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# Strategic school solutions: a capacity building framework for leaders accelerating 21st century teaching and learning

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# STRATEGIC SCHOOL SOLUTIONS: A CAPACITY BUILDING FRAMEWORK FOR LEADERS ACCELERATING 21ST CENTURY TEACHING AND LEARNING

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by

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DOCTOR OF EDUCATION

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# DEDICATION

*To my spouse;* your humor and steadfast support made this feat possible.

*To my mom and dad*; I attribute my love for learning to you both.

*To my village* (teachers, mentors, extended family and friends); your positive influence is evident.

Thank you!

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The completion of this dissertation is one of the greatest, most fulfilling joys of my life. An old African proverb says, *it takes a village to raise a child*. I am keenly aware and appreciative of the spiritually rich people who have taken part in my growth. Many thanks and sincere gratitude to the following:

My Life Partner: I'm so grateful to have benefited from your tremendous patience, discerning wisdom and practical experience, Dr. Hubbard!

Mom: you have introduced to me to most of what I enjoy today: a love for reading chief among them. Not just in words, but also in your actions, you've modeled work ethic, responsibility, integrity, and curiosity. I'd like to think I got many of those traits from you. Thank you for nurturing me to be a good person. Know that it was you that kindled my proclivity to apply my talents to benefit society.

Dad: I remember as a teenager you said, "Beauty fades, brains last forever." You repeated incessantly that, "You can do anything you put your mind to." That thinking gave me the confidence to believe that I, too, despite my uncertain youth, could earn a doctorate one day. Thanks for our long-winded (ha!), deep, analytical discussions about the greater world. Your perseverance, intellect, and feminism helped make this possible.

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And last, but not least…

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# VITA

## SUMMARY

***Organizational Leadership Distinguished Scholar*** *with extensive 21st century teaching and learning experience in K-12 settings consults with school leaders' in developing innovation, organizational learning and transformation. Working in an advisory capacity, leaders are better able to provide enhanced andragogical professional development trainings that best facilitate increased teacher commitment and intrinsic motivation to integrate suggested contemporary instructional methodologies. Enhanced school culture is observed in systems, processes and employee empowerment by utilizing electronic assessments, research-based theory application, strategy, and coaching. With analysis of perception data, coaching conversations and technical support, creating organizational structures for collaboration and knowledge sharing leverages less fragmentation, and more organizational effectiveness. The result is an achieved school mission–increased student learning and successful preparation for Information Age colleges and careers.*

## RELEVANT QUALIFICATIONS

- 10+ years of experience in improving educational environments while teaching
- Extensive experience conducting professional development trainings in 21st century skills for teachers and administrators across multiple school sites
- Expertise in Common Core State Standards educational technology integration
- Excellent analytic, organization and problem-solving skills, with optimistic orientation
- Exemplary interactive skills, ability to mediate thinking, articulate meaning, persuade and inspire action through written and verbal communication
- Adaptable, ability to adjust to needs of audience, addressing personal and interpersonal sensitivity, with enhanced multicultural perspective from international and domestic travel experience

## EDUCATION

**Doctor of Education,** ***Organizational Leadership*** May 2016
Dissertation Topic: *Capacity Building Framework for Leaders' Accelerating 21st Century Teaching and Learning*
Organizational Leadership Distinguished Scholar November 2013
Pepperdine University, Los Angeles, CA

**Master of Arts and Multiple Subject Credential,** ***Elementary Education*** May 2005
Loyola Marymount University, Los Angeles, CA

**Bachelor of Arts,** ***Psychology*** December 1999
Hampton University, Hampton, VA

TRAINING & DEVELOPMENT EXPERIENCE

- Delivered leadership, consultation, coaching and coordination of schoolwide initiatives, with expertise in organization development and 21st century information, communication and technology
- Member of ASTD (renamed the Association for Talent Development -ATD), ISTE, CUE
- Facilitated numerous commended staff trainings on various topics, including: *Instructional Technology Integration, State Standards & Data-based Instruction*, *Academic Conversations, Student-led Conferences, Classroom Engagement and Management* and *more*
- Coordinated and trained staff in new educational technology platforms, e.g. Tablet Utilization, Screencasts, Accelerated Reader, School Webpage, Student Digital Portfolios

TEACHING EXPERIENCE

**Media Literacy Educator and Program Coordinator** 2014-2011
Paul Revere Charter Middle School and Magnet Center, Los Angeles, CA

- Trained staff in electronic database utilization, e.g. Common Core State Standards precept of text complexity, digital literature analysis, research strategy in citing factual text-based evidence
- Coached instructional technology-integration skills e.g. information literacy, Microsoft Office software, Apple OSX, operation of applications, tablets, desktops, document readers, eBooks in Kindle and iPad formats
- Realized the purchase of 12 new iMac desktop computers, a new color laser printer for school stakeholders, and obtained over 50% of PRMS teachers with classroom laser printers from authored proposals that were accepted and funded
- Coordinated robust media literacy program: curated resources for curriculum standards, including electronic data-driven reading program to gain student diagnostic and formative literacy comprehension skills through STAR and Accelerated Reader, and increased patronage each successive year

