



Teachers Are the Center of Education:

Writing, Learning and Leading in the Digital Age



Glossary*

Blog: A blog (short for weblog) is a frequently updated online journal presented in reverse chronological order. Most blogs allow readers to leave comments, making them a powerful social media tool. Blogging software has made it easy for anyone to create their own. Often idiosyncratic, blogs generally reflect the author's personality and serve a wide range of purposes. Increasingly, blogs are also used by organizations as an informal means of reaching the public and a vehicle for two-way communication.

Comic Life: Comic Life is a photo editing tool with a twist. People can use its templates, styles and fonts to arrange their personal snapshots into comic-book-style pages of professional quality, complete with speech balloons.

GarageBand: Apple's GarageBand is simple, easy-to-use software that turns a Mac into a full-featured recording studio. Musicians can record, mix, edit and master their music.

Google Docs: With Google Docs, people can safely use a Web browser to create, store and share documents, spreadsheets and presentations online without downloading any software. When documents are shared, groups can collaborate, making and sharing edits in real time. And because documents are stored online, authors can access their work from any computer. The documents are not public — users control access.

iMovie: Apple's iMovie software transforms video collections into organized, searchable libraries. Mac users can also edit their videos, share them and publish them directly to the Web.

Ning: Ning makes it possible for people to create their own social network with a few clicks and customize their site's look and feel to suit their tastes or even conform to their organization's branding. Network members have many communication options, including profiles, messages and blogs.

Podcast: A podcast is an audio broadcast converted into a digital format suitable for computers and digital music players. Many podcasts are syndicated and updated regularly like blogs.

VoiceThread: At VoiceThread.com, users can collaborate to create VoiceThreads, multimedia slide shows that present images, documents and videos. VoiceThread audiences can leave voice and text comments as they navigate through the slide shows.

Wiki: A wiki is a website that harnesses the knowledge of community members. Users can contribute easily — even if they have no knowledge of Web development or design. Their edits are usually posted directly to the site, without mediation. Wikis may be open for anyone to edit, like Wikipedia, or restricted to a qualified group, like Medpedia. Wikis are often used to power community websites and corporate intranets.

Windows® Movie Maker: Microsoft's Windows Movie Maker software, included with Windows, helps people create, edit and share their home movies. They can also publish them to the Web or burn them onto a DVD.

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Teachers Are the Center of Education:

Writing, Learning and Leading in
the Digital Age

Project Description

This series of reports, *Teachers Are the Center of Education*, was developed to highlight the importance of teachers and the quality of their work. This specific report, a partnership among the College Board, the National Writing Project and Phi Delta Kappa International, shines the spotlight on one aspect of teacher work: the revolutionary use of technology to teach writing skills. Teachers were nominated by the College Board and the National Writing Project and were selected to provide a diverse set of disciplines, locations, kinds of schools and student populations, all committed to excellence in education. The stories of all nine nominated teachers are in the report. In each case, a writer spent a day at each school observing the teacher, and then interviewing him or her and recording their conversation. A photographer also visited each school. The final stories reflect only a small portion of the conversations and observations. School data in each profile were obtained from the National Center for Education Statistics (retrieved January 2010 from <http://nces.ed.gov/>).

Acknowledgments

We want to thank the teachers who are profiled in this report. They could not have been more supportive in allowing us into their classrooms and in sharing their thoughts about their profession, their students, writing, digital learning and American education. Our thanks also to the administrators in these schools for allowing us to visit. We would also like to thank the staffs at the National Writing Project and the College Board who put us in touch with such a distinguished group of teachers and who helped us in defining the shape and scope of this report. Jan Stephens, Beth Oliver and Stephanie Coggin of the College Board created the layout and design of the report. Judy Buchanan, Alan Heaps, Richard Sterling and Fiona Yung helped conceptualize and write the report.

Citation

In citing this report or any of its contents, please use “conceptualized and written by the College Board, the National Writing Project and Phi Delta Kappa International.”



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Foreword

This report, *Writing, Learning and Leading in the Digital Age*, highlights the stories of nine teachers who are quietly but effectively making revolutionary changes in their classrooms. They are joined by colleagues, principals and districts across the country that have begun to embrace both the opportunities and challenges of using an array of digital tools for teaching writing across subject areas.

As William Zinsser states in *On Writing Well*, “The new information age, for all its high-tech gadgetry, is, finally, writing-based.”* Writing has never been more important than in this digital age. It is almost inconceivable to achieve academic success without good writing skills. And, while the fundamentals of good writing remain constant, new forms of writing are quickly evolving. Words are now regularly joined with images and voices.

Unfortunately, many schools and districts are challenged to keep up with these changes. As Paige Cole, a 10th-grade social studies teacher in Winder, Ga., told us, “School doesn’t look like the rest of the world. School looks like school.” This is a tragedy for students.

The good news is that a growing number of teachers and schools have taken it upon themselves to prepare their students for the writing of today and tomorrow. In this report, we highlight the work of teachers who understand the demands of the real world and have created classrooms where their students will be equipped to meet these challenges.

This report is the second installment in *Teachers Are the Center of Education*, a series created to highlight the critical importance of teachers, salute their great work and help amplify their voices. Successful educational reform always needs their active involvement. As the nation looks to rewrite the Elementary and Secondary Education/No Child Left Behind Act, we must be sure to turn to them for advice and counsel.

Gaston Caperton
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Project

Recommendations

Effective teaching with technology requires far more than just adequate hardware and software. It takes commitment, trained personnel, planning, resources and ongoing evaluation.

To meet the challenges of teaching and learning in the digital age:

- Every student, at all levels of education, needs one-to-one access to computers and other mobile devices in the classroom.
- Every teacher, at all levels of education, needs professional development in the effective use of digital tools for teaching and learning, including the use of digital tools to promote writing.
- All schools and districts need a comprehensive information technology policy to ensure that the infrastructure, technical support and resources are available for teaching and learning.





Joel Malley

English Language Arts

Cheektowaga High School, Cheektowaga, N.Y.

No. of Students: 864

Ethnicity of Student Body: American Indian, 1%; African American, 22%; Asian American/Pacific Islander, <1%; Hispanic, 2%; White, 73%

Economically Disadvantaged Students: 32%

State Examination Passage Rate (2008): Reading, 81%; Mathematics, 85%

Joel Malley's subject material may, at times, be texts that are decades and even centuries old, but his teaching methods are pushing modernity's envelope. This English Language Arts teacher is working to help his students gain a true appreciation for the art of writing by using the latest technology in his classes.

"We are preparing kids for a different world — a world where they need to know how to tell compelling stories. And the types of stories that are compelling these days are not just print stories," Malley says, as he lists the numerous tools that today's writers and storytellers have available to them.

Malley is in his eighth year as an English teacher and his second year at Cheektowaga High School in Cheektowaga, N.Y. The school is housed in a two-story building constructed around a courtyard. The building also houses a middle school and the districtwide offices.

A native of this Buffalo suburb that gets its name from the Iroquois and means “land of the crab apples,” Malley teaches five 45-minute periods a day. His classes range from 10th-grade English to Advanced Placement® classes and senior electives. In his large classroom, well lit from the bank of windows that occupies one wall, bookshelves make ample space for the subject’s inspiration, and modern authors rub elbows with the likes of William Shakespeare and Walt Whitman. What’s left of the cheery yellow walls is covered with posters and quotes and a large blackboard that lists Malley’s students and their current project assignments. Student seating is arranged in two inward-facing concentric circles.

On first glance, it is not unlike any traditional classroom setting. But in addition to a ceiling-suspended television, there are sixteen 24-inch Apple computers here, which were purchased in 2009 with grant money from the University of Buffalo to test ways in which computers can best be used in classroom teaching. (Most of the other classes have far fewer computers.)

It’s this balance that Malley finds best suits his style and his students’ needs. Good teaching, he says, requires more than just the savvy use of technology. Quality classroom environments must be student-centered, have low student-to-teacher ratios, include time for communal and individual activities, and create a space that allows creativity and self-awareness to flourish. And for this English teacher, time for traditional writing is important.

“We also work on traditional writing pieces such as explications; we analyze papers and research papers, so that type of writing takes precedence,” he says.

With this as the backdrop, however, digital projects provide a way to enhance and enrich the overall experience.

“It is a way to step away from the more analytical writing and branch out into personal writing while connecting with bigger themes,” Malley says. “They are connecting their personal lives, media and other things that they have read [about] to these bigger themes.”



