Journal of Research on Leadership Education

December 2011, Volume 6, Issue 5

Studies of Technology Tool Usage Are Not Enough: A Response to the Articles in This Special Issue

Scott McLeod
Justin M. Bathon
Jayson W. Richardson

The research in this special issue of the *Journal of Research in Leadership Education* (JRLE) is critically important for moving forward the practice of school leader preparation. The articles are well done and each includes at least one multimedia example of technology-suffused educational leadership pedagogy in practice. Every one of these authors is to be commended for tackling a much-needed and under-represented area of educational leadership scholarship. They should also be commended for venturing into new realms of teaching and learning with digital tools. The rapid technological transitions occurring within our society often create upheaval and fear. The authors and organizers of this special issue not only tried new approaches, but also had the courage to openly share their ideas, visions, failures, and successes with their colleagues in this outlet. It is these change agents that are boldly leading the leaders. In this response, we summarize their work and categorize it within three technology leadership change domains. But in doing so, we also challenge everyone in the field to take further steps forward. While this special issue represents true progress for educational leadership preparation, it is but a baby step compared to the grand information revolution unfolding before us. We need to gather the strength to find and take the bigger steps still ahead of us. Hopefully, in the following sections, we provide a possible path.

The Three Intersections of Technology and School Leadership

Recognizing the digital revolutions that are transforming everything around us (particularly knowledge work), some educational leadership preparation programs have initiated attempts to address the increasingly-significant need for school administrators to be technologically aware and competent. Additionally, a few researchers have begun to investigate what it means to connect the spheres of school leadership and digital technology. This preparation and research work can be divided into three primary domains.

The first intersection of technology and school leadership is what we call ***using digital technologies to teach traditional educational leadership content*****.** In this domain of scholarship and preparation, little attempt is made to change the substantive content of educational leadership coursework. Instead, the emphasis is placed on the delivery

modality of traditional educational leadership classes and how it might be altered and improved using digital learning and communication tools. Most of the articles in this special issue fall under this domain, as would be expected given that the call for proposals requested

> manuscripts that examine specific uses of advanced technologies in educational leadership preparation programs to advance candidates' acquisition of knowledge, skills, and dispositions needed by future school leaders. This is a call for proposals for manuscripts that demonstrate a number of specific uses of advanced technologies in school and district leadership preparatory programs, including: digital storytelling, digital portfolios, video simulations, online learning applications, and other advanced technologies. Final manuscripts must include multimedia examples as well as tools and resources that will help readers implement these practices in their leadership programs. (JRLE, 2010)

The technology emphasis in this domain, and largely in this issue, is on the transformation of delivery, not the transformation of content. To the extent that preservice leaders learn how to better use various digital technologies, it is done primarily within the context of a class or preparation program rather than their future practice as administrators.

The article in this issue by Shinsky and Hanson is a prototypical example of this field of scholarship. Through examination of collaborative technologies such as wikis, Google Docs, and Wimba, the authors highlight the advantages and disadvantages of using digital learning and communication tools to deliver an organizational and community relations course. The article in this issue by Nash, which focuses on the use of online asynchronous discussion forums in a leadership for school reform class, similarly addresses the technological transformation of more-traditional pedagogical techniques.

Utilization of these new tools in the service of traditional leadership content should not be underestimated. As Guajardo et al. show in their article on digital storytelling, these new learning technologies allow for deeper, more personal interactions. Yvette's digital story, through the more personal and emotive nature of her voice and pictures, accomplishes something that no textbook chapter on self-reflection could approach. Young and Fudge, with their university colleagues Janson and Parikh, take this digital reflection concept a step further by incorporating new voices that are not traditionally represented in leadership preparation programs: the joint experience of using new tools clearly changed both the discourse and the relationship of the principal (Young) and the student (Fudge). The discursive digital reflection may well have been the deepest conversation La'Von Fudge has had about college and, frankly, it may well have changed the trajectory of his life. Conversations, concepts, and learning opportunities that may never have happened under traditional delivery formats are possible using new technologies. Keep in mind that these are basic technology tools that even children can operate. Discussion boards, wikis, online videos, and the like are

neither complex nor difficult, and these scholars have shown that, with a little creativity and effort, they can be purposed toward the advancement of learning, even in traditional preparation programs and courses.

