

Nebraska Principals' Perceptions Regarding 'Future-Ready' Schooling and Their Concurrent Support Needs

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Abstract

This study examined principals' beliefs about student success in their future lives, and what supports and barriers exist in their school contexts that may influence this learning, teaching, and leadership work. Results from a survey of Nebraska principals indicated that they are working toward more robust learning modalities for students and are interested in alternative assessment mechanisms, student progression structures, technological resources, and interpersonal supports to facilitate new schooling models. Greater support structures are needed for principals as they work to prepare more future-ready graduates, including resources related to time, funding, training, and often-competing state- and federal-level policy mandates.

Keywords: Leadership; Innovation; Deeper Learning; Future-Ready; College and Career Ready; Principals; Instructional Leadership

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Introduction

Schools are charged with preparing students for their future by equipping them with the knowledge and skills necessary to thrive as local and global members of society (World Economic Forum (WEF), 2020). Education systems worldwide are attempting to reform their curricula, assessment frameworks, and teaching practices in order to better prepare graduates to be 'future-ready' citizens and employees (WEF, 2020). Future-ready students are those learners who are prepared to succeed in college and the workforce and become productive citizens in society (Fletcher et al., 2018). Given the rapid pace of economic and societal change, school-level learning outcomes for students must be dynamic and aligned with new, emergent realities that are context-situated and -dependent (Seong, 2019). Accordingly, future-ready principals must navigate a landscape of different student outcomes, changing societal contexts, often-antiquated state and federal standards, and political considerations across all levels of government (Marx, 2006). School principals somehow must lead their students, families, and educators into a future that is rife with volatility, uncertainty, complexity, and ambiguity (U.S. Army Heritage and Education Center, 2018). The challenges of this work cannot be overstated.

The research literature on the relationship between school leadership and student outcomes emphasizes the principal's critical influence on student learning (see, e.g., Hallinger &

Heck, 1996; Leithwood et al., 2007; Witziers et al., 2003). Moolenaar et al. (2010) explained that principals are under increased pressure to utilize innovative teaching practices to bolster student learning. Leaders can promote the use of these practices by motivating educators and developing a supportive atmosphere for the development of teachers' innovative instructional skills, which leads to the enhancement of the innovative capacity of the entire school (Li et al., 2014; O'Shea, 2021). In their study of the importance of principal leadership for school success, González-Falcón et al. (2019) noted the fundamental part that principals play, stating that "the literature ... acknowledges the decisive role of school principals not only in the creation of the provisions for innovation and improvement but also, more importantly, in maintaining them" (p. 2). Principals thus are advantageously-placed to manage and lead future-ready learning and schooling initiatives.

While principals are situated to support and advance future-ready initiatives in their school settings, this work is both complex and arduous. One constant challenge for educational leaders is balancing the time, focus, energy, and attention needs of their educators. This balance is difficult enough during ordinary times but has been even more challenging over the past two years of the global coronavirus pandemic. Educators, students, and families have been placed into pandemic schooling contexts in which the focus usually has shifted from improvement and innovation to survival or maintenance (O'Shea & Trainin, 2021). In other words, as schools have dealt with a deadly virus, conflicts over protective face masks, angry parents, unsettled children, accelerated technology implementation, and shifting policy

mandates from state, federal, and health officials, adding ‘innovation’ to the proverbial plate of teachers is not something that most administrators have felt comfortable doing the past couple of years (Richardson et al., 2021). Nonetheless, ongoing concerns persist regarding the preparation of P-12 students for our global, innovation society.

Review of the Literature

It is increasingly clear that traditional systems of schooling are inadequate to the demands of the 21st century (see, e.g., Boss, 2012; Collins & Halverson, 2009; Lehmann & Chase, 2015; Lenz, 2015; Socol et al., 2018; Wagner, 2008). As Vander Ark and Liebtag (2021) have noted,

Everyone is facing unprecedented novelty and complexity. This ever-changing world and the innovation economy demand a new level of leadership from individuals - more navigating, more empathy, more decisions, and more demonstrated value. For organizations, it means grappling with new problems and organizing quick design sprints around new opportunities in an attempt to try and keep up with the rapidity of change. . . Contribution requires personal leadership, strength of character, and an entrepreneurial mindset. It’s as much about problem finding as it is about problem-solving (p. 1).