**Media Literacy Educator/Professional Development Coordinator** 2011-2010
Florence Nightingale Middle School, Los Angeles, CA

- Contributed in leadership strategic planning; proficient in Adaptive Schools and Cognitive Coaching Seminars®, employed *reflection* and *planning* coaching conversation models with colleagues
- Coordinated self-, administrator- and, or teacher- facilitated professional development trainings of engaging, pedagogy-enhancing topics, e.g. *Response to Intervention and Instruction*, *Developing Thinking through Strategic Questioning* and *Communication via the Classroom Webpage*
- Procured funding for technological access and utilization of resources, e.g. flash drives per student, website developer, and school site licenses for instructional software and resources
- Trained staff in technology utilization for classroom integration of enhanced engagement and learning, using 21st century digital power tools

**Classroom Teacher** 2010-2002

Florence Nightingale Middle School, Los Angeles, CA

- Educated students in Mathematics, English, Earth Science, Health, and Personal Skills Development, worked with varying academic needs, e.g. English Language Learners, resource and gifted
- Developed and planned policy enhancements for school culture as participant of the Safe and Civil Schools Leadership Committee and Professional Development Committee
- Modeled emerging classroom technology for expanded peer utilization of engaging and strategic instructional techniques

CORPORATE EXPERIENCE

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**Program Specialist** 2001-2000

Nunn Consulting, Inc., Los Angeles, CA

- Collaborated with agency program managers to develop, refine and execute organizational priorities
- Facilitated client work plans, organizational and respective community need assessments
- Participated in feasibility studies of non-profit agencies
- Initiated and chaired Organizational Efficiency Committee

**Research Associate**

- Designed and developed primary data collection instruments
- Analyzed agency records for process and outcome data
- Conducted focus groups, coded and synthesized qualitative data
- Authored draft progress, summary, quarterly, and annual evaluation reports

# ABSTRACT

This grounded theory study sought to create a viable framework that may help school leaders accelerate the expansion of an authentic 21st century instructional model. The U.S. economy is now more dependent on knowledge work than manufacturing. Yet, many for-profit, non-profit, and public sectors perceive schools as not adequately preparing students for 21st century careers and colleges. However, customary principal-led change is challenging. Leaders face several complex organizational challenges, including a modern-day duty and role expansion that limits time, and the inherent difficulty of human-behavior and organizational change, observed in the fact that schools have deeply entrenched norms: an estimated 150 years of traditional lecture-dominant instruction.

As such, a singular research question informed this study: What leadership competencies do 21st century change-savvy school administrators perceive as critical to accelerate successful change to a 21st century instructional model? Using a purposive sampling method, *change-savvy* school leaders ($n$ = 22) with *lived experience* were interviewed covering germane topics such as what worked for them, professional development, and change management.

Utilizing Charmaz's (2014) constructed grounded theory coding process and data analysis technique, the results include two key findings: five leadership competencies *(discerning, authentic, facilitative, collaborative,* and *communicative*) and the *Authentic 21st Century Leadership Framework,* which integrates the respective competencies to provide a user guide for the contemporary time-burdened school leader. Ultimately, the study concluded the following: (a) the leadership competencies are essential; (b) the framework provides a supportive guide to accelerate expansion of the 21st century instructional model; (c) 21st century leadership is chiefly collaborative; (d) leader created and sustained growth culture is critical; and, lastly (e)

as the 21st century instructional model magnifies in utilization across schools, opportunities for all students improve.

# Chapter 1: Problem and Purpose

Knowledge is power, that knowledge is safety, and that knowledge is happiness.

–Thomas Jefferson, Letter to George Ticknor, 1817

Increasing student academic achievement is a widely debated topic nationwide. Educational, political, and business leaders alike have expressed concern regarding the U.S.'s ability to continue competing in the current global economy. At the center of this debate is an issue of how best to suitably educate America's youths for the new global economy. Access to higher education has a strong correlation with potential earnings (U.S. Bureau of Labor Statistics, 2014). Politicians have described education as critical, if not entirely necessary, for achieving the American Dream. The quality of education received, such as a rigorous curriculum, engaging classroom environment and expert teaching, significantly impact students' life choices, circumstances and career opportunities (Darling-Hammond, 1997, 2010). Subsequently, the aim of this study is to examine leaders' of K-12 school organizations ability to transition their school site to embrace reform based upon preparing students for the present-day Knowledge Age economy (see Chapter 2) to (a) understand the scope of existing barriers, and (b) create a research-informed change-framework of practice.

In the role of educator to middle school children for over a decade, the researcher has observed firsthand how children of low-income families often have a limited skillset as compared to the academic and social skills enjoyed by children of affluent families. Children of prosperous families not always, but frequently appeared to exhibit more socially advantageous skills from an early age that seemed to factor into greater academic and personal opportunities. In fact a child's socio-economic status (SES) is the most powerful predictor of that child's

academic achievement, the higher the SES the higher the likelihood of strong academic achievement (Wu & Qi, 2006).

