Teaching in the 21st Century

A Review of the Issues and Changing Models in the Teaching Profession
EXECUTIVE SUMMARY

AS EDUCATIONAL LEADERS, CLASSROOM TEACHERS, STUDENTS AND PARENTS WILL AGREE, 21ST CENTURY TEACHING CARRIES WITH IT A COMPLICATED MIX OF CHALLENGES AND OPPORTUNITIES. CHALLENGES INCLUDE THE ISSUES OF TEACHER TURNOVER, ACCOUNTABILITY, CHANGING STUDENT POPULATIONS AND STUDENT EXPECTATIONS, MOUNTING BUDGET PRESSURES, AND INTENSE DEMAND TO BUILD STUDENTS’ 21ST CENTURY SKILLS.

On the opportunity side of the equation, the growing capacity, capability, and power of technology-based tools and resources give the education community the ability to address these challenges successfully. With strategic use of 21st century learning tools, educational institutions can provide the supportive productive environment educators need to reach, teach, and support each student’s learning needs and potential.
TEACHING IN THE 21ST CENTURY: THE LANDSCAPE

TEACHER TURNOVER: A HEFTY PRICE TAG

$7.3 billion. That’s the estimated annual cost of teacher turnover in U.S. schools according to a recent policy brief published by the National Commission on Teaching and America’s Future (NCTAF). And in a recent cost study, NCTAF estimates that the cost of losing teachers in their first three years of employment ranges from $4,300 in rural schools to $17,800 in large urban districts. While consumer, business and professional media cover the student drop-out dilemma in our nation’s schools, another, equally alarming problem is gaining momentum. Teachers are leaving the profession at a rate that has grown by more than 50% over the past 15 years. Each year 16.8% of our nation’s teachers leave, and in urban schools, that number spikes to 20%.¹

THE ADMINISTRATIVE CHALLENGE

As administrators in districts will attest, the hard costs connected to recruiting, hiring, and training new teachers are just part of the picture. Teacher quality and student achievement are “at risk” in this high-turnover environment as well. Under the provisions of the federal No Child Left Behind legislation, teachers are also required to meet requirements for “highly qualified status” which encompasses content area knowledge, coursework, and instructional practice. Thanks to new data warehousing and analytical innovations, qualification is just one part of the way districts and their stakeholders are evaluating teachers. Teachers are now often evaluated based on student achievement and teaching practice, supporting the belief that highly qualified teachers also need to be highly effective. For many, this a more important measure than coursework, years of experience, and other factors. Highly effective teaching, however, is constantly changing as student demographics, social learning, and education technology continues to change the landscape.
With all of these pressures in play, administrators find themselves in a constant state of “rebuilding the staff.” The impacts are particularly profound in urban and rural schools in greatest need of highly qualified, highly effective teachers. Why? Oftentimes, many schools have high numbers of teachers who may lack experience and qualification. Or teachers who must teach multiple subjects are required to demonstrate subject matter expertise in each. In many cases, teachers often do not receive additional professional development or support when assigned to the most challenging environments. In many instances, there is simply a shortage of teachers who meet certification requirements.

**TEACHERS UNDER PRESSURE**

While administrators grapple with the high costs of turnover, recruiting and retention, teachers are dealing with their own unique sets of challenges. Meeting more stringent licensure requirements, added professional development demands, and increasingly rigorous course content often add emotional and professional stress to teachers’ lives. The added pressures of the accountability movement requirements such as increased reporting, additional testing, differentiating instruction for diverse learners and involvement in their school communities, add time to their already full schedules. Parental expectations for thorough communications and rapid response to questions and requests add greater demands to their overflowing workdays.

And while teachers generally are committed to their students, enjoy their work, and are devoted to their profession and their content areas, 21st century students come to school with very different sets of experiences and expectations than their 20th century counterparts. These tech-savvy, multi-media, multi-tasking digital natives navigate everyday life far differently than many of their digital immigrant teachers. Connecting with them, relating to them, and motivating them now requires teachers who are open to new ways of teaching and supporting students.

Given these challenges, teachers who are new to the profession often find themselves frustrated, disappointed, and unsupported. They leave their schools and often the profession and the cycle continues.