Similarly, McLeod and Shareski (2018) articulated that:

despite our very best efforts, much of what we’re doing in schools isn’t working because it isn’t relevant to the needs and demands of the world around us. For the most part, the problem lies not so much with our people but with the outdated systems that many of us are struggling to abandon. When societies shifted from an agricultural model to an industrial model, we responded by changing how we educated our young people. Now that our societies are shifting from an industrial model to a global information and innovation model, we need to change our approach to education yet again (p. 6).

Many school systems have responded to changing societal and economic contexts by creating new learner profiles or profiles of a graduate (see, e.g., Roanoke County Public Schools, 2021; Saline Area Schools, 2021; Virginia Beach City Public Schools, 2021; Washoe County School District, 2021). These new depictions of desired student learning outcomes emphasize deeper learning, greater student agency, more authentic work, and rich technology infusion (McLeod & Shareski, 2018, p. 4) and often are significant departures from more traditional schooling practices that predominantly focus on factual recall and procedural regurgitation. In turn, these new learning outcomes require different forms of teaching and leading. This idea is encapsulated in a Twitter post from 2014: “You want student learning to change but you don’t want to change teaching or schooling. Good luck with that.” (<https://twitter.com/mcleod/status/512720217684705281>). Simply put, learning and teaching innovations are dependent on concurrent leadership innovations.

The research literature continually underscores the importance of principals when it comes to fostering building-level instructional and organizational innovations. For example, in their multilevel study of 83 schools in Germany, Koch et al. (2015) found that principals’ work engagement with classroom teachers had significant impacts on four different indicators of school innovation: teacher self-identified creativity, school projects, and both external and internal communication. Similarly, a study of 22 Dutch school administrators highlighted the importance of both top-down and bottom-up leadership practices when leading collaborative innovations in their buildings (de Jong et al., 2020). Prew (2007) engaged in a comparative

analysis of four principals, two of whom were successful with their school transformations and two of whom were not. He found that successful principals were effective at navigating the demands of both the local community and the district office, and even could make those interfaces productive as they worked to foster building-level transformation. As these studies illustrate, researchers have recognized for decades the impact of principals on school-level innovation (Chesler et al., 1963). Study after study has reiterated that principals all across the globe are key influences on teachers' professional learning (Abu-Shreah & Zidan, 2017; Grissom et al., 2021) and willingness to innovate (Wu et al., 2019), organizational entrepreneurship (Wibowo & Saptono, 2018), and schools' overall transformation efforts (Gil et al., 2018; Mousavi et al., 2018; Colleague et al., 2021).

Unfortunately, while some principals are able to spark innovative practices in their schools, others are not. Triant (2001) noted that many principals are frustrated with the constraints placed upon them in traditional public school systems. Bureaucracy, lack of resources, organizational resistance, and lack of training can be significant barriers to leaders' ability to successfully innovate (Sincar, 2013). Competing tensions between educational innovation and governmental accountability also can severely limit principals' success with non-traditional learning targets (Watkins et al., 2020). Additionally, Moyle (2010) emphasized that "schools tend to be risk-adverse," which means that "putting into place policies and processes that actually support students to learn the characteristics of flexibility, risk-taking, innovation, and creativity represents significant challenges for education systems" (p. 20).

While building-level leaders are at the forefront of these new and sometimes competing leadership demands, they rarely are formally asked about their support needs as they struggle to implement often-unfamiliar, complex, and difficult challenges regarding 21st century learning and teaching. In this study we aimed to uncover school principals' perceptions regarding innovative leadership and their concurrent support needs.

Methods

With this research we sought to understand 1) what principals believe is necessary for students to be successful in their future lives, and 2) what barriers exist in their school contexts that may inhibit this learning, teaching, and leadership work. To better understand principals' beliefs, we inquired into existing initiatives and supports as well as what they wished was in place. We also wanted to know what challenges principals face as they attempt to lead students toward future-ready life success.

Survey item development was informed by a variety of different resources (see, e.g., Boss, 2012; Collins & Halverson, 2009; Lehmann & Chase, 2015; Lenz, 2015; Socol et al., 2018; Vander Ark & Liebttag, 2021; Wagner, 2008). Several of the primary survey items included in this study were derived from McLeod & Shareski's (2018) articulation of the larger 'shifts' and 'building blocks' necessary for future-ready schooling. Additionally, we engaged in numerous conversations designed to align survey items with perceived needs of principals and schools. These discussions were grounded in our numerous years of experience working with school organizations on future-ready research and professional development initiatives and were

intended to provide a level of content validity that ensured that the survey items adequately addressed the goals of the study (see, e.g., DeVellis, 2017). Likert scale, rank-order, and open-ended items were included in the survey in order to create a user-friendly data collection instrument, reduce redundancy, and allow space for principals' additional input while also ensuring that we received the information desired for the study. Once the survey instrument was developed, Institutional Review Board approval was obtained and the survey was delivered electronically to principals across the state of Nebraska. Principals in Nebraska were chosen as a continuation of prior research conducted for the Nebraska Department of Education. This approach allowed the researchers the opportunity to build off the previous research and continue to foster relationships with principals across the state.

