>
<tr>
<td>Marin Primary &amp; Middle School</td>
<td>Harkham Hillel Hebrew Academy</td>
</tr>
<tr>
<td>Sciences</td>
<td>Sciences</td>
</tr>
<tr>
<td>Megan Wood</td>
<td>Barbara Haig</td>
</tr>
<tr>
<td>Black Pine Circle School</td>
<td>Dunn School</td>
</tr>
<tr>
<td>Social Studies/History</td>
<td>Social Studies/History</td>
</tr>
<tr>
<td>Donna Gilbert</td>
<td>Liz Willis</td>
</tr>
<tr>
<td>The Harker School</td>
<td>Oakwood School</td>
</tr>
<tr>
<td>Technology</td>
<td>Technology</td>
</tr>
<tr>
<td>Jennifer Gaspar-Santos</td>
<td>Stuart Posin</td>
</tr>
<tr>
<td>St. Matthew’s Episcopal School</td>
<td>Marlborough School</td>
</tr>
<tr>
<td>Visual Arts</td>
<td>Visual Arts</td>
</tr>
<tr>
<td>Ken Hay</td>
<td>Roxanne Scruggs</td>
</tr>
<tr>
<td>Hillbrook School</td>
<td>St. Mary’s School</td>
</tr>
</tbody>
</table>