A lack of access to a rigorous curriculum and poor conditions for sustained school engagement has been observed in schools situated in neighborhoods comprised of lower socio-economic status (Kozol, 1991). For example, in her book titled *The Right to Learn: A Blueprint for Creating Schools that Work*, Darling-Hammond (1997) documented how the most disadvantaged students who attend in the least funded schools are most likely to experience inequality of access to qualified teachers. As compared to students in more affluent communities, students of lower SES typically attend local schools that do not have equal access to the best teachers and environments of rigorous coursework, like that offered in Advanced Placement or college preparatory courses.

For example, in the state of California, which purportedly offers equal per pupil state funding for all students as decreed by the state funding formula, UCLA's Institute for Democracy, Education, and Access (2004) reported, "California school funding is not equal" (p. 1) which is contradictory to the formula. Additionally, according to a study by Education Trust-West (as cited in Darling-Hammond, 2010), "the 50 largest California districts, high poverty schools spent and average of $2576 per teacher less on salaries than low poverty schools within the same district" (p. 39). Urban districts are being reported as receiving less funding than suburban districts.

One reason this phenomenon is thought to occur include the monetary and political contributions of upper-income parents, such as lobbying skills, less tolerance for dilapidated resources, and significantly more funds raised by higher earning parents, all of which contribute positively to the overall school program (Darling-Hammond, 2010). Fewer resources, according

to Darling-Hammond (2010), literally inhibit access to knowledge and thus restrict future life success of students. As analyzed further in Chapter 2, these disparities result in an achievement gap, a notorious issue of academic equity among ethnic cultures and SES groups.

Consequently, in search of a strategic solution, the recent advent and proliferation of affordable technology—with Internet capability—is auspiciously speculated to potentially remediate the disparity of resources, by increasing knowledge of the children most impacted. Enhanced access to information at one's fingertips, previously singularly available to persons of wealth, may cure a longstanding social problem. This theory, posited by information-technology enthusiasts, suggests that if technology is widely accessible and used strategically as a learning tool, then ultimately the technology may help to restore equity of opportunity. The thought is that technology provides knowledge access and attainment to those who have come from meager means. As an abstract theory, this supposition appears logical at face value. However, when applied in practice, it is often the case that simply providing the technology in urban schools is insufficient (Chelliah & Clarke, 2011). In the context of bureaucratic primary and secondary education institutions, for example, operated with traditional and entrenched organizational norms of cultural and instructional operations, this proposed educational solution is more often met with trepidation and mass resistance from would-be practitioners (Creighton, 2012).

Utilizing educational technology requires new ways of teaching and learning while using new tools (Chelliah & Clarke, 2011). Moreover, the demands for change of teaching style and methodology are frequently expected with little training prior to utilization (King & Bouchard, 2011). The difficulties associated with performance of newer technology points to a lack of capacity, or need for appropriate and pertinent training (Cummings & Worley, 2005). This lack of appropriate training for and orientation to change creates a barrier to implementation that

cycles back as sufficient rationale for teachers' non-compliance or disaffiliation with the incorporation of strategic uses of technology (Rotherham & Willingham, 2009).

While the demand for organizations to adapt to specific skills required of 21st century technology are unique, the need to change organizational norms is an age-old problem (Cummings & Worley, 2005; Trilling & Fadel, 2009). For example, in past eras of industry change, leadership leveraged in savvy and strategic ways is seen as a vital antecedent to large-scale change in staff behavior. Likewise, today, leaders still hold the potential to influence change of follower orientation to one of greater adaptability and participation (Fullan, 2001, 2010; Kochan, Bredenson, & Riehl, 2002; Northouse, 2010). Motivating groups of public school educators to change both their instructional habits and tools is a formidable responsibility expected of school leaders, especially when this task comes in addition to an often-overloaded list of tasks requested of present-day principals (Deal & Peterson, 1999; Fullan, 2010, 2013a; Murphy, 2002).

Yet, the chore of increasing educator professional growth in knowledge and application of technology, as well as other interrelated 21st century skills, is necessary, as substantiated by demand in both the for-profit and non-profit sectors. For instance, economists have noted the accelerating change in production from manufacturing of goods to the provision of services or informational goods (Powell & Snellman, 2004). Moreover, it is notable that "the top 10 in-demand jobs projected for 2010 did not exist in 2004" (Gunderson, Hones, & Scanland, as cited in Darling Hammond, 2010, p. 2). Schools now need to prepare students for jobs that do not necessarily exist at present. A method to accomplish this feat, as discussed at length in Chapter 2, is to increase teacher knowledge and integration of 21st century skills summarized as the 4Cs—communication, creativity, collaboration and critical thinking skills—as applied to

problems (Trilling & Fadel, 2009). Considering that "knowledge is now recognised as the driver of productivity and economic growth, leading to a new focus on the role of information, technology and learning in economic performance" (Organisation of Economic Co-operation and Development, 1996, p. 3), it is decidedly important for public school leaders to accelerate the change of the traditional instructional model to preserve the nation as a competitive participant in an increasingly global economy. Leaders will need to support staff risk-taking in adapting to newer methodology and tools to facilitate this process.