Skeptical at first, his AP® English students, in addition to other assignments such as interpretation of texts and analytical papers, now enjoy blogging about the texts they read. The list of books for the class includes *The Awakening*, *Ethan Frome*, *Invisible Man*, *Much Ado About Nothing*, *Wuthering Heights*, *Lord of the Flies*, *Frankenstein* and *1984*. On Sundays, students are expected to enter their critical thoughts about themes, what they liked and disliked, and how the topics impact their own

“Video is important because you are combining print with music, speaking, voices, images and the facts. I think the multi-modality and combination of all these different mediums allow for deeper learning.”



lives. Malley uses their excerpts and blogs to guide class discussions on Mondays and Tuesdays.

Now, fully engaged in ways the digital world can affect the world of literature, students are forging ahead, taking Wordsworth and Keats poems and turning them into short films. Images and sounds now connect with venerable texts to create something fresh and dynamic. Additionally, students have created podcasts from personal essays about gender differences in works like Kate Chopin's *The Awakening* and Shakespeare's *Much Ado About Nothing*.

But nowhere is the past and the present more in harmony than in Malley's Mass Media and Film Production senior elective class. With a subject of their own choosing as inspiration, students work individually or in groups over a four-week period to create two-minute documentaries. "Ode to Dad," "Cheerleading Is More than a Sport," "My City Is Buffalo" and "Self-Taught Guitar" have all had their moments in the spotlight. Two videos elicit the most responses. One is about the father of one of the students, who is battling cancer. The other is about the appropriateness of four white students who attended a Halloween party as members of the Jamaican bobsled team with both costumes and darkened skin. After viewing the videos, students take notes and discuss the various aspects, including what they liked and didn't like in such production areas as voice-overs, music, angles and themes.

"When kids make a video about something, they know it a lot better than if they were writing a research paper. There are a lot of decisions involved when they decide how to match up music, sound effects, audio, who to video or what shot to take. There is a deeper embedded knowledge required," he says. "When it is more real, they are more engaged; they are more motivated, but they also try harder."

Malley says that the post-video discussion is an integral part of the course and is designed to help students learn about the peer-review process and practice engaging in it constructively. Everyone comes away with more knowledge and a stronger skill set.

Philosophically, this is the core of how Malley views technology in the classroom: a resource to provide vitality to conventions that never go out of style. Life lessons have not changed, but there are now greater opportunities to teach students to use more tools, combine modes and meet the needs of a changing world.

And although technology should never outshine the basics, Malley has some strong opinions on the need for schools to fully embrace change. At the top of his list is accessibility. Getting classrooms wired and connected for function is critical, he says.

"If you are to have teachers use technology in the classroom, you have to give them access. If you cannot plan on technology being there every day, you will not use it," he maintains, pointing a finger at what he believes is the outdated computer-lab model, where students and teachers must sign up for times to use equipment.



Along those lines, there must be schoolwide support for using technology, he says, which starts on a national level.

“We need more of a national push for technology in education ... a push or encouragement from the people who make decisions, saying that technology is valid and that we need to be doing these things in our classrooms, would force the decision-making bodies in districts nationwide to make the purchase of technology and training a priority.”

Other recommendations include redesigning the traditional school-day schedule to better accommodate multidisciplinary learning; creating a community for teachers to connect with others from outside their own districts and exchange ideas; and offering teacher training to immerse educators in the world of podcasts, videos and blogs, helping them build their technical skill set and confidence at the same time. Malley is careful to point out that his skills in both the teaching of writing and technology were derived through training at the “City Voices, City Visions” project given by the School of Education at the University of Buffalo and the National Writing Project.

In the end, a love of teaching and a love of writing and storytelling trump everything for Malley. He’ll use whatever resources he can implement to best engage his students.

“I am part of this exciting place where my students are creating, and I get to look at their creations in progress and use my expert knowledge to help guide them,” he says. “I am able to influence people and celebrate and encourage the very important concepts of storytelling, persuasion and big important rhetorical ideas.”



Katherine Suyeyasu

History and Language Arts

ASCEND School, Oakland, Calif.

No. of Students: 363

Ethnicity of Student Body: African American, 8%;
Asian American/Pacific Islander, 6%; Hispanic, 80%; White, <1%; Other, 5%

Economically Disadvantaged Students: 81%

State Examination Proficiency Rates: English/Language Arts, 35%; Mathematics, 54%

Making learning both an enjoyable and a valuable experience for her students is the balance Katherine Suyeyasu aims to achieve in her classroom. Merging the two is a method she found worked well in the business world when she ran a small, not-for-profit organization, and now that she's returned to teaching, Suyeyasu is using technology for both practicality and creativity.

Her home for the last seven years now has been the K–8 ASCEND School in the heart of Oakland, Calif. With an 80 percent Latino student population, the majority of Suyeyasu's students spoke Spanish before they spoke English. Serving just 363 students, ASCEND prioritizes teacher-student relationships, and each teacher has the same class for two years. A seventh- and eighth-grade teacher, Suyeyasu has the eighth-grade class this year after teaching them in seventh grade.

"One of the main challenges I grapple with as a teacher is finding a balance between a focus on standards and a focus on engaging students in a love of learning," she says. "If my students leave my classroom having been exposed to the expected content, but not engaged as learners, then I will have done them a disservice."

To accomplish this, Suyeyasu first introduces technology in the way she routinely uses it herself: the computer as a tool for planning and writing. Now, after educating herself on ways to incorporate digital storytelling, she is opening creative doors and helping students appreciate a new way to present traditional writing.

On this particular day in her classroom, where the walls are decorated with posters of literary icons and progress shout-outs, such as “books we have read this year” and students’ written work, the atmosphere is relaxed yet focused. Students work at tables in groups of four or five, composing a first draft of a personal memoir, which is an assignment in Suyeyasu’s series that teaches writing in different genres. They write, exchange papers, read each other’s work, answer questions and help each other revise. In each of Suyeyasu’s classes, students use laptops, which are shared throughout the school and brought to classrooms via a computer cart. When it’s Suyeyasu’s classroom’s turn to use the laptops, students quickly log on and begin writing.

“I use computers as a tool ... and all the work that I give to my students I generate on a computer,” she explains. “But technology is not something that particularly enamors me in any special way beyond its practicality.”

While students are working on their laptops, Suyeyasu circulates to ensure every student is working. She consults, troubleshoots and spends time with each one over the course of the period.

“If my students leave my classroom having been exposed to the expected content, but not engaged as learners, then I will have done them a disservice.”



She admits that using technology can be a challenge, and committing to it means learning how to use it effectively while still meeting district and state content standards.

“There is this initial excitement around technology, but I do not want it to be a surface exposure. If we are going to use technology, I want it to give the students something to grapple with and to encourage depth,” Suyeyasu says.

This makes professional-development workshops and seminars critical, and she takes advantage of them whenever she can. It was at a Bay Area Writing Project conference that she learned about digital storytelling and had the opportunity to experiment with it herself.

“I had a weekend to get material together on the Japanese Internment, because it was part of my family history that I wanted to know more about,” she says. “I was able to interview my aunt and grandpa and collect some images, and within the space of that five-day workshop ... I put together a three-minute film.”

The inspiration took hold immediately, and she began planning for ways to implement the process in her classes.



“The first project we did focused on family history, and it was one of the most rewarding projects, particularly when students’ families were sitting in the room and watching the films. The students had created something that was very meaningful to their families,” she says.

Her new challenge is to find ways to make the exercise even more clearly connected to writing and language arts, which is why she is currently working to include a genre study on memoirs in which her students will publish their memoirs as digital stories.

Because she has a natural bent toward the practical, Suyeyasu thinks a lot about how technology in the classroom helps the learning process: how much it adds, whether its results are quantifiable and whether those results translate to state assessments.

“Ultimately, I see education as access, and I want my students to be able to enter any situation and analyze it in a way that will allow them to participate meaningfully.”

“I have no doubt that the process of making a digital story has the capacity for developing student skills in writing and composition, but how will this be measured?” she says. “We focus on analysis of key written and spoken genres. There is no way that I can teach my students every single genre, but I try to instill a framework for thinking. ... Ultimately, I see

education as access, and I want my students to be able to enter any situation and analyze it in a way that will allow them to participate meaningfully.”

Suyeyasu’s questions echo those raised by many educators today who are balancing conventional standards with a digital age and asking whether such tools are worth the investment of time and resources. While practicality is always on her mind, Suyeyasu also recognizes the importance of students gaining the skills, familiarity and knowledge that they will need in the future.