The team from Virginia Commonwealth University pursues the next generation of leadership learning technologies. Through their middle school simulation, these researchers attempt to make preservice administrators' learning experiences more authentic by building on multiple data sources to create a virtual environment complete with leadership decision trees. Tucker and Dexter show us how to transform start-up grant dollars into broad learning opportunities for school leaders. Utilizing the ability to build leadership content by subtopics into unique classroom settings at the elementary, middle, and high school level and then assess student responses through extremely-detailed feedback mechanisms, the authors provide instructors with rich data on student leadership performance, data that are extremely difficult to obtain through other learning contexts. These types of innovative efforts that package multiple technologies into new learning environments are pushing the boundaries of leadership instruction in novel and wondrous ways.

All of these new technologies, and the corresponding efforts of program faculty, are permanently changing educational leadership program delivery. As the Korach and Agans article shows for the University of Denver, entire programs are now transitioning to new learning modalities. It is now a minimal expectation of a quality leadership preparation program that new learning technologies are incorporated into the standard curriculum. But Korach and Agans also show how small our initial program transition steps may be. While their efforts represent real and important improvements to student learning, online communities, discussion boards, and e-portfolios do little to alter the traditional leadership content paradigm. For many programs, these technology tools simply supplement traditional courseware.

The second intersection of technology and school leadership is what we call ***training school administrators to better use digital technologies*.** In this domain, there is a technology emphasis on course content rather than course delivery, but the content focus is on digital productivity and communication tools. The article in this issue by Friend, Adams, and Curry is an example of this area of scholarship. Their study focused on one university's use of student-created videos and portfolios to enhance preservice leaders' ability to communicate effectively with the media and external stakeholders using the medium of online video.

Much of the extant research that attempts to connect school leadership and technology—including most of the earliest studies—falls under this second domain (McLeod & Richardson, 2011). Many doctoral dissertations have examined school administrators' technology tool knowledge and usage, as have a few peer-reviewed articles. For example, in a survey of 214 Louisiana administrators, Leonard and Leonard (2006) found that 43% of principals reported not being familiar with various technologies while 44% reported not feeling qualified to lead technology integration in their schools. Likewise, Weber (2006) focused on computer technology use by leaders in Texas elementary schools, but investigated the use of technology generally rather than

the use of specific digital tools. Other examples of this genre include Brockmeier, Sermon, and Hope's (2005) assessment of principals' preparedness to integrate technology into teaching and learning and to use technology as a tool to complete their administrative tasks and Schiller's (2003) survey of 217 principals to understand their perceived competencies in using technology tools such as word-processing software, email, and Internet search engines.

Rather than general investigations of administrators' technology awareness and competency, sometimes specific technology tools or classes of tools are investigated more deeply. As might be expected, these technology tool investigations often are indicative of the important issues of the time. For example, Chance's (2000) study of a web-based instructional system was conducted when the movement to better integrate data into organizational decision-making was gaining steam and examined preservice leaders who were learning how to use databases, analyze data, create spreadsheets, and design appropriate graphs. Additionally, Streifer's (1999) research resulted in a list of seven reasons why superintendents and principals should embrace databases to facilitate school-based decision making.

Similarly, as email has gained prevalence in schools, administrators' use of this communication technology also has been studied by a few researchers. For instance, Hines, Edmondson, and Moore (2008) researched the impact of email on high school administrators. Likewise, Diokno (2010) surveyed school leaders about their attitudes regarding email. Today we are seeing some scholarly recognition of more collaborative (and potentially disruptive) communication technologies. Pardini (2007) reported that superintendents were not yet likely to use handheld communication devices as a way to leverage their leadership. In contrast, Ferriter (2009) noted how RSS feeds are indispensable to school leaders. This second domain, which focuses on administrators' technological proficiencies, is still a vital area of study in the future as digital tools continue to change and present new challenges and opportunities for school leaders.

Finally, the third intersection of technology and school leadership is what we call ***preparing school administrators to be better technology leaders*.** Like the second domain, the technology emphasis in this domain is on course content rather than course delivery, but the content focus is on leadership capacities rather than tools. This is the domain in which educational leadership scholarship is particularly scarce, whether for preparation purposes or for ongoing leadership practice. Few of the initiative described in this special issue approach their efforts with this intersection in mind. Tucker and Dexter may come the closest with their ETIPS modules on leadership of digital equity and technology integration and implementation. Further examples of research in this domain might include Dexter's (2011a) cross-case analysis of case studies of team-based technology leadership in schools with 1:1 student laptop initiatives or the study by Rutkowski, Rutkowski, and Sparks (2011) on the impacts of distributed leadership practices and school-level technology integration support on effective technology-suffused pedagogy.