However, as discussed further in Chapter 2, change in any organization is challenging; as such, a motivational strategy of facilitating urgency to change is recommended to begin with, followed by strategic management thereafter to ensure lasting change (Kotter, 2012). The fact that today's global economy is becoming increasingly techno-centered is irrefutable, and, as suggested, this fact may be emphasized in training by leadership to stimulate the motivation of a school staff to change traditional job-associated behavioral norms. Nonetheless, despite an apparent and seemingly omnipresent demand for technology-enhanced skills—potential motivation for some—lasting organizational behavior change is difficult to achieve. While students themselves may be amenable to change, often many leaders and teachers, some of whom who have decades of positive experience in traditional methods, can be resistant to change. However, given the economic demands and the role of the school principal, school leaders are accountable for establishing skilled technology utilization for learning. The complexity of this paradox is replete with multi-dynamic factors that can appear insurmountable. However, organizational development, leadership theory, and perhaps history itself inform paths upon which to embark.

**Organizational Development and Change in Public Schools**

In comparison to the private sector, many school districts have yet to match the investment and understanding of how organizational development (OD) principles can affect schools positively. OD is a "systemwide application and transfer of behavioral science knowledge to the planned development, improvement, and reinforcement of the strategies, structures, and processes that lead to organization effectiveness" (Cummings & Worley, 2005, p. 667) and can be summarized simply as *planned change*. The OD industry is an offshoot of industrial organizational psychology that gained popularity in the early 1980s. Since then, major corporations have realized the benefits associated with influencing organizational structures and cultures that lead to greater profitability.

The K-12 public school organization, however, as a not-for-profit entity, focuses on its mission "to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access" (U.S. Department of Education, n.d., para. 1) without necessarily applying the behavioral science knowledge and practices associated with OD. For example, schools employ instructional specialists, literacy coaches and program coordinators along with the leaders/principals/administrators that lead the school, sometimes based on outmoded, industry-era management style. Public schools feature little, if any, OD specialization outside of particular tasks requested of principals that work to solely improve organizational capacity and therefore efficiency.

Moreover, despite innovations specific to the opening of many charter school organizations, most public schools, as evidenced in the Los Angeles Unified School District (LAUSD, n.d.), remain primarily as traditional bureaucratic organizations. This lack of organizational capacity is a documented problem (King & Bouchard, 2011). To plan more

effectively for a school mission to be achieved, "a well-conceived and well-managed organization culture, closely linked to an effective business strategy, can mean the difference between success and failure in today's demanding environments" (Cummings & Worley, 2005, p. 482). That is, how an organizational culture exists and the leadership and structure of its operation can either facilitate or prevent the kind of knowledge sharing required of a thriving learning organization (Cummings & Worley, 2005; Robbins & Judge, 2011; Senge, 2006).

**Statement of the Problem**

> The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.
>
> –Alvin Toffler, *Future Shock,* 1990

Public schools necessitate reform and its leaders require support to facilitate such organizational change. Every school that has assumed the Common Core State Standards (CCSS), which is a shared set of national educational standards, is now expected to utilize technology in instruction, mirroring the use of technology in the workplace or college environment. Given that the majority of states have voluntarily adopted this educational initiative, it is consequently imperative that America's public schools accelerate the teaching of a 21st century instructional model. The archetype of this model not only includes 21st century technology, but also higher-order thinking skills, as well as an intercultural and environmental awareness to prepare students adequately for an increasing knowledge-based interdependent economy (Senge, 2012).

Despite this economic reality and a variety of strategies offered via the Internet, an entrenched lecture-based traditional instructional model still persists in U.S. public schools. Common hindrances involve school leaders' failure to provide relevant timely professional

development of teaching staff (King & Bouchard, 2011). In order to attain system-wide goals, however, changes in schools' usual modus operandi must occur. Planned change, as mentioned previously, is suggested to accelerate capacity building for this purpose. To address the inherent barriers associated with change, in the context of highly bureaucratized school climate, a study to garner both scholar-based and experiential evidence of best practices in leadership is proposed.

School principals are often inundated with external and internal accountability measures (Kochan et al., 2002), such that their decisions result in quick fixes versus strategic, long-term, whole system reform (Fullan, 2013a). If school leaders fail to take into account recognized OD strategy, structures, and/or processes for transformation, schools will continue to be at risk for exacerbating the declining trend in education and employability of minorities in this country. Conversely, providing school administrators with a research-based capacity building framework to accelerate OD for meeting the existing demands of improved 21st century instruction may ultimately improve student learning and preparation, which would result in sustained global competiveness.

**Purpose of the Study**

The purpose of this study is to create a framework that may help school leaders expedite the transition of their respective traditional school programs to a 21st century instructional model. While many leadership books propose best methods of school leadership for change, this study aims to synthesize contemporary theory and undertake empirical research for the modern day time-burdened school principal's ease of application. This study seeks to address and obviate common hindrances to increasing organizational capacity, such as the comfort of tradition, and low morale, by discovering attributes and methods of savvy school leaders with pertinent experience. The literature review will apply research amassed in adjoining fields of OD,

leadership, psychology, education, and educational technology. Furthermore, this study will seek to ascertain exemplary practices by exploring strategies used by school leaders that yield successful program transformation in incorporating 21st century teaching and learning.