“It is my hope that the more experience and exposure they have, the more comfortable they will be engaging in the broader world around them,” she says. “I think technology is an important piece of that. I do not want them to be left out because there is something that they are less familiar with.”

If she were writing a memoir of her life, Suyeyasu might describe herself as someone who is blending technology with classroom lessons, merging practicality with creativity and constantly striving for balance. The excitement on her students’ faces and the quality of their work relate a less complicated but no less precise assessment of their teacher: successful.

“If every kid could go through a school experience that would allow them to love learning, then I think we have done our jobs,” Suyeyasu says, conceding her long-term goal. “But I do not think that that is a measure of success right now.”





Paul Epstein

Title I Reading, Writing and Technology Teacher
Ruffner Elementary School, Charleston, W.Va.

No. of Students: 337

Ethnicity of Student Body: African American, 9%;
Asian American/Pacific Islander, 1%; Hispanic, 1%; White, 90%

Economically Disadvantaged Students: 62%

State Examination Proficiency Rates: Reading, 69%; Mathematics, 64%

As a reading, writing and technology teacher who directs Ruffner Elementary School's technology lab, Paul Epstein is a living definition of what it means to teach in the 21st century. And if he has his way, his young students will leave the school with good writing skills, a solid understanding of computers and the resources they offer, and how the two fit together. That's because, to Epstein, technology and writing are equally important and intrinsically linked in today's modern world.

"... Illustrating your writing, learning how to manipulate things — sound, text, images — it is a digital, multimedia world these kids are moving into. They're going to have to and want to participate fully in that multimedia world. And if we can get them ready for it now, it's just going to be that much easier. They're going to have teachers in middle school who are going to say, 'I want a multimedia project using Movie Maker on Christopher Columbus and early colonization. Put it together and e-mail it to me,' and these kids are going to have to do this at home. ... Their boss might say, 'I want a presentation,' or their girlfriend might say, 'If you can't do multimedia, I'm not interested,'" says Epstein.

Ruffner, which serves grades K–5, is housed in a single-story red brick building, recently expanded when two schools merged. It is in the heart of the Appalachians in West Virginia’s capital city, Charleston, where the Elk and the Kanawha Rivers come together. Named a West Virginia School of Excellence in 2008, Ruffner is also a Title I school, meaning it serves a high number of low-income students and receives supplemental funding from the U.S. Department of Education.

Epstein teaches 11 half-hour periods a day and has been at Ruffner for 17 years. Every class in the school visits his technology lab twice a week (the other classrooms in the school have only three or four computers each). He collaborates with teachers on lesson planning and often co-teaches with them, helping the teachers acquire skills as well. Here, with its 26 computers, projector and electronic whiteboard, he teaches writing and a variety of digital skills, such as changing the font; saving and opening files; searching the Internet; downloading images and inserting them into Word documents; creating PowerPoint, Movie Maker and audio files; manipulating images; and creating spreadsheets and graphs. “By the time our students are in the fifth grade, they have those [technological] skills,” he says.



Epstein began his teaching career at a more rural school in West Virginia in 1987. After three years he understood that the teaching of writing “does not come naturally. ... Reading is complex, math is complex, but writing, I think, is even more complex in terms of how to teach. And most teachers avoid it like the plague.” So when it came time to renew his teaching certificate, he began work with the Central West Virginia Writing Project to improve his skills in this area.

This coincided with an aggressive plan from then Governor Gaston Caperton of West Virginia to modernize schools with technology and provide access. Epstein began to consider how writing and technology could work together, especially in education. That work paid off.

“Over time, we became a school that was interested in writing,” he says, pointing to *Ruffner Writes*, the school’s quarterly anthology of student writing. “I want writing to be for every child, not just the ones for whom writing comes easily. My goal is to publish every student by the end of the year. It was a struggle, but I collaborate with the other teachers and have students write in the lab, and sometimes go to classrooms to co-teach writing lessons. We celebrate each publication with an assembly to which I invite parents. ... Most teachers have come to love teaching writing. They understand now. The kids understand. When the teacher says, ‘We’re going to write today,’ the kids don’t put their heads down on the desk,” Epstein says.

“Writing in a digital age is where every person is a moviemaker. Every person can put a script together [and] have images to go with it.”

Epstein has his own methods for helping students get comfortable with words. He encourages them to get their ideas down, then helps with issues such as run-ons, where to place periods

and/or remove “ands,” spelling, and revisions for meaning, word choice or conventions. In the third grade, he and classroom teachers work with students to develop coherent paragraphing, improve word choice and the other traits of good writing, and organize ideas on a topic. But he believes that when students are ready to start writing, they should start. He wants them to understand that writers revise through every stage of the process even if the end product cannot be imagined at the beginning.

Narassa, a fifth-grade student, worked on the following poem in the computer lab, combining writing and images to give a portrait of herself following a common format provided by her classroom teacher.

I am crazy and funny

I wonder if my sister is going to get that job

I hear two birds perching at my window

I see a smiley face above my head

I want to not have homework today

I am crazy and funny

I pretend I am flying above the blue sky

I feel beautiful

I touch the sun’s surface

I worry about my dog

I cry when my cat got put to sleep

I am crazy and funny

I understand two and two is four

I say Santa is real

I dream that there is no school for the rest of my life time

I try to keep my grades up

I hope I do not have to do chores at home

I am crazy and funny





Epstein cites three primary reasons that digital tools enhance teaching and learning, particularly writing. First, because students enjoy working on computers, they are more willing to complete work if a computer is a part of the exercise. Second, computers make critical parts of writing, like editing and revising, far easier and more efficient. And finally, the world of desktop publishing makes the end product look professional, giving students a sense of accomplishment. He says that the “really basic deal is that the kids like it.”

“Writing and using a keyboard are necessary 21st-century skills,” he adds.

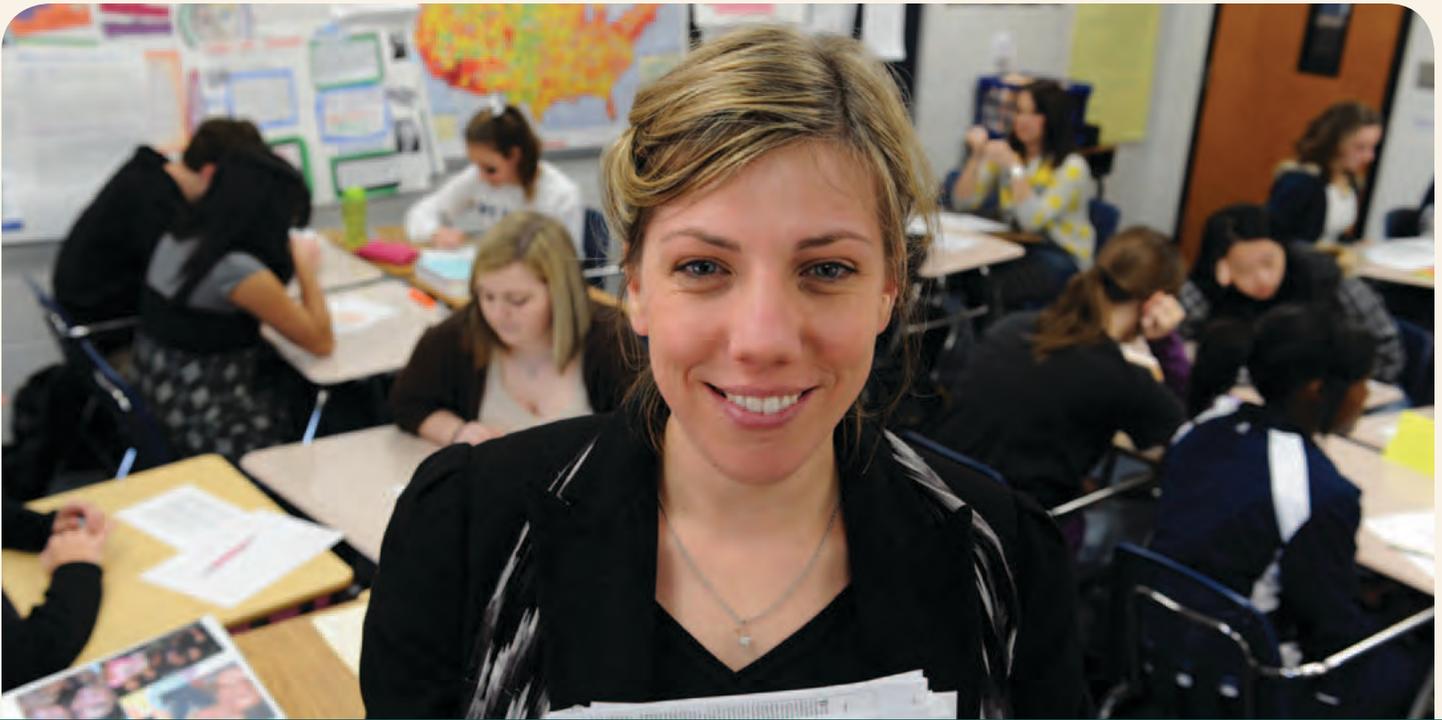
Epstein knows the value of professional development and training for teachers, and he now co-chairs the National Writing Project’s Rural Sites Network and codirects the Central West Virginia Writing Project. He is careful to point out that teachers need to feel that technology is not being forced on them, that they are part of the decision-making process.

