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Supporting Professional Development Through Digital Principal Leadership

Introduction

A core role of the school principal is to support and nurture the growth of others. That growth is commonly thought to be at the student level. However, school leaders must also focus on the growth of their teachers. As such, the literature body is clear that school leaders often engage in supporting their teaching staff by establishing clear instructional expectations and protecting instructional time (Hallinger & Murphy, 1987), monitoring student progress (Smith & Andrews, 1989), making regular classroom visits (Heck, 1992), providing incentives for lifelong learning (Sheppard, 1996), and fostering professional learning (Matthews & Crow, 2010). School leaders engage in these practices while simultaneously adjusting to a world where technology has crept into many aspects of the profession. And sometimes, technology innovations come during a time of sudden disruptions and instant disequilibrium, such as with the COVID-19 pandemic in spring 2020 where digital learning and digital leadership became the new norm; even as uncertainty and change remained omnipresent. As such, while it is clear that principals must be collaborative instructional leaders, and that principals must develop their faculty and staff, what is left to be known is *how* principals use technology to engage in such activities.

The Professional Standards for Educational Leaders (PSEL) (National Policy Board for Educational Administration, 2015), as well as various state standards, note that principals should support teachers as professionals. For example, the PSEL Standard 6 is titled *Professional Capacity of School Personnel* and Standard 7 is titled *Professional Community for Teachers and Staff*. These standards evidence the need for school leaders to build capacity of their teachers. The call for developing professional capacity is also evidenced at the state level. For example, Standard 4 of the North Carolina Standards for School Executives (North Carolina Department of Public Instruction, 2011) is titled *Human Resource Leadership* and details that "school executives will ensure that the school is a professional learning community" in which the school executive engages "teachers and other professional staff in conversations to plan their career paths" (p. 6).

As borne out in these professional standards (as well as many others across the country), principals are tasked with improving teachers' professional capacity.

Technology has changed the way principals learn and grow, and how they, in turn, help teachers learn and grow. U.S. education institutions spend over \$13 billion annually on technology resources (Technology for Education Consortium, 2017) and principals help determine this resource allocation. Increased spending on technology resources and increased access to computing devices signals the need to examine further the leadership implications of the PSEL to "promote the effective use of technology in the service of teaching and learning" (National Policy Board for Educational Administration, 2015, p. 12).

Leadership is central to growing others as professionals. As such, the role of the principal as a digital leader is becoming an increasingly important area of research (Sheninger, 2014). Building on previous research of technology-savvy superintendents (Richardson & Sterrett, 2018; Sterrett & Richardson, 2019), this study focuses on the school level where we ask the question, "How do principals leverage digital leadership to transform their school into a professional learning organization?"

Literature Review

School leadership is essential for improving teaching and learning (Hallinger & Huber, 2012; Sebastian & Allensworth, 2012). Cotton (2003) observed that principals influence student academic achievement through the way they support and interact with teachers. Fostering a supportive and engaging learning community requires a school principal who is an effective collaborator and a savvy communicator (Garza, Drysdale, Gurr, Jacobson, & Merchant, 2014). Sustaining professional development over time requires leaders who understand the school's needs and who can then apply a combination of layered and embedded professional development efforts (Day, Gu, & Sammons, 2016). Principals thus play a pivotal role in supporting the work of teachers by providing and supporting myriad of professional development efforts.

Principals Lead and Support Professional Development

Teacher professional development is an essential factor in improving the quality of the school and realizing school improvement goals (Liu & Hallinger, 2018). The principal is positioned to initiate and support this work, all in an effort to improve the student learning experience. A growing body of research indicates that principal leadership is essential to improving teaching and learning (Park, Lee, & Cooc, 2019). As such, effective principal behaviors include those that impact teachers and teacher working conditions. These behaviors include creating strong mission and vision, implementing routines and procedures, involving teachers in decision-making, providing helpful feedback, and supplying essential mentoring supports new and veteran teachers alike (Fuller, Pendola, & Young, 2018). By aiding in teachers' growth, the principal strengthens teaching and learning within the school.

Leadership is pivotal to this work. The research body is clear that principals catalyze teacher collaboration and growth (Goddard, Goddard, Kim, & Miller, 2015). Principals serve as professional development leaders in facilitative functions, such as having conversations about the instruction following short observations (Crum & Sherman, 2008). By emphasizing teaching and learning, supporting collaboration, developing coaching relationships amongst teachers, aligning curriculum, principals help teachers grow as educators (DiPaola & Hoy, 2008). Given that teachers have unique skill sets and needs, principals can adopt innovative and individualized approaches to instructional leadership and professional development (Daphnee Hui & Chiu, 2017). Principals strengthen teachers through relevant, timely, and individualized professional learning opportunities. Thus, how principals lead with and through technology to support this growth is a timely area of research.