**Research Question**

To address the focus of this study, the following is the central guiding research question to be qualitatively investigated:

> What leadership competencies do 21st century change-savvy school administrators perceive as critical to accelerate successful change to a 21st century instructional model?

**Significance of Study**

The Information Age (aka Knowledge Age) is upon the U.S., and its nation's public schools are charged with preparing pupils for this increasingly knowledge and technology-based economy (Organisation of Economic Co-operation and Development, 1996). Schools often possess a complex organizational culture, have less funding and organizational resources than for-profit businesses, and as such are challenged to transition outmoded long-held traditional instructional practices to a 21st century model that teaches valuable skills for employability in today's market.

The onus falls upon the school principal to create the motivation, learning experiences, and organizational structure for developing his/her staff and ensuring a new instructional model is utilized. However, the current all-encompassing role and responsibilities of the average school principal leaves very little time to reflect on the many day-to-day instructional and operational needs, much less provide the time to review and implement scholarly research for long-term strategic planning necessary for system-wide change. Principals are typically inundated with

tasks associated with their job, often reacting to problems as they arise, which results in an orientation toward "quick fixes and nuggets of knowledge that can be immediately applied" (Kochan et al., 2002, p. 290).

The problem lies in the fact that while research of methods to integrate technology is ample, the very nature of school leaders' work leaves little time to implement a particular method systemically. Added to the problem is the inherent challenge of change itself; organization transformation is heavily dependent upon leadership, both for vision and management. Change is simply difficult to effect over a sustained period of time (Kotter, 2012).

Combined, these factors pose a threat to the timely augmentation of the traditional school to adequately prepare students for Knowledge Age colleges and careers. Leaders' work is critical to accelerating change through staff orientation, knowledge, and practice of integrated technology. Given this reality, this study aims to determine the circumstances, characteristics, and strategies employed by effective school leaders to change their existing school model to a 21st century model. A synthesis of current research, taking into account these aforementioned common barriers, yield a proposed framework to be utilized by modern-day K-12 school leaders in their respective school environments.

Additionally, this study is conducted in an effort to answer the call for further research. For example, in a dissertation about education in the 21st century, Ziegenfuss (2010) explicitly asserts an "expanded epistemic frame of school leadership is necessary" (p. 12) to suggest a change from going about business as usual, redesigning the organization to include an awareness of theories of action, such as OD and transformational change strategy. Furthermore, an examination by Seong and Ho (2012) found relatively few studies of school leaders' role in information, communication, and technology, also known as ICT reform. Likewise, in a

dissertation by Cheung (2013), an explicit call for further study of principals' implementing 21st century skills is recommended.

Therefore, in this study, qualitative methodology is used to investigate school leaders of K-12 schools that have led 21st century school transformation. The key takeaway learned from this research may be highly applicable, rendering it easy to access and implement change strategies focused on the public schools. The product will be a theoretical framework viewed from the domains of *OD*, *leader and teacher development* to successfully transition the education organization from primarily traditional practices to an evolved 21st century-savvy instructional model.

**Assumptions**

This study makes the assumption that the leaders or participants who have exacted a change in their respective education institution responds honestly to the interview questions regarding their lived change experiences and personal opinions. In addition, it is assumed that the participants in this study will have similar experiences as the overall target population, such as having had to facilitate buy-in of staff to transition to a 21st century instructional model.

**Limitations**

One limitation of the study is the setting. To be consistent the researcher would prefer the interviews take place in one setting, however given the challenge of school leader participants' accessibility, an effort to be amenable to one's preferred setting is a limitation to be endured. Second, the time frame to complete this study could be viewed as a limitation. As mentioned, the independent investigation is a dissertation study, scale of the study had to be within reach for the researcher. For example, a longitudinal study or nationwide-scale of study had to be ruled out.

Lastly, while exhaustive efforts were taken to use strategies and suggestions prescribed by methodology experts, a lack of experience holds the potential to limit the study.

**Delimitations**

A delimitation of this study is that participants were mostly from districts in southern California, as opposed to a sampling more randomly across the nation. Another delimitation is the operational definition of savvy-change leader as possessing no less than 2 years of experience integrating 21st century skills into their instructional program.

**Definition of Terms**

*21st Century Skills:* Essential skills for success in today's economy, such as critical thinking, problem solving, communication and collaboration (Trilling & Fadel, 2009).

*4 C's of 21st Century Learning:*

- *"Critical Thinking* - Looking at problems in a new way, linking learning across subjects and disciplines.
- *Collaboration* - Working together to reach a goal; putting talent, expertise, and smarts to work.
- *Communication* - Sharing thoughts, questions, ideas, and solutions.
- *Creativity* - Trying new approaches to get things done equals innovation and invention" (Partnership for 21st Century Skills, 2010, p. 1).

*Change-savvy School Leader:* A school leader that organizes his/her respective instructional model to transition from traditional instructional methods to one that integrates technology in order to best prepare students for the Knowledge Age economy.

*Digital literacy*: Ability to use digital technology, communication tools, or networks to locate, evaluate, use, and create information.

*Information Age/Knowledge Age/Digital Age/21st Century*: The Information Age (aka the Knowledge Age or Digital Age) is characterized by the shift from traditional industry that the industrial revolution brought through industrialization to an economy based on information computerization (Trilling & Fadel, 2009).