“Every computer is a TV station capable of broadcasting to the whole world.”

“They really want good experiences and to become better teachers and to find out what works and how it works — whether it’s in writing or in using technology or anything,” he says. “But they need to know that it’s genuine, and it’s not just something that somebody’s telling them to do. ... When professional development is shoved down our throats, you get resentful, burned-out teachers, even if it resembles good professional development.”

Epstein is very positive about Ruffner, its students and West Virginia as a whole when it comes to merging technology and education. He points to efforts in the 1990s, when the state prioritized technology, and the commitment that has continued.

“Our state and our county are ahead of the curve on technology. There are great things happening in technology here,” he says, referring to the passage of a 2008 excess levy that will spend millions across Kanawha County to put a laptop, projector and electronic whiteboard in every classroom. “And the teachers are getting trained on this [new equipment]. This is going to change education in this county. This is huge. It’s happening in our school next year, and we’re ready.”



Paige Cole

U.S. History/Social Studies

Apalachee High School, Winder, Ga.

No. of Students: 1,521

Ethnicity of Student Body: American Indian, 1%; African American, 14%;
Asian American/Pacific Islander, 7%; Hispanic, 10%; White, 67%

Economically Disadvantaged Students: 38%

State Examination Proficiency Rates: English/Language Arts, 88%; Mathematics, 75%

Paige Cole is not a techie. Though she owns an MP3 player, it sits at home and gathers dust. She only started text messaging earlier this year, and when her mother offered to buy her a portable e-book, Cole asked for the old-fashioned kind with pages instead.

"I don't incorporate technology into my life naturally," she says.

But a visit to Cole's 10th-grade U.S. history class would never reveal her ambivalence to using digital tools. In fact, the latest technology plays an integral role in her teaching, where students use wikis, podcasts and software like GarageBand, iMovie and Comic Life to bring lessons to life.

"It's totally student-driven. They love it," Cole says of the classroom's environment. "They do so well with it, so I just try to facilitate it."

In her sixth year at Apalachee High School, Cole began her teaching career at a Montessori school and an adult education program before accepting a job at the Winder, Ga., high school. With a population of 12,451, Winder enjoys its small-town classification as an outer-ring suburb of Atlanta. When in need of concrete and crowds, residents can access Atlanta with an hour's drive west.



Although Cole does not have a natural affinity for technology, she plunged into the world of blogs, wikis and podcasts in 2007 at a Technology Matters Institute sponsored by the National Writing Project. Realizing that technology is a routine part of her students' lives outside of the classroom, Cole decided to educate herself on ways she could infuse her teaching using similar tools.

"School doesn't look like the rest of the world. School looks like school. But if school is supposed to help us in the rest of the world, shouldn't school look like what's going on in the rest of the world?" she asks.

The institute empowered Cole and another Writing Project colleague to start "the Army of Dorkness," a grassroots tech team supporting teachers interested in incorporating digital tools into their classrooms. Still thriving, the Army of Dorkness supports and encourages the use of technology in classrooms throughout Northeast Georgia.

In 2007, with the help of her Army of Dorkness colleagues, Cole successfully created her first digital-tools-based project, in which students created films tackling issues such as teen pregnancy, depression, drug abuse and the water shortage crisis. This project led to a series of firsts for Cole: She created a blog, where students could post their films and receive feedback from their peers; she learned the intricacies of Movie Maker and working with incompatible video and audio formats; and she figured out ways to manage obstacles like websites blocked by the school's server.

After weeks of challenges, the students, along with their families and friends, were treated to a movie night premiere of their films.

"They were really beautiful, the films, and they dealt with things that were really tricky," Cole says.

This success led Cole to try other digital tools, like wikis, which provide students a forum for online collaboration. She also introduced classes to the Web-based application VoiceThread for interactive stories on cultural integration, and to the publishing program Comic Life, which helps them illustrate historical events as viewed through family experiences.

Podcasting is her newest endeavor, which she will use for a research project that looks back at Ellis Island and interviews immigrants in the Winder community. Like the other digital tools she has learned and used in her classroom, podcasting and the audio editing programs Audacity and GarageBand will be new to her.

"School doesn't look like the rest of the world. School looks like school. But if school is supposed to help us in the rest of the world, shouldn't school look like what's going on in the rest of the world?"

Cole doesn't let the fast pace of technological advances or her steep learning curve deter her. In fact, she finds the collaborative process of learning with and from her students rewarding.

"They teach me. They can quickly figure out better ways and smarter ways to work in (technology)," she says. "It's the whole digital natives thing. They're natives to this."

Each day is divided into four 90-minute blocks and a 25-minute "skinny period" for remediation. Because she stays in the same room all day, her classroom is covered with student work dedicated to the civil rights movement.

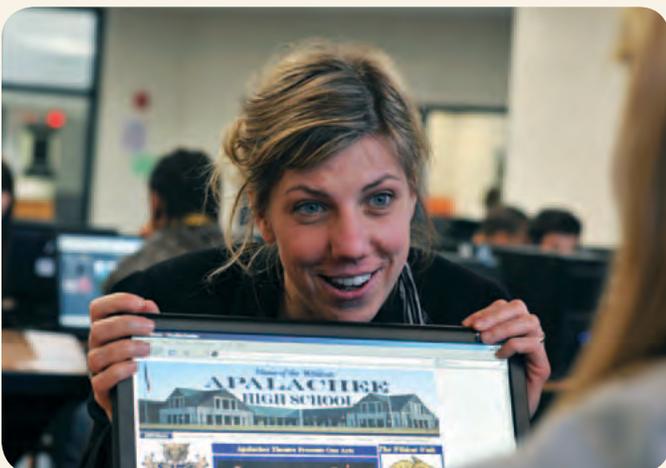
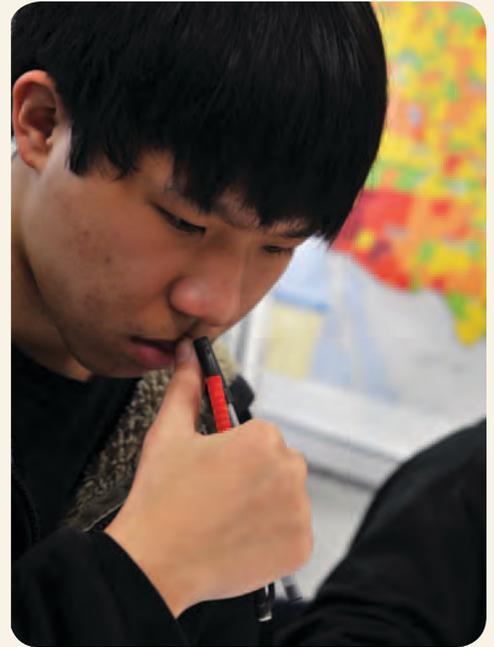
The students in Cole's first class, 10th-grade AP U.S. History, are ready to pack up and move to the library's computer lab as soon as they arrive. They are eager to start working on their digital project of the week, a class newspaper on the Civil War. Each student is assigned one or two jobs: writer, editor, political cartoonist and satirist. One group of students works on a news broadcast script, which will be filmed at the end of the week. All work will be published on the class wiki.

As editors amend the news articles on the wiki, writers can see how their pieces are being edited and add additional information. For example, one student looks up the text to Abraham Lincoln's "spot" resolutions House speech online, while another student uses cross-references online and text resources to fact-check his article.

On this day, students use a style handout, "Asimov's Dirty Dozen Elements of a Standard News Story," which Cole provides. One student is already finished with her story, having looked up the style guide on the Internet the night before.

Cole believes that digital access in school provides a wider range of resources and audiences for the students.