Engaging Teachers

Today's school leader leads through action and interaction rather than merely occupying a physical office (Rousmaniere, 2013; Sterrett, 2011). The purposeful interactions a school leader has with teachers can impact teacher behavior. As they interact with others, principals have the

opportunity to encourage innovation (Moolenaar, Daly, & Slegers, 2010). Sheninger and Murray (2017) observed that school leaders innovate by engaging in formal and informal learning experiences, empowering others to lead, and adapting to new changes and challenges. In the digital age of educational leadership, Sheninger (2014) advocates that school leaders break through the inevitable isolation of leadership by cultivating professional learning networks within their schools and also connect with outside networks as well. In the COVID-19 environment (and repercussions thereof), it has become more evident that technology plays a front and center role in these learning networks.

Digital Leadership

The current literature body is sparse as to how principals support professional learning in a digital learning environment. Recent studies of district-level leadership reveal that technology-savvy superintendents put teaching and learning "at the center of technology integration efforts to maximize the possibilities of digital learning spaces" (Richardson & Sterrett, 2018, p. 611). Nevertheless, there is a relative dearth of recent studies that focus on principals. Nearly two decades ago, Anderson and Dexter (2005) examined technology leadership noting that a school's technology progress was threatened if administrators were not engaged as technology leaders. Later, Dexter (2011) noted that "school leaders currently need clearer theoretical direction on how leadership and resources can be optimally combined in utilizing technology to support teaching and learning goals" (p.169). Nevertheless, to date, how principals lead and support professional learning as digital leaders is largely unexplored. In support, Liu, Ritzhaupt, and Cavanaugh (2013) studied technology innovation and concluded that further research is needed on school leadership styles and practices within schools. Hence, examining how innovative, technology-leaning principals foster professional learning is of growing importance in today's context of teaching and learning.

Methods

To better understand how principals foster professional learning in an age of innovation, we utilized a qualitative case study approach. We sought to understand how innovative principals embrace and harness technology to grow as leaders and to help their teachers grow in terms of professional development. Understanding how school leaders support professional learning will provide the field of educational leadership with helpful insights for further strengthen innovative principal leadership.

Population

Because there is no definition of what is a technology-savvy principal, finding these leaders was challenging. To address this challenge, we chose to examine award-winning "digital principals" recognized by the National Association of Secondary School Principals (NASSP) as our population. Criteria to be selected for the annual award includes excellence in collaborative leadership, curriculum, instruction, and assessment, and personalization. Through this award, NASSP (2019) "honors principals who exhibit bold, creative leadership in their drive to harness the potential of new technologies to further learning goals" (para 1).

These award-winning principals were chosen because they offer unique insights into collaboration and professional learning in a digitally suffused school. We considered these principals to be key informants who represent a reasonable purposive sample (as defined by Check & Schutt, 2012) of exemplary building-level technology leaders. This study thus involved a purposive sampling of key informants who were each recipients of the NASSP Digital Principals of the Year Award.

NASSP has bestowed this award to three principals per year since 2012, awarding 18 digital principals awards at the time of this study. We compiled the names of all award recipients from the NASSP website. By searching the Internet and using social networking sites such as LinkedIn, Twitter, and Facebook, we were able to locate the contact details for 15 of the 18 award recipients from 2012-2017. Of those, 12 agreed to participate in the study (see Table 1). This

resulted in an 80% participation rate of those principals we could locate. These 12 award-winning school leaders led schools that varied from a small rural high school in Arkansas with about 100 students to a suburban school in Ohio of over two thousand students.