*Information Literacy:* The ability to access, evaluate, and use information efficiently and effectively (Trilling & Fadel, 2009).

*Inquiry-based Learning:* "The learning method based on the power of questions" (Trilling & Fadel, 2009, p. 94) to engage and sustain learning.

*Design-based Learning:* An instructional "method that uses the power of designing solutions to problems" (Trilling & Fadel, 2009, p. 94) in engaging and sustaining learning.

*Knowledge-based Economy:* Indicates greater reliance on intellectual abilities than physical inputs or natural resources (Powell & Snellman, 2004).

*Organizational Development (OD):* System-wide application and transfer of behavioral science knowledge to the planned development, improvement, and reinforcement of the strategies, structures, and processes that lead to organization effectiveness (Cummings & Worley, 2005).

*Strategic* [Change]*:* considers the long view, the goal and means to achieve, relating to the identification of long-term or overall aims and interests and the means of achieving them (New Oxford's Dictionary, 2013).

*Traditional Model:* A model of teaching and learning that relies on lecture-based instruction, and teacher-centered rote practice (Common Core State Standards, 2010).

**Summary and Organization of Study**

Chapter 1 offered an introduction to this dissertation, emphasizing that despite an enhanced skillset required of workers in today's economy, school leaders are struggling to change their school culture from a traditional school model to one that is preparing students adequately for 21st century knowledge work, as compared to manual labor. Using qualitative methodology, this study intends to uncover strategies utilized by school leaders who are successfully leveraging 21st century instructional models. In Chapter 2, a comprehensive literature review includes a brief historical account of education and the challenge of equity. Then it proceeds to identify and detail emergent themes thought to improve school organization transformation. It discusses the K-12 school leaders' role in building school capacity for 21st century skills in teaching and learning. In Chapter 3, the methodology of qualitative research is described and the appropriate methods utilized in the study are specified. In Chapter 4, the results will be articulated, extrapolated for generalizability, synthesized, and presented in a framework. Lastly, in Chapter 5 a discussion and summary of the findings are used in making recommendations for future study.

# Chapter 2: Literature Review

## Introduction

In an effort to apply contemporary organizational leadership theory to strategic practice of leveraging change in public schools, this chapter presents a comprehensive review of literature of key attributes affecting teaching and learning in present day K-12 education organizations. First, a brief historical trajectory of the achievement gap grounds the study in the context of the most notorious school problem relevant to society. Then, as recommended by Creswell (2009), the literature review is organized by four critical concepts that emerged as pertinent to the current needs identified for contemporary school reform: 21st century skills, school leadership, andragogical professional development, and education change practices.

## Brief History of the Achievement Gap

The achievement gap is a controversial and distinct topic discussed in educational, private, and political organizations throughout the nation. The achievement gap is defined as the historically present distance in standardized test scores between Whites and Blacks (Raudenbush, 2009). However, presently, the dichotomy is split between Whites and Asians on one side and the larger people of color population, which includes non-White Latinos and African-Americans as the low performing, low SES comparison group. To analyze the current problem from a historical perspective, the traditional criteria of exploring the gap in academic achievement between Whites and Blacks were utilized.

**The gap narrows.** There was a period of time when the achievement gap was said to have narrowed (National Assessment of Educational Progress [NAEP], 2010). Some consider the landmark 1954 case decision in favor of *Brown v. Board of Education (BOE) of Topeka, Kansas* that deemed separate schools for Blacks and Whites as unconstitutional as the beginning of

closing of the gap by enforcing an end to de jure racial segregation. Critics note that the law actually took effect and truly began to be enforced nearly a decade later, especially in the South, around the time of the Civil Rights Act of 1964 (Ferguson & Mehta, 2004; Raudenbush, 2009; see Figure 1 for a timeline).

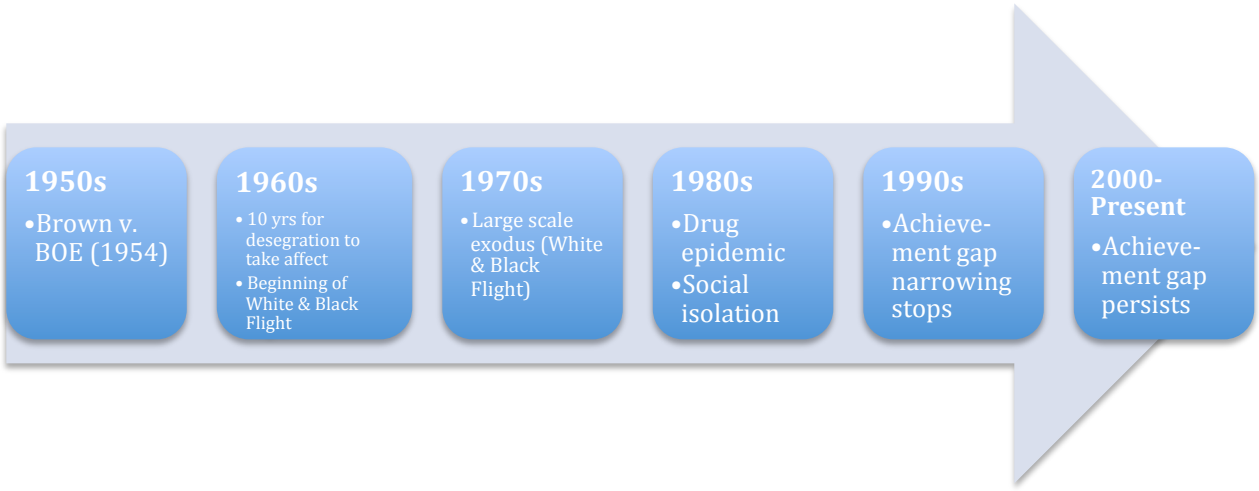



*Figure 1.* Timeline of achievement gap.