"They get so much more out of [digital learning] than just some of the traditional classroom kind of modes," Cole says. "They have more information at their fingertips. They're processing more, faster."



All her projects, whether taught traditionally or through the incorporation of digital tools, put students' writing skills front and center, Cole says. She has noticed, however, that an online project like this one, in which students are writing, printing and publishing to an interactive audience, has given her students ownership of their work and created motivation for them to improve their composition.

"They're writing more. I feel their writing is really benefiting from this," Cole says. "I have had kids come to me over the last couple days or last week wanting to write on something or wanting to do the political cartoon."



In Cole's second class, a traditional 10th-grade U.S. history class, Motown music plays as students consider the cultural, religious and familial influences on activist Malcolm X. Later in the week, students will apply what they've learned about the civil rights movement into the development of a comic strip using the software Comic Life.

Despite a supportive school administration, Cole does see challenges to a digital movement building in her school. With 22 computers and a student population of approximately 1,600, access is an issue. There is no wireless Internet access in the school, and booking the computers often has to be done two weeks in advance.

Cole says she also has to fight the stigma that digital tools are frivolous — just an extra, fun item in the classroom.

"People see [technology] as an add-on, and I don't see it as an add-on. I see it as an integration, a way to do a lot of the same things, but to do them differently by incorporating technology."

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Incorporating technology into the school day serves the dual purpose of offering helpful boundaries for students who are already online in their daily lives, Cole says, explaining that by using it in the classroom, they get experience with valuable skills like research and how to determine what's reliable information.

For her part, Cole will continue to learn new technologies and pass along her knowledge to other teachers through National Writing Project conferences and the Army of Dorkness. Already, she has seen a change in her teaching style and her students' engagement.

"It makes me put more in their court, do less 'stand and deliver,' and more hands-on projects. It kind of forces that, which is nice. And it opens the door for more creativity and innovations on their part, too," she says. "Students that aren't engaged in any other mode of teaching, of normal classroom life, really come to life in this stuff."



Alejandro Sosa

Social Studies

World Journalism Preparatory: a College Board School, Queens, N.Y.

No. of Students: 445

Ethnicity of Student Body: African American, 9%;
Asian American/Pacific Islander, 18%; Hispanic, 32%; White, 42%

Economically Disadvantaged Students: 23%

State Examination Proficiency Rates: English/Language Arts, 80%; Mathematics, 84%

Alejandro Sosa considers himself a high-end technology user these days, but that has not always been the case. Now in his third year as a teacher, he concedes that initially he was not prepared to harness technology's power for his classroom and that his learning curve was steep. But Sosa was committed to the task and is now a testament to how the digital age is shaping the way new teachers approach their chosen professions.

He teaches 11th-grade AP World History, 11th-grade Global Studies, and 12th-grade Economics and Government at World Journalism Preparatory in Queens, N.Y. Sosa is in the middle of one of the most ethnically diverse communities in the country. More than 20 native languages are represented here, and many students speak two or even three fluently. The school, a small New York City school affiliated with the College Board, serves students in grades 6–12.

Sosa's classroom exudes the level of energy that comes naturally with technology. In addition to the standard wall fare of maps and posters of historical figures, an electronic whiteboard takes center stage at the front of the room. Additionally, a television monitor sits on a rollable stand. Classes are fast-paced and focused, with students hammering away on laptops as they write and



research. Delivered to classes via “laptop carts,” the school-issued computers are an example of World Journalism’s commitment to keeping classes connected, says Sosa, who also credits the school’s principal with helping him get up to speed during his first weeks.

“My first experience with using some of the digital tools as a new teacher was discovering that the students had access to Google Docs and individual Gmail accounts, and I had no idea how to use them in the classroom,” he says, adding that these are tools he now accesses daily.

Now armed with his own website and accompanying calendars, Sosa says he encourages students to visit the site often so that they can note upcoming test dates, how long they have for their projects, when specific assignments are due and if they should be reviewing certain pages in books.



Another program utilized at World Journalism gives students an opportunity to check on their progress in the classroom. “They can see what grade they have received on an essay or test. It’s also a great way to communicate with parents. I can enter in all their grades in maybe 20 minutes and then e-mail all the parents and all the students,” Sosa says.

It’s this combination of using technology to manage, teach and assess that Sosa sees as most beneficial.

From the beginning, Sosa says, he has reached out for Web resources to aid in his own research and lesson plans. In addition to sites that contain information on topics from lesson plans keyed to state assessments, Sosa has been encouraged by the online community of teachers from across the country who are there via LISTSERV.

But how does all this translate for students at World Journalism? Sosa believes that educating himself on the ways technology can be implemented with subtlety and real agility has benefited his students enormously and that they are, in fact, demonstrating real knowledge of complex materials.



One example of this is the portfolio website available at World Journalism that allows students to organize their written work while matching state standards.

“It is a place for students to post their work and to think back about how they are doing,” he says, explaining that the site provides a place for students to describe the assignment, upload their work and write a reflection. And because the site matches students’ work to state standards, they can see what they have mastered and what they still need to work on.

Like other educators who are embracing the digital age, Sosa is coming to terms with the all-important balance of traditional methods with technology. He believes that the classroom is still the place where learning as a group remains vitally important. In Global History, for example, working online makes research easier but does not necessarily guarantee mastery of the material, he says.

“I’m a high-end user of technology now, and I’ve seen what it can do and how it’s changed my entire work life.”

In one assignment, students are asked to compare various world religions over time. Here, students must learn to distinguish between fact and opinion as well as the statements of various authorities and their points of view. Students use interview surveys, learn to gather information, and analyze and write essays (persuasive comparative analysis, document-based questions, change over time and thematic essays) to present

their views. All of these aspects are guided through mostly conventional methods like class discussions, but by utilizing digital tools, Sosa sees a renewed vitality in his students’ writing.

While there’s always the risk of students trying to use such resources as a shortcut, Sosa has experienced more examples of students using the tools to reinforce and bolster their learning.

“I’ve seen cases where students are trying to use the digital tools to get out of reading ... but overall, I see students trying to answer these questions, trying to create a cohesive essay or trying to create a cohesive answer,” he says. “They actually start going back to the text online to do their work. They can work at home, at school, and some even work on their [smartphones]. I’ll see them going back into the text multiple times to try and get a more careful understanding, especially when I leave feedback.”



Technology might have been new to him, but his students have significant experience, Sosa says, adding that most of them have a computer and broadband connection at home, and others have figured out how to sync their calendars with their smartphones.

“Students who discovered how to use this on their own have gotten very excited,” he says.

The school’s support system is critical, Sosa affirms. World Journalism embraces technology in the classroom and offers ongoing professional learning for all faculty; this has proven very helpful to him, personally.

“The fact that we have professional development sessions every single week for two hours is huge,” Sosa says. “It’s teachers teaching teachers, and I can tell you that makes a big difference. For me to stand up there in front of my colleagues and to say something or vice versa, I think there’s much more respect.”

There is little doubt that being surrounded by colleagues who believe firmly in technology’s use has proved a significant incentive for his personal education, Sosa says. Because tools are changing rapidly, schools must implement new technologies with appropriate training and support so that teachers can be confident and know they are using them most effectively. This does not happen by accident.

“As far as professional development goes, I think most professional development should start focusing on how to use these tools,” he says. “I’m a high-end user of technology now, and I’ve seen what it can do and how it’s changed my entire work life.”

“The fact that we have professional development sessions every single week for two hours is huge. It’s teachers teaching teachers, and I can tell you that makes a big difference.”



David Brown

English as a Second Language (ESL)

John H. Webster Elementary School, Philadelphia, Pa.

No. of Students: 929

Ethnicity of Student Body: African American, 34%;
Asian American/Pacific Islander, <1%; Hispanic, 50%; White, 12%; Other, 3%

Economically Disadvantaged Students: 90%

State Examination Proficiency Rates: Reading, 44%; Mathematics, 56%

David Brown has a joke he likes to tell people about his first day as a substitute teacher that helps explain his unconventional career move from computer programming to education.

“I jokingly say to everyone that’s when I fell and hit my head,” he says.

In fact Brown did fall for teaching that day and decided he loved the idea of molding young minds enough to immediately begin work on his teaching certificate and leave “a really good job” with “lots of days off.”

Twelve years later, he’s still glad he made the move.

Brown teaches English to mostly Spanish speakers in second and fourth grades at John H. Webster Elementary School in Philadelphia. Serving more than 900 students, the school is housed in a large, modern three-story building located in the Port Richmond neighborhood of



Philadelphia, a neighborhood of two-story row homes that was once a robust industrial area hailed as one of America's "Workshops of the World."