Table 1

2012-2017 NASSP Digital Principal of the Year Participants

Name	Age	Years in education	Award year	School	Twitter handle	Enroll*	Locale*
Eric Sheninger	42	16	2012	New Milford High School (New Milford, NJ)	@E_Sheninger	632	Suburb: Large
Michael King	63	38	2012	Dodge City Middle School (Dodge City, KS)	@digitalsandbox1	738	Town: Remote
Patrick Larkin	49	21	2012	Burlington High School (Burlington, MA)	@patrickmlarkin	1,123	Suburb: Large
Carrie Jackson	45	22	2013	Timberview Middle (Fort Worth, TX)	@jackson_carrie	1,113	City: Large
Dwight Carter	41	23	2013	Gahanna Lincoln High School (Gahanna, OH)	@Dwight_Carter	2,260	Suburb: Large
Daisy Dyer Duerr	41	18	2014	St. Paul High School (St. Paul, AR)	@DaisyDyerDuerr	103	Rural: Distant
Derek McCoy	47	22	2014	Spring Lake Middle School (Spring Lake, NC)	@mccoyderek	487	Suburb: Large
John Bernia	37	14	2015	Oakview Middle School (Oakland Charter Township, MI)	@MrBernia	559	Rural: Fringe
Winston Sakurai	43	24	2016	Upper School Hanalani Schools (Mililani, HI)	@WinstonSakurai	740	Suburb: Large
Bobby Dodd	44	16	2016	Gahanna Lincoln High (Gahanna, OH)	@Bobby_Dodd	2,260	Suburb: Large
Darren Ellwein	46	22	2017	Harrisburg South Middle (Harrisburg, SD)	@DEllwein	338	Town: Fringe
Nicholas Indeglio	41	17	2017	Downingtown Middle School (Downingtown, PA)	@DrIndeglio	924	Suburb: Large

*Data retrieved from Institute of Education Sciences in the Common Core of Data (<https://nces.ed.gov/>)

Data Collection

To gain a deeper understanding of these building leaders' experiences, we chose interviews as our data collection method. A qualitative approach was used as our goal in this research was to illuminate and explore the insights of these digital leaders (Jones, Torres, & Arminio, 2014). These 60-minute semi-structured interviews were anchored around fourteen questions that focused on principals' perceptions about digital leadership and their roles in improving the capacity of teachers. The interview protocol used in the current study was a slightly altered version of the protocol used to understand the experiences of technology-savvy superintendents (see McLeod, Richardson, & Sauers, 2015).

Data Analysis

Coding was done using the constant comparative method as detailed by Lincoln and Guba (1985). As such, coding was done iteratively. At the initial stage, each researcher coded two interviews. The researchers met to discuss, add to, delete, collapse, and expand codes until 100% agreement was achieved. After the codebook was agreed upon, each researcher coded half of the transcripts. The researchers met a second time to adjust the codebook. Afterwards, each researcher recoded all of the interviews. Finally, the researchers met a third time to conduct a confirmatory analysis of each coded transcript. The researchers used this process to triangulate the data across the principals' interviews to find themes (see Merriam, 1998).

Results

The results provide insights into how digital principals support professional learning in their schools. The findings are organized into three themes of how these principals lead in this work. First, these digitally savvy leaders engaged teachers in purposeful professional development. They understand their teachers' needs, and they respect teachers' time. Second, these digital leaders engaged in digital professional learning networks. As such, they realized that they can support teachers by staying 'dialed in' to new ideas and innovations from across the world. These

leaders also saw their own learning as ongoing and sought to model lifelong learning. Finally, these digital leaders saw the importance of empowering their teachers as leaders. These principals realized that leadership must extend throughout the classrooms, and they were willing to help teachers learn, grow, and lead.

Engaging Teachers in Purposeful Professional Development

All 12 technology-savvy principals indicated being purposeful in engaging teachers in professional development. For example, Eric noted that teachers are often critical of professional development, especially when "professional development has always been something that has been done to us. It's not something we want to do." As such, Eric worked with his teachers to create digital portfolios to showcase their teaching and help them rethink traditional ways of teaching.

Daisy replaced meetings with online Friday Focus Newsletters. She encouraged teachers to respond to the online newsletter via Padlet responses. She later noticed teachers using the Padlet app with their students. She also reduced faculty meetings and instead, had teachers share tips and strategies via the online newsletter. Daisy observed that this approach "was really neat because the teachers became really creative. They might use a different technology tool; they might do a skit of some sort." Teachers "would come out of their shell" and "become empowered" as collaborative trainers.

Bobby saved meeting time by creating screencasts that included tips and "how to" examples. He explained, "I always made sure my videos and my screencasts were about five minutes long, because nobody wants to watch a video any longer than that." For example, he created a tutorial on how to use Kahoot! as a formative assessment tool. Within 24 hours, Bobby noticed several classes within a single department incorporated the digital tool into their lesson. Teachers made time to watch his short tutorial and implemented the tool. This was a testament to the effectiveness of his targeted, purposeful training. This is an example of how teachers gained confidence when they saw their principal leading by example. Likewise, Dwight added, "I think

the most effective types of professional development are those that are modeled. Just model the strategies that you want your teachers to use. If it's a Socratic seminar, then model that. If it's an interactive lecture, model that." He reduced "sit and get" professional development and instead created a "Teacher Channel" to include video clips of teachers sharing updates and insights.