All Nebraska principals were included in the initial survey solicitation in order to try and assess a diversity of educational settings and to achieve the widest possible geographic spread of participants across the state. Principals' contact information was obtained from a Nebraska Department of Education database. We engaged in three rounds of participant recruitment, with each round occurring two weeks after the previous one. For each round, participants received an email invitation, a consent form, and a link to the secure online survey, which we created using survey software from Qualtrics.

After three rounds of recruitment, a total of 124 participants had completed the survey. After removing partial completers, invalid email addresses, and individuals who no longer were the principal of their school, this total represented a response rate of 14.8% (124/835). This

response rate is in line with previous research indicating that typical response rates for online surveys external to an organization are between 10% and 15% (see, e.g., Fryrear, 2015; Wengrzik et al., 2016).

Findings

The majority of participating principals in this study (76%) worked in rural schools. About 16% of participants worked in urban settings and another 8% of respondents worked in suburban schools. These proportions are representative of Nebraska schools and school districts, which are primarily rural (National Center for Education Statistics, 2019). Participating principals were from all but three of the seventeen regional Educational Service Units (ESUs) in the state, ensuring that almost every corner of the state was represented in the study.

Participating principals were asked to prioritize future-ready learning opportunities in their districts, including 1) higher-level thinking and deeper learning; 2) greater student agency, control, and ownership of the learning work; 3) authentic, real-world work; and 4) robust technology infusion (McLeod & Shareski, 2018). Participants were able to select multiple items in order of importance from the list and also could articulate other opportunities besides those on the list, thus allowing for the opportunity to identify multiple priorities and to include non-listed priorities. Table 1 details the principals' responses. 'Higher-level thinking and deeper learning' was the highest priority in respondents' districts, followed by authentic, real-world work; greater student agency, control, and ownership of the learning work; and robust

technology infusion. Additional responses listed by participants included “college and career readiness” and “high-quality scientifically-based instruction.”

Table 1

Future-Ready Learning Priorities

Priority	%	Count
Higher-level thinking and deeper learning	33.9%	42
Authentic, real-world work	24.2%	30
Greater student agency, control, and ownership of the learning work	19.4%	24
Robust technology infusion	15.3%	19
Other (please explain)	4.0%	5
None of the above	3.2%	4
Total	100%	124

Principals then were asked to rate their schools’ interest in - and depth of implementation of - ten possible components of future-ready learning (McLeod & Shareski, 2018):

1. project- and inquiry-based learning;
2. authentic, real-world work opportunities for students;
3. standards-based grading and competency-based education;
4. 1-1 computing initiatives;
5. digital and online (maybe open access) information resources;
6. online communities that share mutual learning interests;
7. adaptive learning software and data systems;
8. digital badges and alternative credentialing mechanisms;
9. flexible scheduling; and
10. redesigned learning spaces.

Participants first rated their *interest* in these components on a four-point Likert scale (1 = low interest; 4 = high interest) and then also rated their *implementation* of those components on another four-point Likert scale (1 = initial conversations; 4 = regular implementation at scale).

We utilized mean scores to interpret these results. A higher mean score on the interest scale meant that the participant believed that these components were of greater interest in their schools. Conversely, lower mean scores on the interest scale showed that the participants believed that these components were of less interest in their schools. A similar approach was taken for the implementation responses. Tables 2 and 3 show the ordered results of the interest and implementation responses, respectively.

Table 2

Principals' Interest in Possible Components of Future-Ready Learning

Component of Future-Ready Learning	Mean Interest Score (\bar{x})
Authentic, real-world work opportunities for students	3.4
1-1 computing initiatives	3.3
Standards-based grading and competency-based education	3.2
Digital and online (maybe open access) information resources	3.1
Project- and inquiry-based learning	3.0
Adaptive learning software and data systems	2.8
Redesigned learning spaces	2.6
Flexible scheduling	2.5
Online communities that share mutual learning interests	2.4
Digital badges and alternative credentialing mechanisms	1.9

As shown in Table 2, participating principals were most interested in authentic, real-world work opportunities for students. Other components of high interest included 1-1 computing initiatives; standards-based grading and competency-based education; and digital and online (maybe open access) information resources. Conversely, participants were least

interested in digital badges and alternative credentialing mechanisms. Other components of low interest included online learning communities, flexible scheduling, and redesigned learning spaces.