Today, the "workshop" is Brown's digital-age classroom, where students are connecting with one another and their shared culture by connecting to the wired world.

"I build community in my class, and I make all my kids feel safe and welcome," says Brown, who is embracing the challenge of educating in the 21st century. "I love that every year's different. I love that every day is different. I love that I get to shape young minds."

It was in looking for a way to get his students more involved in the learning process of language that he discovered a strategy known as the "I Am From" poem. Students are encouraged to think about their culture and where they are from — geographically or figuratively — and compose a poem. The poems, he says, help bring the idea of community into the classroom, allowing students to share the things they all have in common: eating, families and activities.

Brown first guided the exercise in 2007, and 50 students wrote and revised poems to be included in a school anthology. Publishing the poems heralded a new enthusiasm for technology in the classroom for Brown and the students, he adds.

"It was one thing to have them write out their work, [but] the kids had a different feeling, a different look on their faces, when they saw their work typed up and printed out. That got me into the technology part."

So with momentum in his corner, Brown added a more complex technical element to the exercise and introduced iMovie for a more comprehensive project that would culminate in a presentation for parents. The video editing software allowed him to merge his background in programming with teaching language.

But first he had to learn the application, which he did at a professional development session offered through the Philadelphia Writing Project. Afterward, Brown worked to incorporate teaching some basic software know-how along with English so that his students got comfortable enhancing their published work with digital tools.

Because he works with young students, however, just getting to the "technology part" took a while.

"You have kids who have never been in front of a laptop. They don't know that you can't bang on one," he explains, adding quickly that while age can pose a hurdle, it's important for teachers to work around it and through it in order to expose their youngest students to these new tools and build their confidence levels.

To help, Brown uses his one classroom computer (affectionately known as "his dinosaur") with each student who wants to translate a poem into

"I would want lawmakers to know that we all need schools of the future, and we needed them five years, ten years ago."

“I would say I’m the pioneer, my co-worker Maria and I. We like to push the envelope. We like to do things that are different and creative. Different strategies to get kids to learn and to enjoy learning. I’m very big on that. I feel the more you enjoy it, the more you’re going to buy into it and do it and retain it. The students will remember that process and remember what they did, which is beneficial, for them. I would like to do more.”

an iMovie. “Everybody is welcome to do it. We don’t exclude anyone,” he says, adding that with only one computer, the whole start-to-finish process takes several weeks.

But the full process, which includes reproducing the poems’ contents into storyboards with pictures, helps students distill the most important elements of their work and forces them to summarize and make choices. Additionally, students practice early public speaking skills, since they also have to talk about what they wrote in the way they want it to be conveyed.

“We talked about feelings. Like, ‘When you see this picture, what does it make you feel like, and what does that sound like?’” he says.

During past projects, Brown has been pleasantly surprised when most of the students choose to do their iMovies completely in English. “They said, ‘I’m learning English. I know English. I want to say it in English.’ And I let them do that, and I was completely fine with it,” Brown says.

In addition to the extra practice they get with speaking English, the students are also increasingly interested in revision, Brown attests.

“My students want to revise, and they want to get it right, because they know this is different. It’s almost like they’re on television, in a sense, because there are pictures and other people are going to see it,” he says, beaming with pride that even the youngest learners are also working to improve their work without prodding from him. “By that point, I don’t have to say anything about revision. They are the ones that bring it up or will stop me and say, ‘No, I need to do it again.’”

After revision, the students were ready to share their hard work with a wider audience: their school and their parents. In Brown’s words, “they loved it ... we played it during the parent-teacher conferences and graduation ceremonies. ... The parents loved that — loved seeing all their children’s productions and the things that they had to say. I think some parents were maybe a bit surprised to hear what their kids had to say and what was important to them. And with the actual book that we created, we let the kids know: ‘Now you’re published authors! They really liked that.’”

Brown says that the success of his iMovie project has inspired him to see more digital learning in the classroom, though there are challenges that hinder these digital projects from becoming more widespread. Like others working to make technology a routine part of the classroom, Brown says accessibility to equipment and professional development for teachers are two significant needs.





"I would like to see 21st-century teaching look like 21st-century teaching, but we're still teaching with 20th-century tools ... and, for the most part, 20th-century ideas," he says, adding that more technology and more professional development on how to use it effectively would help more teachers get on board.

"I've never had a problem with using technology — even technology that I don't know about. Give it to me, and I will figure it out with my kids. They'll get it before I do."

In the end, Brown sees himself as a pioneer who is interested in any resource, any tool, that helps students learn. Technology offers plenty of options for offering different strategies that can make the classroom a thoroughly enjoyable place. And that, in his opinion, is where it's at for teachers and their students.

"I feel like the more you enjoy it, the more you're going to buy into it and do it and retain it. They'll remember that process and remember what they did, which is beneficial."



Erin Wilkey

English

F.L. Schlagle High School, Kansas City, Kan.

No. of Students: 893

Ethnicity of Student Body: African American, 72%;
Asian American/Pacific Islander, 6%; Hispanic, 12%; White, 11%

Economically Disadvantaged Students: 78%

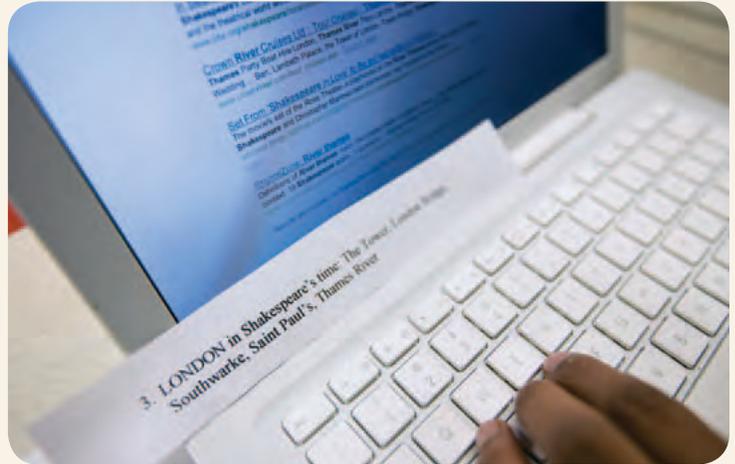
State Examination Proficiency Rates: Reading, 52%; Mathematics, 48%

Erin Wilkey is constantly on the lookout for opportunities to deepen her students' knowledge in order to prepare them for college and careers after graduation.

Wilkey, a third-year teacher, was drawn to the Kansas City, Kan., district because of its urban high school reform efforts and because it had just launched a one-to-one laptop computer program, emphasizing technology in classrooms. At F.L. Schlagle High School, Wilkey teaches students across all four of the school's career-based academies, but the majority of her six classes are in the business technology academy.

One-to-one laptop initiatives vary in their implementation across the country, but at F.L. Schlagle, students check out an Apple MacBook at the beginning of the year. After paying \$50 for insurance — the cost of which can be offset with community service — students have full use of the laptop both in and out of school for the year. At the end of the school year, students return the laptop so it can be upgraded and refurbished over the summer and then returned to the student the next school year.

With a computer in every student's possession, teaching and learning are organized using online resources in all subjects. To help support the faculty in this new endeavor, the school has trained staff to service the computers. The district's technology department will also help teachers and their classes learn new approaches, like podcasting, says Wilkey, explaining that someone will come to the class to get everyone up to speed.



Regular department meetings, where subject-area teachers get together to learn from one another, are also very helpful, explains Wilkey.

"We talk about different ways of teaching different concepts and what we are missing," she says. "We do formative tests so we all use the exact same assessment, and then we look at the results and talk about how we taught the different concepts differently. We focus on learning from each other. . . . Our school made AYP (Adequate Yearly Progress) last year in reading and math."

Placing such an emphasis on digital access puts two primary responsibilities on teachers. First, they are expected to oversee and implement the curriculum in new, interesting and digital ways. Second, they must use online tools to manage and evaluate student learning. Since there are few traditional textbooks at F.L. Schlagle, Wilkey designs lessons using online texts and digital tools. For example, at the beginning of the year, she designed a project on Geoffrey Chaucer that focused on reading skills and how to approach a difficult text.

The multi-week lesson plan guided students through using text features, context clues and structural analysis of words to find their meanings. Wilkey found texts online in which the translation only modernized the spelling, leaving in all the Middle English syntax and vocabulary.