Before the *Brown v. BOE* decision, characteristics of segregated schools are said to have had harshly unequal conditions. For example, in many locations Black schools had a shorter school year (6 months versus 9 months), fewer years to complete (8 grades versus 12 grades), and secondhand texts, often in disrepair and filled with racial epithets (Raudenbush, 2009).

When combined, these circumstances led to a discernible gap in achievement between Black and White students and, consequently, limited means for Blacks' upward social mobility. Following the breakthrough Supreme Court case *Brown v. BOE* mandating school desegregation, a reversal of the 1896 *Plessy v. Ferguson* case deeming Jim Crow laws constitutional (Waks, 2005), Raudenbush (2009) suggested that while many inequalities were not abolished, significant gains in closing the gap, especially in literacy, were made roughly between 1960 and 1990:

> Data from the National Assessment of Educational Progress show a very large Black–White achievement gap in reading for 13-year-olds born around the time of Brown and

> tested in 1971. The gap then was a little more than a full standard deviation, meaning that a typical African American child would score below 82% of all White children. For children tested 17 years later, in 1988, this gap was reduced almost by half. (p. 170)

However, although this narrowing of the gap is definitively acknowledged, the NAEP report authored by Barton and Coley (2010) contradicts the argument that the narrowing began conclusively due to the desegregation of schools, instead suggesting this phenomenon as a factor involved, but not as an explanatory variable. Grissmer, Kirby, Berends, and Williamson (as cited in Barton & Coley, 2010) stated that additional factors such as parent education and income have also influenced the narrowing.

Moreover, the statistical means by which to attribute desegregation definitively as the beginning of the narrowing of the achievement gap have been questioned given that data monitoring of academic standing became accessible in the middle of the 20th century, but data from ethnic groups were not stratified. In addition, the rate of desegregation varied greatly by geographical area (Barton & Coley, 2010).

*Narrowing of the gap halts*. While opinions vary on the cause of the narrowing of the skill gap, the research does agree upon the end of the tightening of the achievement gap: the late 1980s (Waks, 2005; Wilson, 1987) and early 1990s (Barton & Coley, 2010; Ferguson & Mehta, 2004; Raudenbush, 2009; Wilson, 1987). The end of such narrowing is associated with the era commonly known as White flight, wherein many Whites moved to more suburban locations around the 1960s and 70s (Raudenbush, 2009). This era is known as a time when desegregation was occurring and urban neighborhoods hitherto predominately Caucasian were becoming increasingly ethnically diverse. Thus, Whites of varying European descent started migrating to suburbs. These new locations were characterized as having little to non-existent diversity.

*Social isolation.* Analogous to the White flight theory, another particularly illuminating reason offered for the halt in the narrowing of the achievement gap in the late 1980s came from sociologist William Julius Wilson (1987) in his second seminal book titled *The Truly Disadvantaged*. In this provocative text, Wilson transcended the White flight research by emphasizing the social degradation and associated risks exacerbated by the lesser-acknowledged phenomenon of Black flight. This era describes a time when middle class Blacks fled the increasing dilapidation of their urban communities for ones that were more affluent and class-centric; the period was around the same time as that of the White flight. As result of this migration, the residents and communities left behind were what Wilson termed the *truly disadvantaged*, also referred to as the *ghetto underclass*.

According to Wilson (1987), before the Black flight period, communities were integrated, comprising families from different SES backgrounds. Doctors, lawyers, teachers, servicemen, and the unemployed tended to live in close proximity. Perhaps more importantly, the children of vastly varying household salaries attended school together. Yet, as the economy plummeted, joblessness increased and single female parent households increased. Communities became less desirable and the African-American middle class families started to uproot itself. Only those who could not afford to move remained.

The home and school environments drastically changed for the truly disadvantaged who remained in their urban neighborhood and schools. Before the middle and working class departure, impoverished children were able to observe the benefits of education, honest work, and effort. Youths would be able to encounter productive, educated, and gainfully employed citizens of color. After the flight of higher earning families, what resulted in some of the nation's most poverty-stricken areas was the socially isolated ghetto underclass (Wilson, 1987).