The big disconnect

Unfortunately, it is the third domain—preparing school administrators to be better technology leaders—that is most significant. It is this third domain that will be most impactful on students, schools, and society. While it is appropriate and desirable to transform the technology tool usage of both our students and ourselves as faculty, neither of those specifically target one of the most critical educational issues of our time: *the need to create and facilitate learning environments for P-12 students that prepare them for the digital, global world in which we now live.*

As Collins and Halverson (2009) wrote,

> schools have kept new digital technologies on the periphery of their core academic practices. Schools … do not try to rethink basic practices of teaching and learning. Computers have not penetrated the core of schools, even though they have come to dominate the way people in the outside world read, write, calculate, and think. (p. 6)

It is this discrepancy between school practice and student and societal needs that is most pressing as we think about school leadership research and preparation. As McLeod (2011), one of the co-authors of this response, recently noted,

> Every societal and economic sector that revolves around information is being radically transformed by digital technologies, online services, and social media. Very few areas of American life remain relatively untouched by these paradigmatic shifts. Unfortunately, one of those areas is our elementary and secondary schools and we as educational leadership faculty share the blame for this dismaying situation. . . .
>
> We know, simply from projecting current trends forward, that in the future our learning will be even more digital, more mobile, and more multimedia than it is now. It will be more networked and more interconnected and often will occur online, lessening dependence on local humans. It frequently will be more informal and definitely will be more self-directed, individualized, and personalized. It will be more computer-based and more software-mediated and thus less reliant on live humans. It will be more open and more accessible and may occur in simulation or video game-like environments. And so on. We're not going to retrench or go backward on any of these paths. We thus need school leaders who can begin envisioning the implications of these environmental characteristics for learning, teaching, and schooling. We need administrators who can design and operationalize our learning environments to reflect these new affordances. We need leaders who are brave enough to create the new paradigm instead of simply tweaking the status quo and who have the knowledge and ability to create schools that are relevant to the needs of students, families, and society. . .

> Our professional priorities must be aimed at preparing our [programs'] graduates for the world as it is and will be. Otherwise, what are we here for? In other words, who's going to prepare these school leaders if we don't? (p. 4)

The evidence is clear that most of us are neglecting digital technologies in our preparation and scholarship (McLeod & Richardson, 2011). When we do engage in work in this area, a focus on tools has been our predominant orientation. The tools are the low-hanging fruit; we must extend ourselves further to accomplish the more difficult work of preparing school leaders who understand what it means to transform student learning environments in ways that are technologically rich, meaningful, and powerful.

Where to from here?

There is "a significant difference between our traditional educational leadership coursework (that occasionally is delivered online) and coursework that puts technology and 21st century skills leadership *at its core*[emphasis added]" (McLeod, 2011, p. 4). Educational leadership faculty must adjust their daily research and preparation work to reflect these technology-related societal and educational changes. The same recommendations that have been made throughout this special issue regarding technology awareness and competency for preservice administrators also apply to education leadership faculty and their teaching, scholarship, and service. We must adopt new lenses through which we frame our work. Educational leadership faculty that do so likely will find that adoption of a technology frame can sweeten their craft as well as make their work more interesting and, most importantly, more relevant.

What might this look like in practice? While it will vary by individual and institution, we can hypothesize some examples. For instance, educational law scholars who put a technology lens on their work quickly understand that digital technologies are one of the main drivers of state and local policy changes. Technology is changing the law of search and seizure, student expression, teacher privacy, open meeting, and copyright, just to name a few of the many impacted areas of school law. Adoption of a technology frame not only provides an avenue to relevant thinking and scholarship, it also allows educational law scholars to predict where changes in the law may arise given the advent of new technologies. For example, although Facebook still is blocked in most schools, education-oriented social networking alternatives such as Edmodo are rapidly gaining favor with educational practitioners. Schools' social networking policies thus are likely to shift in the upcoming years. This will affect everything from constitutionally-protected expression to discipline policies.