From the implementation section of the survey, Table 3 shows that participating principals cited 1-1 computing initiatives as their most frequently implemented component of future-ready learning. Also ranked relatively highly on the implementation scale were digital and online (maybe open access) information resources; authentic, real-world work opportunities for students; and standards-based grading and competency-based education. Inversely, participants in this study indicated that digital badges and alternative credentialing mechanisms were the least implemented future-ready component, mirroring their lack of interest as shown in Table 2. Other low-implementation components included online communities that share mutual learning interests, flexible scheduling, and redesigned learning spaces. These implementation responses were similar to the interest-related responses.

Table 3

Principals' Implementation of Possible Components of Future-Ready Learning

Component of Future-Ready Learning	Mean Implementation Score (\bar{x})
1-1 computing initiatives	3.3
Digital and online (maybe open access) information resources	2.8

Authentic, real-world work opportunities for students	2.6
Standards-based grading and competency-based education	2.4
Project- and inquiry-based learning	2.3
Adaptive learning software and data systems	2.3
Redesigned learning spaces	2.1
Flexible scheduling	2.1
Online communities that share mutual learning interests	1.9
Digital badges and alternative credentialing mechanisms	1.7

Overall, participants consistently rated authentic, real-world work opportunities for students; 1-1 computing initiatives; standards-based grading and competency-based education; digital and online (maybe open access) information resources; and project- and inquiry-based learning in the top half of both the interest and implementation categories. Another question on the survey asked principals what changes, if any, their school was trying to make in order to prepare more future-ready graduates. Common responses included college and career readiness, technology infusion and training, authentic learning, and social-emotional learning (i.e., some of the executive function and 'soft skills' needed for life and workplace success).

As principals work to develop future-ready schools and graduates, they run into challenges that can make it difficult to enact their vision. We asked participants to rank order the five biggest challenges they face in preparing more future-ready graduates. The choices were developed through a mix of *a priori* codes developed from previous research on school leadership and themes identified in initial conversations between the researchers (Miles et al., 2014; Yin, 2014). The choices included:

- our teachers aren't interested in doing this work,
- our teachers don't know how to do this work,
- our leadership team isn't interested in doing this work,
- our leadership team doesn't know how to do this work,
- competing mandates from the state or federal governments,
- lack of technology,
- inflexible school schedules,
- lack of funding to do this work,
- lack of time to do this work,
- lack of professional development, and
- other (please describe).

The open-ended response allowed participants to express other challenges that they faced that were not included in the survey.

The biggest challenge that principals reported was a lack of time to do this work. This challenge was noted by 34% of participants. Other top challenges included competing mandates from state or federal governments (22%), a lack funding to do this work (21%), lack of professional development (21%), and inflexible school schedule (15%). Other challenges identified by participants for the open-ended response included a “lack of guidance and resources from the state that explain an exact process and resources needed to start a program” and a “lack of understanding from parents and community that future-ready is not just college-ready.” These results demonstrate that the obstacles faced by principals as they do this work are numerous and complex.

To address these challenges, principals must utilize different levers for organizational change, personnel development, and instructional transformation. We asked participants to identify supports that were available to them as they worked toward future-ready learning, teaching, and schooling. The choices included supports commonly found in school districts, such as district training, university courses, outside speakers, strategic plan, coaching, mentoring, visiting other (school) sites, online tutorials, and other. The open-ended response again allowed participants to express other supports that were not included in the survey.

Participating principals could select as many or as few supports that they felt were available to them. For this survey item, higher counts show greater prevalence across school districts in the state. As shown in Table 4, the most prevalent support reported by the participants was district training (41 responses). Additional, higher-frequency supports for

principals included visiting other (school) sites (37 responses), outside speakers (31 responses), and having a strategic plan (31 responses). Online tutorials were the least prevalent support noted in this study. The support that was least prevalent in the study was the use of online tutorials (10). Other supports identified by participants for the open-ended response included “Junior Achievement district curriculum specialists” and “autonomy from the central office to try new things without fear of failure.” None of the supports listed were identified by more than 30% of participants.