Engaging in Professional Learning Networks

All 12 principals touted the benefits of professional learning networks. Each principal was active on Twitter (see Table 1). For example, Dwight would engage in Twitter chats and would implement strategies he learned from other principals and teachers that would, in turn, help him improve his own school culture. Derek said, "I would not be the educator that I am if it was not for Twitter," explaining that it helped him curate a blog where he posts helpful resources. Patrick, who recently transitioned from a principal to a district-level administrator, encouraged new principals to "stay up on the latest tools" and to see what leaders across the country are doing. From his location in Hawaii, Winston noted that Google Apps, such as Google Slides, along with other tools such as Edmodo and Voxer, help foster learning networks "that can happen, not here on campus, but all across the world" and across time zones.

The connections that technology savvy principals make with leaders and innovators outside the school through their professional networks enabled them to transform the work within the school. For example, Mike leveraged Skype "with various people out there who are experts and we bring them in, they visit with the kids and work on projects with us." Dwight added that engaging in a professional learning network allowed him to help his school community see opportunities *outside* the school, explaining, "It's not just about the tools, it's about how the tools are being used to extend and expand student learning opportunities...beyond the walls within the school." By focusing on local, national, or even global issues, Dwight talked about how "digital principals are free to take those risks to expose their kids and their staff to those opportunities."

Carrie used Twitter to engage parents using what she called the "TMS Hawkchat," being a weekly activity that fostered teachers' sharing and interaction. She explained, "I became a bit

of a spokesperson, if you will, for principals getting out in front of parents, families, communities, and students and engaging with them through social tools.” Being active in professional learning networks, be it a Twitter chat or an international Skype session, can enhance the leadership lens of the principal and, in turn, expand the learning experiences for both students and staff.

Supporting Teachers as Professional Leaders

Ten principals in the study mentioned fostering professional learning by supporting their teachers. For example, Mike emphasized the importance of teacher choice in this work explaining that “we bring an instructional coach in every Tuesday, and then the teachers get to set their agenda about what they want to learn and then we go from there.” He added that “the tech coach is pretty diversified in the fact that she can fit the needs of the teachers” and thus able to meet the diverse needs across the spectrum of professional development and technology needs. Further, Winston invested in taking veteran teachers to several innovation-focused conferences and he embraced new learning and innovation, touting new teaching strategies learned from YouTube or TED Talks. Winston explained how “that’s the culture that we try to build here...I just called it shared leadership...that the principal doesn’t have to be the owner of information or have all the answers. Hopefully, that trickles down into the classroom where it’s also where the teacher doesn’t have all the answers... the students might have some answers that are better than the teacher sometimes.” Winston went on to note that supporting teachers as technology leaders was essential in building his school’s culture.

Bobby noted the importance of teachers leading from within the district saying, “when we incorporated a lot more Chromebooks into our building...we had teachers lead the instruction, instructing their peers on how to do, basically, the basics of Google Classroom.” This co-teaching was differentiated based on teachers’ experiences and comfort levels. Derek explained how he and his teachers developed a “personalized menu for our teachers” with open times for choice in learning coupled with structured professional development at other times. These digital principals conveyed that empowering teachers added more meaning to the professional learning and

strengthened the work. Carrie explained that she would often hear her teachers remark, “my best professional learning was not necessarily the formal training provided by the district, but instead it was the opportunity to collaborate with other teachers.” Principals in this study tended to prioritize time and space which lead to teacher empowerment and professional development.

Discussion

This study focused on how technology-savvy principals support professional learning through and with digital technology. The findings are relevant for future research as well as practice. As such, it is useful to consider these findings through the lens of professional development aspects offered by Glickman, Gordon, and Ross-Gordon (2013), that includes “school-wide, group, and individual goals” (p. 336) . Next, we will juxtapose these levels of goal settings with the findings from our study to inform recommendations for future research, for practice, and for the preparation of school leaders in an ever-changing context of a digital leadership landscape.

School-Wide Professional Development

Glickman, Gordon, and Ross-Gordon (2013) noted that professional development designed to make sense of new mandates or curricular innovations often takes place at the school level. The digital principals in the present study leveraged their position to serve as an advocate for their school learning community while empowering others in their schools. Their leadership was at the their level, *inside* their school. Additionally, by being socially connected through online networks, these principals had a greater awareness of opportunities and challenges in the field *outside* their schools and how they might relate those to their specific schools.