"I found an audio of someone reading the *Canterbury Tales* prologue introduction in Middle English, so I played that audio first. My students tried to pick out familiar words. We then worked through the introduction and first character as a class, annotating the text, listening to the audio again to see if we understood more of the content. I assigned each student a character to profile. They 'translated' the text and summarized, before presenting their different characters to the whole class."

Teaching students to do research using online tools is the other main focus of her instruction, Wilkey says, explaining that she introduced spreadsheet software to the students as a way to organize research.

"Just as they would with note cards, each row of the spreadsheet includes the piece of research, source number, a paraphrase, a connecting statement and a subtopic," she explains. "Once they have the research completed, they can sort the notes according to subtopic as a way to organize the paper."

Building on these research skills, Wilkey has assigned a multi-genre research project for her 12th-graders, using a range of digital tools.

"The district has a technology department . . . and if you want to know how to podcast they will send someone out to teach your class how to do a podcast."

"It's one of our academy goals that all students use technology tools for different projects," she says. "My seniors will write texts using different types of writing — persuasive, personal, informative, creative and reflective. I created a spreadsheet for the students to keep their notes, writing and documents on Google Docs. I have them divided into response groups. And they're sharing with their group in the online space."

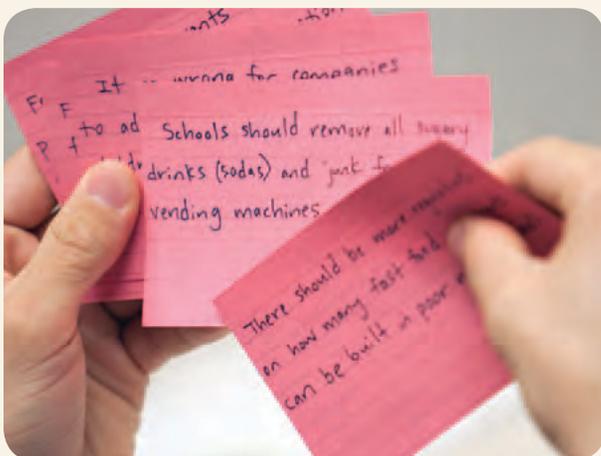


This year's senior project focuses on imagining a school reunion 10 years from now. Students are asked to imagine they are proposing a location for their reunion to the student council. To add to the fun, Wilkey has "arranged" that an F.L. Schlagle classmate has made significant money and has offered to fly attendees anywhere in the world using his own airline. Students must create a multi-genre proposal that highlights the city or location of their choice and describes their lives after graduation.

For each aspect of the project, students must conduct research using online sources, including books, newspapers, magazines and online databases. For the essay, students need to persuade their classmates about why their city or location is best. For the personal letter, they must write to a former classmate and provide information about the college or career training they received and their current jobs.

Though the laptop program extends her classroom hours from the normal 7 a.m. to 3 p.m. day, it also provides a window into her students' work habits and the ability to help at all hours. "If they have a question at eight in the evening, they'll e-mail me if they have access to the Internet and I can respond," says Wilkey.

The multi-genre products also offer students the opportunity to use the digital tools, she says, describing a podcast project she created for her students in which they record an informal reflection using GarageBand. Wilkey's directions state: "You should write out some notes before you record yourself. Have you changed directions at all while completing the research? Is there something that has been particularly challenging? Has anything surprised you? What do you think about Google Docs? Create a timeline for yourself of the time remaining for the project. Set goals so that you will be able to turn in the project on time.



"I think the activity helped them mentally map out a fairly large project. Also, they have the option to create a few pieces using any tool they choose, including iMovie, GarageBand or Comic Life," Wilkey says.

Despite the many advantages for students and teachers, there are also ongoing challenges in implementing the laptop program. Creating a school in which all students use laptops in all their classes requires new management strategies on the part of the faculty, including developing an acceptable use policy for students and for staff. There have been some bumps along the way, but the vast majority of the students use their laptops appropriately.



Access to the Internet through the district's in-school wireless network can open the entire world of information and ideas to the students, but Internet filtering also makes teaching digital literacy skills difficult at times. "We're starting an inquiry research project with my juniors. And just yesterday I had them using a tutorial program to review and decide whether a source is credible or not. But every example I selected for a noncredible source was blocked."

Teaching digital literacy requires time, and Wilkey is concerned that even for her seniors, the three years of the laptop initiative have not provided enough time. "I think that students still need support in learning the literacy of the Internet. I find that sometimes when they're on a website they have trouble distinguishing between one column that is advertising and another column that contains the actual content they need. I think, 'Oh, my gosh, we need to talk about this.' But I'm appreciative that they have these tools and that I'm constantly able to monitor and see what skills they're lacking as far as technology and literacy..."

Access to other resources for students is also an issue. Wilkey has written two small grants to purchase books for her classroom. If she could make one change in education policy it would be to try and bring more resources to urban schools. "I would definitely try and balance things out. ... If I need a book I'd like to be able to get copies and check them out to my students. Right now, if we're reading a book I have 30 copies for my 120 students. And so they can't take them home. ..."

Wilkey's goal is to help all her students achieve their goals and return for that F.L. Schlagle 2020 reunion as successful professionals — maybe even so successful they can afford to fly classmates to an exotic location. Prosperity, however, is not the end goal as much as it is helping students connect with school and creating a lifelong interest in learning. If digital tools can help accomplish that, then she's all for it.

"I just want to be able to show them, all that's out there" she says.



Jennifer Woollven and Alina Adonyi

9th- and 11th-Grade English

Eastside Memorial Green Tech High School, Austin, Texas

No. of Students: 659

Ethnicity of Student Body: African American, 15%;
Hispanic, 83%; White, 1%

Economically Disadvantaged Students: 80%

State Examination Proficiency Rates: Reading, 66%; Mathematics, 36%

When a new technology-focused high school opened in Austin, Texas, Alina Adonyi and Jennifer Woollven jumped at the chance to work there. They had each been teaching 10 years in Austin and knew one another through their involvement with the Central Texas Writing Project at Texas State University.

Green Tech High School is one of more than 40 schools in the national New Tech Network. Founded in Napa, Calif., in 1996, the New Tech Network creates high schools that take an innovative approach toward integrating technology into a project-based learning environment. Green Tech is a science, math, engineering and technology school with a focus on environmental themes. It is one of three small schools located on the same campus.

Before joining Green Tech as English teachers, Adonyi, who teaches 11th grade, and Woollven, who teaches ninth grade, worked together at an Austin middle school, which feeds Green Tech High. Both women have master's degrees in educational technology and are excited to be part of a new school environment where the principal and other faculty members are focused on the



same goals. That strikes a chord with Adonyi, who says that in her previous schools she thought, “I teach here. At Green Tech High, I feel like I’m really part of a movement.”

And that “movement” can best be summed up in these words: full access to technology in the classroom.

For example, at the beginning of the 2009-11 school year, each student received a netbook. Though some were concerned that students might not take the responsibility seriously, initial fears that the students might forget, break or lose the computers were quickly assuaged.

“It’s their gate to the world. I mean, they love these things. It’s their music. It’s everything,” Woollven says.

Students begin a typical period by logging in to their school’s online project-based management system. From this portal they can find their personalized agenda for the day and a project calendar with links to assignments. This is not the conventional classroom environment established in the 20th century, and teachers’ roles reflect some new classroom practices.

Adonyi’s and Woollven’s classrooms are spacious with tables and chairs, wide-screen display projectors and several desktop computers in each room. The walls are covered with student work and posters, inviting students to think about the content of what they are studying. The school curriculum integrates project-based learning with the Texas State Standards. It’s the teachers’ job to design projects that connect all aspects of the work. In this way, they benefit from being a part of two networks: the network of New Tech schools and the National Writing Project.

“At Green Tech High,
I feel like I’m really part of a
movement.”

— **Alina Adonyi**

This year, Woollven and Adonyi designed a curriculum sequence integrating “Why I Write” personal essays with the creation of public service announcements after researching a topic. In January, Adonyi’s 11th-graders completed a digital storytelling project on a social issue and began the research for the public service announcement component. Their intended audience is students at Austin Community College, which is also where they will present their finished pieces later in the spring. Students shared their final digital stories with their Green Tech classmates, and Adonyi led the discussion on each completed project with both a comment about the quality of a particular aspect of the piece and a request for a written response to each presenter. The topics included neighborhood violence, immigration, civil rights, abortion, environmental concerns, public health and bullying.

Meanwhile, down the hall in Woollven’s class, ninth-graders completed 30 minutes of silent reading time. On Mondays and Thursdays, her students log on to a website on which she has set up a group for the class.