Social justice scholars who adopt a technological lens in their research and preparation work quickly recognize that as technology changes underlying educational paradigms, the effects across populations are far from equitable. More affluent student populations typically gain access to the latest technologies well before low-income students (the '"digital divide"'). Additionally, when they use learning technologies, they often use them in very different ways than their less-affluent student peers (the so-called "secondary digital divide"). The additional challenges of urban districts

frequently prevent them from adopting the latest learning technologies and pedagogical techniques. This can result in extremely unfortunate outcomes as digital technologies are used as stratifying, equalizing, or empowering instructional forces. Scholars of social justice who closely examine how technology changes learning opportunities could provide critical assistance to the potential equalization possibilities inherent in adoption of learning technologies as well as guidance about how school leaders can positively impact those possibilities.

If they placed a technology frame onto their work, faculty interested in policy, politics, and funding issues could provide immeasurable guidance and information regarding national, state, and local educational technology funding and policies. There is a critical dearth of research regarding the ups and downs of state and federal funding and policy for technology infrastructure. Similarly, the vagaries and diversity of local districts' policy decisions regarding learning technologies have received little to no attention. Faculty that are interested in staff development issues have ripe opportunities to study the impacts of online learning systems (both formal and informal) on teachers and administrators' professional growth. Faculty members that are interested in cross-cultural relations could investigate how technology positively or negatively changes communications between school leaders and various stakeholders. Faculty that are interested in assessment and accountability or teacher supervision and evaluation issues could focus on the impacts of large-scale (e.g., data warehouse) and small-scale (e.g., tablet computer) technologies on teacher accountability, educator development, and student achievement. Faculty interested in motivation could research how school leaders and their staffs gain the self-efficacy to adopt new technology-infused practices. And so on…

For every field of school leadership preparation and scholarship, individual and programmatic adoption of a technological lens could be incredibly helpful. But instead, the vast majority of us continue to produce new articles that ignore the digital world around us. We also continue to turn out new administrators that are woefully unprepared to be effective leaders in the area of technology, even though we know that if the leaders do not "get it," their systems—most importantly their students—surely will not either. We cannot continue to go on this way. If we care about societal and school relevance, it is time for us to pay more attention to digital technologies.

It is also worth noting that adoption of a technological lens in our work provides novel opportunities to combine teaching, research, and service in interesting and powerful ways. For instance, consider the example of Dr. Bruce Baker, a school finance scholar and education leadership professor at Rutgers University. Dr. Baker's blog, *School Finance 101*, has quickly emerged as a public outlet and conversation hub for school finance scholarship. He provides public access to his slide decks, his datasets, and information about his current research, which is in itself a service to the community. Dr. Baker also has applied a technological lens to much of his own research. Data storage and analysis technologies now allow educators to do more with student achievement data than ever before, including linking students' achievement data to their teachers and measuring the potential value added to students' individual

scores by particular educators. Because he understands and personally utilizes the relevant technology tools, Dr. Baker has been able to provide deeper and more interesting analyses of these trends than many other scholars. Because he also is on Twitter, broad conversations across multiple researchers and practitioners have ensued, raising the visibility of himself as a scholar as well as the school policy issues about which he writes. These conversations have, in turn, led to more research and publications and an ever-deepening cycle of scholarship and service.

Another faculty example is Dr. Scott McLeod, director of the UCEA Center for the Advanced Study of Technology Leadership in Education (CASTLE) and one of the co-authors of this response. Over the past four years he has built up an incredibly large audience of practitioners and scholars who care about leadership, technology, and school reform. Every time he blogs, he reaches nearly 27,000 subscribers. Every time he tweets, he reaches nearly 11,000 followers. His online *Did You Know? (Shift Happens)* video series has now reached 40 to 50 million people. While the sizes of Dr. McLeod's audiences likely will be the exception rather than the rule for most educational leadership faculty, his information channels represent the possibilities that are out there for us.

Finally, all three of us personally know, and can vouch for, the amazing potential of this technology-oriented framing of our efforts. Go ahead, Google us. You will find that we function within networks of tens of thousands of practitioners and scholars who care about school leadership and policy, digital technologies, educator development, and other school-related issues.

We, school leadership faculty, often bemoan our lack of impact on policymakers and educational practitioners. At the same time we ignore many of the technology tools that would enhance our work and reach. Instead, most educational leadership scholars continue to put their best thinking and writing into outlets that have significantly smaller audiences and effects. Thoughtful consideration and symbiotic use of social media and other digital technologies—in our teaching, research, and outreach—not only can enhance our relevance to the preservice and practicing administrators that we serve, but also can significantly impact the leadership, instructional, and policy conversations that surround us.