**STUDENTS NEED MORE**

Students across the achievement and socioeconomic spectrum need and deserve motivating, supportive instructional environments, engaging content, and the opportunity to learn in settings that support collaboration with peers, teachers, and the larger world community. Students today live digitally every day. They use the Internet, text messaging, social networking, and multimedia fluidly in their lives outside of school and they expect a parallel level of technology opportunity in their academic lives. There is a disconnect between the way students live and the way they learn, and student engagement ultimately suffers. Closing this gap is a challenge for our current school systems.
THE GENERATION GAP...REVISITED

Thomas G. Carroll, president of the National Commission on Teaching and America’s Future reports that a third of the nation’s teachers are baby boomers who are wedded to a stand-and-deliver teaching process. Carroll stated, “We have a new group of young Generation Y teachers. They’re in their 20’s and while they often share the values of the [baby] boomers they tend to be very idealistic and very oriented to teamwork, collaboration, constant communication, multi-tasking, and technology. These young teachers find themselves in classrooms and schools that don’t match their vision or expectations. Couple that with ‘boomer’ teachers who are being pushed into perhaps uncomfortable technology environments and you have some dissatisfaction at both ends of the spectrum.”

Currently, the baby boomers and teaching veterans are retiring, representing nearly one-third of the teaching workforce. At the same time, 20% of all new teachers are leaving [the profession] as well. Carroll notes that American education will need to consider new staffing models in which “learning teams” representing cross-generational teaching teams address students’ learning needs and opportunities.

TEACHER QUALITY & STUDENT ACHIEVEMENT: THE PROVEN CONNECTION

Among education’s many stakeholders, one point of agreement remains constant. As reported in the U.S. Department of Education’s research including the 2003 report Teacher Quality: Understanding the Effects of Teacher Attributes shows that “high quality teachers are the most important factor in a child’s education.” In fact, this same report notes that teachers are the single most important factor in student achievement. Lower achieving students are most likely to benefit from improvements in teacher effectiveness. In addition, good teachers can make a difference of one grade-level equivalent in annual achievement gains. Teacher quality continues to rank as the most reliable predictor of student achievement.

PUTTING THE PIECES TOGETHER...IN NEW WAYS

When the teacher retention outlook combines with the proven importance of teacher quality and efficacy, it’s clear that systemic reform initiatives must encompass programs, strategies, 21st century learning tools and commitments to create supportive, productive environments for educators. Said NCTAF’s Thomas Carroll, “With NCLB, we have many of the right ‘pressure points’—most notably accountability for each student’s learning and knowing how each teacher is performing. When many district leaders examined the retention issue, they used to think what they had was simply a supply problem. Now, they’re recognizing that it’s not just about retention, it’s retention of effective teachers.” According to Carroll, there is a new role and new need for tools and strategies to help teachers become not just qualified, but effective. He states, “We need a continuous process of development for teachers in schools so that each teacher becomes as effective as possible. There’s a more systemic process in schools that school leaders can use to empower teachers to manage their teaching.” Carroll also noted that this systemic process, when supported by appropriate technology, can harness the collective wisdom of teachers, adding quality, continuity, and collaboration to the entire approach to teacher training, development, and retention.
NEW MODELS AND NEW OPPORTUNITIES TAKING SHAPE IN JEFFERSON COUNTY, COLORADO

John Canuel, Director of Technology, Division of Instruction, for Jefferson County Schools in Colorado, provides a working example of the systemic process described by NCTAF’s Thomas Carroll. Canuel described the district’s model saying, “No matter what else we put in place, it’s what a teacher does and the tools and resources we give a teacher that makes them effective. With our model, we focus on four main areas for supporting teachers. Teachers need **curriculum** and we define that as the key essential learning that students need to know throughout their career and that tie back to standards, benchmarks, and expectations. Next is assessment. We embrace and surround our teachers with effective **assessment tools** so they know not only what students need to know…but verify that they [students] know it. We also emphasize clear **instructional practices** and clear strategies for differentiation, reaching every student. Lastly, we focus on **teacher leadership**, so teachers truly understand the big picture about where students are going.”