By valuing teachers’ time and creating new spaces for sharing and learning, these digital principals were transforming practice within their schools. These digital principals were active on social media, gleaning ideas and sharing strategies on Twitter, sharing success stories from within their schools and engaging in professional conferences, and thus shaping the professional narrative outside their school walls as well.

Group Professional Development

Principals foster a unique professional ethos to support smaller groups within the school, such as specific departments or grade-levels. The digital principals in this study demonstrated that they hold a unique position where they can leverage their role as a *connector* who are, as Gladwell (2002) explained, the “kinds of people who know everyone” (p. 38) and who have large circles of influence. Research indicates that principals who are more involved in everyday classroom instruction can “help close the gap between their views and those of teachers” (Claro, Nussbaum, Lopez, & Contardo, 2017, p. 52) regarding how to successfully integrate technology and innovation within the classroom setting. As Derek noted with his differentiated professional development approach, this work is purposeful for a specific subset of teachers who have distinct goals. This practice is key in improving digital integration at the group level.

School leaders can help others connect outside the district by encouraging the teachers to become involved in professional learning networks, and can steer them purposefully toward resources and individuals that can help them meet their group goals. By utilizing their relational capacity and communication skills, the digital principals in the current study brought members of the school community together and built new networks outside the school community to address the needs of various groups within the school.

Individuals' Professional Development

Glickman, Gordon, and Ross-Gordon (2010) observed that schools are comprised of teachers who need individualized development and individualized goals. As Day, Gu, and Sammons (2016) observed that principals are able to “recognize, acknowledge, understand, and attend to the needs and motivations of others” (p. 253) in a way that promotes both staff success and student engagement. The digital principals in the current study eschew the “one-size-fits all” approach and empower teachers to have choice and a voice in growing as unique individuals in how they participate in professional development.

These digital principals did not neglect their own growth either. These digital principals were primarily in their mid-forties, were at least a decade removed from their undergraduate and graduate preparation, yet they were continually engaged in professional learning themselves. The digital principals noted the importance of being involved in learning networks that extend beyond the district. All 12 saw themselves as continuing to learn and grow in their role as individuals, while at the same time supporting others' growth as well.

Limitations

Using the NASSP population of digital principals has a few limitations. First, it is possible that these specific principals are not the most innovative in the nation when it comes to digital leadership. It is also possible that these award winners achieved more social capital and prestige than their peers and were thus selected based on popularity rather than their achievements. Second, this population does not represent the best principals who are technology-savvy, but instead includes key informants who demonstrated a level of excellence as set by NASSP. Hence, these principals were not selected to be representative, but rather examples of excellence in the field with regards to the phenomenon of digital school leadership. Third and finally, this study is limited by choice to collect only one type of data, being interviews. What this single data source does not capture were the actual practices being implemented by these digital principals or how those practices impacted teachers or students.

Conclusion

Technology-savvy leaders help shape the professional ethos of the school, including embracing and supporting innovation while supporting others' learning and growth. Digital principals ensure that they remain engaged in learning and innovating as well. Teachers who see their administrators encouraging innovation, engaging in professional learning networks, and, for example, leading a Twitter chat, may be willing to take new risks as learners and educators as well. Principals can help teachers see themselves as collaborators who play a vital role in the success of students and the overall learning community. In this work, principal presence and

support is critical. Digitally savvy principals help grow others within the school, and they are uniquely poised to help tell the story about teaching and learning from within their school.

P-12 leadership preparation should include more relevant and modern connections as “aspiring leaders need time to engage in authentic practices afforded to them through mentoring and internship experiences” (Clayton, Sanzo, & Myran, 2013, p. 90). Working with technology-savvy administrators should be woven into the graduate coursework and field experiences to get at some of this authenticity. The COVID-19 crisis instantly disrupted the usual modalities of teaching and learning, and as such, pushed school leaders into the digital foray overnight. In response, the field of educational leadership must learn from innovative educators who are already digital leaders and those lessons need to be reflected in preparation programs.

From having guest speakers share examples of innovative instructional strategies to working through case studies involving district and school-level technology leadership, graduate students can gain critically relevant insights into digital leadership and how to support others in an era of innovation and change. From using professional learning networks to solicit ideas for teaching strategies or classroom management tips, to highlighting school successes through a Twitter feed, the digital principals in this study clearly serve as a collaborative presence both inside and outside the school. They lead with action in their schools, and they seek to connect their work with outside learning communities. Digital principals have a powerful story to tell regarding fostering professional learning in schools. Now, more than ever, their lived experiences should inform the field for practice, research, and leadership preparation.

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