Table 4

Supports Available to Principals for Future-Ready Learning

Supports for Principals	Count
District training	41
Visiting other (school) sites	37
Outside speakers	31
Strategic plan	31
Coaching	23
Mentoring	23
University courses	20
Online tutorial	10

Discussion and Implications

The principals who participated in this study made up a representative portion of the state of Nebraska, representing the rurality of the state and thirteen of the seventeen Educational Service Units. The findings of this study demonstrated that Nebraska principals are interested in developing future-ready graduates by providing school experiences that encourage higher-level thinking, student agency, and authentic, real-world work experiences for their students. These priorities have sparked principals' interest in - and implementation of - authentic, real-world work; project- and inquiry-based learning; standards-based grading; 1-1 computing initiatives; and other digital resources and supports. Enacting these priorities comes with the ever-present challenges of time, training, and often-countervailing federal- and state-level mandates. Nebraska principals are addressing these challenges by turning to their district offices, outside experts, and other local sites for guidance. The following discussion identifies some of the key issues that schools face when doing this work as well as recommendations for future support and scholarship.

First, the impetus for this study originated in the current movement toward the development of future-ready graduates, a movement that is rooted in many of the criticisms aimed at traditional school and pedagogical models. These traditional models often tend to be

based on a ‘teaching as transmission’ model of instruction (Ainley & Carstens, 2018) or a ‘banking model’ of learning (Freire, 1970) and are thought by many to impede practices that prepare students for life, citizenship, and career success (see, e.g., Hermans et al., 2008; McLeod & Shareski, 2018; Vander Ark & Liebttag, 2021; O’Shea, 2021). In our current global, innovation society, many schools and communities are determining that students need to be exposed to practices that are designed to make them think, design, collaborate, analyze, evaluate, and build a variety of ‘deeper learning’ skills across the curriculum. These skills and dispositions are difficult to develop in students when utilizing a lecture format (Ainley & Carstens, 2018) or in schools that emphasize control, compliance, factual recall, and procedural regurgitation (McLeod & Shareski, 2018). School leaders are a key component for addressing these shifts since they are the second-most influential school factor (after classroom teaching) when it comes to student success (see, e.g., Leithwood et al., 2004). Considering the substantial influence that leadership has on school outcomes, a clear alignment should exist between principals’ instructional and organizational priorities and the supports provided to them as they work toward future-ready learning in their local communities.

Second, it’s worth noting that although 1-1 computing initiatives and digital/online resources were the two most implemented components of future-ready learning listed in this study, developing future-ready graduates extends well beyond technology (WEF, 2020). The presence of computing devices and online resources is necessary but insufficient for transforming student learning experiences without concurrent emphases on different learning

and schooling contexts for students. The prevalence of these two indicators at the top of the implementation list for principals may be an indicator that these structures are relatively easy to implement compared to more complex changes in schooling. The principals in this study indicated that they are interested - and need greater supports - in other areas that focus more directly on the student learning experience, such as authentic, real-world work and project- and inquiry-based learning.

Third, participating principals indicated that they are so busy implementing current models of schooling that they are struggling to find time to create more relevant learning models for students. The participants in this study also are struggling with a lack of resources and training for their educators, as well as competing state- and federal-level mandates. This is similar to findings from Blakesley (2012) and Preston and Barnes (2017), who explained that educational leaders often are wedged between local priorities and centrally-mandated directives. Given that none of the most common supports for principals was identified by more than 30% of participants when it comes to future-ready learning, it seems clear that participants need more support when it comes to new schooling modalities. Future-ready systems of schooling that are more relevant and meaningful for students will never be implemented adequately without addressing these ongoing challenges. We also think it is worth noting that neither district-level training nor site visits to other schools, the top two supports for future-ready learning that principals in this study indicated that they are receiving, are going to address their top-listed challenges of external mandates and lack of funding for this

type of work. School districts will need to provide other supports and help principals understand how they can accomplish some of their desired future-ready learning goals within their internal contexts while they await higher-level changes in our educational policy and funding systems.

The principals who participated in this study are working toward more robust learning modalities for students and are interested in alternative assessment mechanisms, student progression structures, technological resources, and interpersonal supports to facilitate their new learning and teaching work. While the scope of this study was limited to the state of Nebraska, we see similar work occurring in many other schools, states, and nations. While participants' responses represent a potential blueprint for supporting principals in their implementation of future-ready schooling in the state of Nebraska, a similar approach could be taken in other locations as well. Clearly more supports are needed if principals and their schools are to adequately address the future-ready preparation needs of their students and overcome the challenges that stand in the way of that work. More research is needed to determine how best to support school leaders and educational organizations as they work toward these important societal goals.

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