CONTINUOUS PROFESSIONAL DEVELOPMENT GOES ONLINE

Jefferson County, like other districts throughout the United States, sought to develop a technology-enabled approach that would provide continuous, on-going professional development. Among their goals were providing educators with more convenient “anywhere, anytime” access to learning materials and online courses, offering more personalized professional learning opportunities, and creating online communities that would support individual needs and the sharing of best practices.

Canuel stated that the district used the four priorities noted above as the conceptual foundation for launching new technology-based educational tools and resources for teachers. In addition, the district’s leadership noted that teachers, young and veteran alike, were struggling with 21st century digital skills. As the district built its strategic plans, leadership challenged itself to “…think more comprehensively about how to step into a digital learning environment.”

EDUCATOR COMMUNITIES OF PRACTICE

Professional development was among the district’s first reform targets. Notes Canuel, “We have expanded the traditional professional development model. We believe that quality professional development is much more time sensitive and closer to the school. We use many site-based models for staff development and we’ve done a great deal of work around communities of practice, which, we’ve discovered, can be incredibly powerful.” These online communities provide discussion boards and give the district’s teachers the opportunity to share best practices. In Jefferson County, professional learning communities are now thriving both in and across the district’s 150 school buildings. The district introduced traditional online courses and discovered that educators genuinely valued the ability to interact with their colleagues.
From there, momentum began to build. Canuel notes that quite naturally, teachers are simultaneous members of multiple communities—within their own buildings, by grade level, by subject matter and more. Using a platform that integrates online course and content delivery and community, the district supports these multiple professional learning communities with a growing collection of custom resources and tools. “We’ve used technology-based tools to create a portal/professional learning community system, so teachers now receive customized delivery of information, around our four key priorities.”

As an example, first grade teachers receive specific first grade information supporting curriculum, instructional practice, and other relevant communication. Canuel reports that this new system empowers first grade teachers to interact and share with one another, supporting informal professional development among colleagues. The district’s first grade teachers are sharing strategies and resources more fluidly and across building boundaries. The new technology infrastructure supports teachers with a constant community presence, in which content, curriculum and professional practice are integrated and immediately accessible.

UNEXPECTED BENEFITS

Jefferson County’s Canuel noted that like districts everywhere, teacher workload was a difficult issue. When the new community portal/professional learning community system was introduced, the district expected some resistance from faculty based on the need for training and the time required to learn the new system. In both formal and informal surveys, the district has experienced unprecedented acceptance. According to Canuel, teachers are enthusiastic about the new tools, resources, and growing community. He stated, “Our teachers are more effective than they were, they are much more skilled, they have better knowledge, and we are starting to see that our teachers are more engaged.” He also noted that students now see their teachers modeling effective, productive use of technology and students perceive that teachers are “…engaging in their world.” Canuel also reported anecdotally that the new system is supporting teacher recruiting more effectively. He cites examples in which prospective recruits notice that the district is using “…the same kind of tools I’m used to using in college.” It’s tangible evidence that the district supports its teachers with quality resources and tools when new teachers come on board. In fact, all first and second year teachers in Jefferson County have their own community within the system and new teachers can see that they will have a digital support network when they begin their careers.

SUPPORTING EDUCATORS IN BROWARD COUNTY, FLORIDA

Laurie Jones, M.S., Systems Analyst with The School Board of Broward County, Florida echoes the Jefferson County experience and points out that a critical component of that district’s commitment to provide a productive, supportive environment focuses on teacher induction. The district’s New Teacher Academy begins in an online-supported environment and then incorporates a hybrid model that includes both face-to-face professional development sessions and strong community-building support.

“We have found that the technology infrastructure we have in place has been essential in saving us time and money and keeping teachers in the classroom.”

Laurie Jones M.S.
Systems Analyst
The School Board of Broward County,
SAVING TIME AND MONEY WITH ONLINE PROFESSIONAL DEVELOPMENT

Jones also noted, “In Broward County, we have concentrated on building a strong online course component as part of our professional development and teacher efficacy initiatives. We have found that the technology infrastructure we have in place has been essential in saving us time and money and keeping teachers in the classroom.” Jones also pointed out that the district’s professional development course completion rate has increased, as a result of providing additional courses online, since teachers can access their courses anytime or anywhere. Jones added that this new approach to professional development is increasing levels of job satisfaction and teachers are reporting a new eagerness to begin integrating online learning in their own teaching as well. Additionally, the technology supports better management of the county’s professional development program and is enabling administrators to continually measure and evaluate the impacts of its many professional development initiatives.