Moving Forward

The articles in this special issue are exceptional in the sense that they are well done, but also exceptional in the sense that they are rare. We simply do not have enough research about what effective school technology leaders look like nor what preparation programs should do to prepare such leaders. The studies in this issue are exemplars for other scholars and future research. But they are not enough.

With this special issue of *JRLE* and this year's special issue in the *Journal of School Leadership* (Dexter, 2011b), research momentum is building in the right direction. The literature base is building, and other educational leadership publications, such as the recent technology-focused issue of the *UCEA Review* (Young & Lopez, 2011), are starting to pay attention to the topic of technology leadership. But we need more: more attention, more effort, and more research.

The three intersections of technology and school leadership discussed above are a starting point toward providing us with a simple but useful mental framework around which we can center our educational leadership scholarship and preparation:

- using digital technologies to teach traditional educational leadership content;
- training school administrators to better use digital technologies, and
- preparing school administrators to be better technology leaders.

Adoption of a technological lens in our work and consideration of that work within the three domains just listed can help us organize our future efforts. A burgeoning body of scholarship now exists in the first two domains, as does increasing attention to preparation issues in these areas. Sadly, little research or preparation yet exists regarding the third domain, which is the most important and impactful of the three. Although we need to continue asking and answering questions about what effective student and program technology tool usage looks like, the more significant issue is what effective *leadership* in the domain of school technology looks like. With this special issue and other recent scholarship as a baseline, this critical area awaits our scholarly and instructional focus over the next few years.

In sum, we now have a burgeoning literature base, a simple (but hopefully helpful) conceptual framework, and some examples of what all of this might look like for scholars and programs. The challenge is laid bare: will we rise to the challenge or will we meet these resources with apathy and inaction? The choice is ours.

References

Brockmeier, L. L., Sermon, J. M., & Hope, W. (2005). Principals' relationship with computer technology. *NASSP Bulletin, 89*(643), 45-63.

Chance, P. L. (2000). *Technology tools for data-driven decision making: Promising professional development for rural school leadership.* Paper presented at the annual meeting of the National Rural Education Association, Charleston, SC.

Collins, A., & Halverson, R. (2009). *Rethinking education in the age of technology: The digital revolution and schooling in America.* New York, NY: Teachers College Press.

Dexter, S. (2011a). School technology leadership: Artifacts in systems of practice. *Journal of School Leadership*, *21*(2), 166-189.

Dexter, S. (Ed.). (2011b). Technology leadership [Special issue]. *Journal of School Leadership*, *21*(2).

Diokno, D. H. (2010). *Impact of email communication of school leaders.* (Doctoral dissertation). Arizona State University, Tempe, AZ. (UMI No. 3425776)

Ferriter, B. (2009). How to become a digital leader. *Educational Leadership*, *67*(2), 90-91.

Hines, C., Edmonson, S., & Moore, G. W. (2008). The impact of technology on high school principals. *NASSP Bulletin*, *92*(4), 276-281.

Journal of Research in Leadership Education. (2010, November 1). *Special theme issue of the Journal of Research in Leadership Education* [Electronic mailing list message].

Leonard, L. J., & Leonard, P. E. (2006). Leadership for technology integration: Computing the reality. *The Alberta Journal of Educational Research*, *52*(4), 212-224.

McLeod, S. (2011). Are we irrelevant to the digital, global world in which we now live? *UCEA Review*, *52*(2), 1-5.

McLeod, S., & Richardson, J. W. (2011). The dearth of technology-related articles in educational leadership scholarship. *Journal of School Leadership*, *21*(2), 216-240.

Pardini, P. (2007). Riding the wave of personal technology. *The School Administrator*, *5*(64), 10-21.

Rutkowski, D., Rutkowski, L., & Sparks, J. (2011). Information and communications technologies support for 21st-century teaching: An international analysis. *Journal of School Leadership*, *21*(2), 190-215.

Schiller, J. (2003). Working with ICT: Perceptions of Australian principals. *Journal of Educational Administration*, *41*(2), 171-185.

Streifer, P. A. (1999). Putting the 'byte' in educational decision making. *Education Week*, *18*(27), 53.

Weber, M. J. (2006). *A study of computer technology use and technology leadership of Texas elementary public school principals.* [Doctoral dissertation]. University of North Texas, Denton, TX. (UMI No. 33214502)

Young, M. D., & Lopez, G. (Eds.). (2011). *UCEA Review,52*(2).