“It’s essentially a Facebook for book lovers where we have a discussion board. So I’ll post a topic for discussion, and they can write about what they’ve just read. On Friday, we will shift to an actual face-to-face discussion in class with students who are reading the same book.”

After reading, students begin working on their current project, research on a social justice issue. Their first task is to write a letter to the editor. After completing individual work, they will work together in teams, writing and designing a children's book.

"They have a choice of either illustrating by hand or using Comic Life, which is a program that they have just learned in another class on computer applications," Woollven says.



When the children's books are completed, Woollven plans to share them with classes at the nearby elementary school. These opportunities to create and design projects for real audiences are part of the goals of the school.

"I think that our approach here, where we're looking more at skills that are broader that students will need in the future, like being able to collaborate with others, solve problems and communicate, is a step in the right direction," she says. "We have to realize that things are changing and that students are going to have different sorts of jobs."

Digital tools have "immensely" changed her practice as a teacher, she has observed.

"I can get feedback to students so much faster and so much more authentically. Whereas before, I lost so many opportunities to say ... 'what you wrote here, I love this, or I don't like this,' or 'what did you think about this?' There used to be stacks of papers, and I just couldn't give enough feedback on all of them," Woollven remembers.

Using technology as a way to collaborate is also working to improve students' problem-solving skills, agree Woollven and Adonyi.

"They are becoming better thinkers and they're better able to solve problems. So ... when they get to those (state assessment tests), they are better able to go through and really think critically and logically," Adonyi says.

In addition to the state tests that monitor progress, Green Tech develops its own learning outcomes that align with state standards. They include assessments in written and oral communication, critical thinking, and digital literacy.

"Because we're Green Tech High, we also have environmental and civic engagement outcomes. Our students need to be able to show in their portfolios how they've grown in each of these areas," Woollven says.

Helping students learn to navigate in this environment places new demands on the faculty.

"I think our biggest challenge is how to help the students get to a place where they can responsibly multitask and manage their time," Woollven says. "Another is helping them discern the credibility of websites. I realized after our second project that students were citing Google when listing where they had gathered information. Google's actually not a source. It is the engine to get to the source. So helping them understand that, helping them to be able to get critical sources, is really important."

What's exciting to Woollven is watching changes that have taken place in her high school freshmen since the beginning of the year.



“They’re becoming more responsible. At the start of the school year, there were lots of questions: ‘What are we doing today?’ ‘What’s my grade?’ And teachers constantly replied, ‘Well, look on the agenda. Look at your grade book. You tell us,’” Woollven says.

And the online management system supports students taking responsibility and helps them with their group work, adds Adonyi. “Students can’t say, ‘Oh, I lost that,’ or ‘I can’t find my jump drive.’ The online system really helps the students be accountable.”

Some students at Green Tech are learning English as a second language, and Adonyi sees particular strengths in using technology to support this effort. She can empathize with these students since she was once like them, learning English after emigrating from Israel.

In her English class, Adonyi’s students work collaboratively in an online Ning. Using this online space allows the English Language Learners (ELL) students to work through conversational skills in a context that develops confidence and allows the students to emulate patterns of speech.

“They’re able to model, because they’re able to see the norm, and I think that that’s really crucial,” she says.

For both Woollven and Adonyi, new teaching methods that integrate technology and highlight its function in everyday life are a wonderful reason to teach in the 21st century.

“One of the most important parts of going digital is saying to the students, ‘Here you go. It’s your turn. Teach me.’ And to be comfortable with that is really crucial,” Adonyi says. “And then to say, ‘Here are my expectations. I love literature. I’m going to teach you how to try to love it.’ I think the digital aspect of things really helps with establishing true symbiosis. To me, that is absolutely critical.”

“We have to realize that things are changing and that students are going to have different sorts of jobs.”

— **Jennifer Woollven**

The reasons for writing this report are simple:

To highlight the critical importance of teachers, salute their great work and recognize that they stand at the center of education.



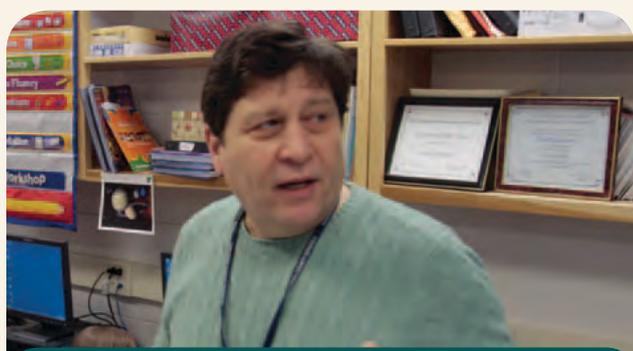
“You can be a great teacher with a piece of chalk and a chalkboard; you can be a great teacher of content. But I do not know if you can be a great teacher of skills without using technology.”

— **Joel Malley**



“I see education as access. I want my students to be able to enter any situation and analyze it in a way that will allow them to participate meaningfully.”

— **Katherine Suyeyasu**



“When you do something on the computer and fix a mistake, there’s no erasure mark. It doesn’t look ugly. It looks perfect. When you spell things incorrectly, you don’t have to copy it over. It is writing without tears.”

— **Paul Epstein**



“[Using digital tools] started with being able to have my kids publish their work. ... The kids had a different feeling, a different look on their faces when they saw their work typed up and printed out.”

— **David Brown**



“I’m a high-end user of technology now. I’ve seen what it can do and how it’s changed my entire work life.”

— **Alejandro Sosa**



“You can get computers and use them poorly. You can use them as worksheets and you can use them as test prep ... Or you can explore true digital literacy, which is a whole other animal.”

— **Paige Cole**



“If [my students] don’t have [Internet] access at home, they’ll walk to the corner and find it.”

— **Erin Wilkey**



“We have to realize that things are changing and that students are going to have different sorts of jobs.”

— **Jennifer Woollven**

“At Green Tech High, I feel like I’m really part of a movement.”

— **Alina Adonyi**

The College Board

The College Board is a not-for-profit membership association whose mission is to connect students to college success and opportunity. Founded in 1900, the College Board is composed of more than 5,700 schools, colleges, universities and other educational organizations. Each year, the College Board serves seven million students and their parents, 23,000 high schools, and 3,800 colleges through major programs and services in college readiness, college admission, guidance, assessment, financial aid and enrollment. Among its widely recognized programs are the SAT[®], the PSAT/NMSQT[®], the Advanced Placement Program[®] (AP[®]), SpringBoard[®] and ACCUPLACER[®]. The College Board is committed to the principles of excellence and equity, and that commitment is embodied in all of its programs, services, activities and concerns.

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The National Writing Project

The National Writing Project (NWP) is a nationwide network of educators working together to improve the teaching of writing in the nation's schools and in other settings. NWP provides high-quality professional development programs to teachers in a variety of disciplines and at all levels, from early childhood through university. Founded in 1974 at the University of California, Berkeley, NWP today is a network of more than 200 university-based sites located in all fifty states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. Co-directed by faculty from the local university and K-12 schools, each NWP site develops a leadership cadre of teachers through an invitational summer institute, and designs and delivers customized professional development programs for local schools, districts, and higher education institutions. NWP sites serve more than 130,000 participants annually, reaching millions of students. For more information, please visit www.nwp.org.

PDK

Phi Delta Kappa International is the premier professional association for educators. For more than 100 years, it has focused its work on the tenets of service, research and leadership.

PDK is one of the largest education associations and has more than 35,000 members, including teachers, principals, superintendents, and higher education faculty and administrators. PDK publishes the highly regarded *Phi Delta Kappan*, the No. 1 education policy magazine, and sponsors the annual PDK/Gallup poll of the public's attitudes toward public schools.

PDK is the sole sponsor of the Future Educators Association (FEA), the only national and international professional organization that provides students who are interested in education-related careers with activities and materials that allow them to explore the teaching profession in a variety of ways.

More than 250 local PDK chapters — most located on college campuses — give PDK members a unique opportunity to network with other like-minded educators.

PDK's mission is to support education, particularly public education, as the cornerstone of democracy. Its vision is to be the experts in cultivating great educators for tomorrow while continuing to ensure high-quality education for today.



The College Board Advocacy & Policy Center was established to help transform education in America. Guided by the College Board's principles of excellence and equity in education, we work to ensure that students from all backgrounds have the opportunity to succeed in college and beyond. We make critical connections between policy, research and real-world practice to develop innovative solutions to the most pressing challenges in education today.

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