ENABLING EFFECTIVE PROFESSIONAL DEVELOPMENT WITH TECHNOLOGY

NCTAF’s Thomas Carroll offers important insights with regard to the role of 21st century technology tools and learning environments and their impacts on creating and sustaining teacher quality and efficacy. Carroll points out that embedded professional development can and should support induction and mentoring. In addition, technology now makes it possible to build communities focused on instruction and curriculum relevance and coherence. Additionally, 21st century tools allow teachers to communicate effectively with parents and provide teachers with the ability to give students immediate feedback about how they’re performing. According to Carroll, this directly affects teacher retention and most importantly results in improved teaching quality and student learning.

IMPACTING TEACHER RETENTION

When districts support professional development programs with technology-based tools, the vision of job-embedded, on-demand teacher support becomes realistic. With effective learning management platforms, all teachers have the opportunity to expand access to professional development, reflect on their practice, and communicate with others, and the districts have tools to manage and track teachers’ engagement and progress. In the contemporary teaching and learning environment, every teacher needs to be effective. This demands the tools and resources required to improve practice continuously.

Carroll makes a direct connection between effective technology tools and improved teacher retention and efficacy particularly when these tools make it easier for teachers to monitor their own and students’ performance. He states, “Turnover is often driven by a sense of efficacy. If teachers know they are doing a good job and making a difference with students, they are less likely to leave. When you can reduce turnover, you can start to improve effectiveness over time.”

TEACHER-TO-TEACHER COLLABORATION

Technology-based collaboration and collaborative tools are also part of the emerging vision. Collaborative practice gives teachers the ability to learn from one another, benefit from self- and peer-assessment, and to plan and build instructional strategies together. Young teachers often report that they are isolated in their first-year teaching, working in a “sink or swim” environment. Learning, including learning to teach, is a social, collaborative process and according to NCTAF’s Thomas Carroll, it’s logical then to tap the power of technology to support teacher-to-teacher collaboration across a building, a district or a wider network of peers. That scaffolds teacher retention and accelerates new teachers toward proficiency and effectiveness.
SHIFTING THE PARADIGM...FROM TEACHING TO LEARNING

Laurie Jones from Broward County advises colleagues to follow established best practices when launching an online professional development and community initiative. She adds that research with neighboring colleges and other schools using online learning and community tools provides a valuable frame of reference as well. Jefferson County School district’s John Canuel advises school leaders to start their planning with core instructional goals, making sure to put technology “in service” to meet those goals, all the while remaining open to the new possibilities that technology can offer.

NCTAF’s Thomas Carroll summarizes by saying that district and teacher leadership teams must work together to accurately assess their current teaching models and investigating new models that will address current issues and challenges, including the new “learning team” mentality in which the entire school team works to deliver better academic performance. Cohesive, comprehensive and integrated human resource, instructional, and professional development strategies are the driving force and technology tools and infrastructure are a core part of the foundation.

For centuries, schools have been structured and perceived as places for teaching. The challenge in 21st century is restructuring schools as learning places...for both students and teachers alike. Technology’s role in the transformation is critical and valuable in creating learning environments that support teacher efficacy, productivity, and professional practice.
REFERENCES

Dwyer, Carol A. (2007), America's Challenge: Effective Teachers for At-Risk Schools and Students, National Comprehensive Center for Teacher Quality

Kleiman, Glenn M. (2005) (Education Development Center, Inc.), Meeting the Need for High Quality Teachers: e-Learning Solutions, U.S. Department of Education Secretary’s No Child Left Behind Leadership Summit; Increasing Options Through e-Learning

Koch, Melissa and Fusco, Judith (2007), Designing for Growth: Enabling Communities of Practice to Develop and Extend their Work Online

National Summary: 2007 State Teacher Policy Yearbook: Progress on Teacher Quality, National Council on Teacher Quality


Teacher Quality: Understanding the Effects of Teacher Attributes (2003), U.S. Department of Education