*Environment of the truly disadvantaged.* Children coming of age in this atmosphere seldom have positive examples living among them; in their place is the observation of idleness from witnessing people with long periods of joblessness, ignorance, and crime. A contextual awareness and understanding of the importance of work and school is infrequent and not the norm experienced. Wilson (1987) noted that the absence of the encounters with Black middle class, which he termed as *social buffering*, propagates ignorance and poverty. Concerned with the socio-economic implications, he noted that "the development of cognitive, linguistic and other job related skills is adversely affected…A vicious cycle is perpetuated through the family, community and schools…A high degree of educational retardation exists in the inner city" (p. 58).

*Inner city and/or low-income school environment.* This lack of a social buffer constitutes a school environment that can look like the antithesis of a great school. The students who require the most support often end up with the least effective teachers and are in classes that are so overcrowded with students that it renders lessons inaccessible (Darling-Hammond, 1997; Kozol, 1991), especially given the classroom misbehavior and the sheer number of students in the same class who are uninterested in learning (Halle & Kurtz-Costes, 1997). Often times the educators in these school environments are exasperated, which only further hinders learning (Wilson, 1987).

Additionally, worse-off students frequently experience malfunctioning and poorly equipped facilities in their locally designated, often low-performing, low-income schools. To illustrate, in his book titled *Savage Inequalities,* Jonathan Kozol (1991) recalled visiting an inner-city school in New York, which he described as a building with no sign indicating it was a school. He recalled classrooms with no windows and low ceilings, watching students share books because there were not enough for the large class. These kinds of conditions often only

worsen the perception of school lacking value for underserved students (Barton & Coley, 2010). This misconception is especially detrimental to the truly disadvantaged students, as education attainment is often the very mechanism needed for deliverance from oppression, or said another way, access to upward social mobility.

*Low-income home environment.* "In the US, over 20% of children under the age of 18 are officially 'poor': This means they live in households with incomes below the federal poverty line" (Yoshikawa, Aber, & Beardslee, 2012, p. 272). But what does a poor home environment look like? Unfortunately, the economically disadvantaged home environment, like the schools the truly disadvantaged deemed children attend, are also typically of meager means and inferior to those attended by children of higher SES families (Halle & Kurtz-Costes, 1997). For example, beyond the strain of actually being impoverished and not always having basic physical needs met, living as a resident in an underprivileged neighborhood exposes youths to conditions that cause anxiety. Children of these communities can experience stressors that detract from strong academic pursuits, including observing violence, substance abuse, and interacting with convicts returning from incarceration (Speight, 2009).

**Program efforts to close the achievement gap.** Given the enormity of this pervasive challenge, it seems that virtually every current educational product now purports to help narrow the achievement gap. According to the reviewed literature specific to the aforementioned research question, there were few mentions of effectual programs. Instead, the research highlighted characteristics of successful program strategies, rather than robust, statistically effective whole programs. Accordingly, offered subsequently is a snapshot description of both programs and political incentives of those mentioned:

***Programs.*** Both for-profit and not-for-profit entities have created and implemented programs for traditional and non-traditional schools to address the notorious achievement gap.

***Student Success Skills (SSS).*** The SSS program is a school counselor-led intervention program aimed at closing the achievement gap between Whites and Black and Latinos. It was said to be effective at closing the achievement gap of low to mid-range performing students. Researchers who have used an experimental research design that compared the program to a control group showed results of improvement in math and reading. Although coordinated through a school's counseling office, the SSS program is said to be based on strong theoretical design and more specifically on three constructs that are called for in literature to address the achievement gap: (a) cognitive and metacognitive skills, such as goal setting; (b) social skills; and (c) self-management skills. Moreover, results from a U.S. Department of Education-approved research model showed that participating students demonstrated improvement in math and reading (Miranda, Webb, Brigman, & Peluso, 2007).

***AVID.*** AVID (Advancement Via Individual Determination) is a contemporary proprietary curriculum that has received positive recognition in this literature review of programs that also purposes to support heightened student learning, often of low-achieving students. It teaches strategies that high-achieving students use, such as improving organization, note-taking, and emphasizing critical thinking. While it has received mixed results on achievement depending on the comparison group, it has been documented as particularly effective for mathematics achievement (Peak, 2010).

***CCSS.*** The Common Core State Standards (CCSS) is an instructional framework co-created by National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) to standardize existing varying state standards

to ostensibly provide students the knowledge and skills that best prepare students for college, career and life no matter where they live. A means of addressing gaps in equity, the CCSS also is said to be based in research that addresses the necessary shifts required of our present day economy. The CCSS is self-described as a successful product of state-led change (as opposed to federal mandates) to bring about educational equity. Currently, "forty-three states, the District of Columbia, four territories, and the Department of Defense Education Activity (DoDEA)…have voluntarily adopted and are moving forward with the Common Core" (Common Core State Standards Initiative, 2016, para. 2). In lieu of different curriculum standards per state, the CCSS are self-reported to have been developed standards from the best in the country. Additionally, standards from top-performing countries are described as having played a significant role in the development of the CCSS.

***Policies.*** Wide-scale efforts to address the achievement gap have been attempted by government, business, and education groups. Policymakers themselves are indeed thought to help improve schools (Barton & Coley, 2010; Darling-Hammond, 2010), as evidenced by some of the programs mentioned. Moreover, this notion is demonstrated through the funding they allocate, as well as the awareness they bring to the press, state legislators, and local school districts.

***Clinton years (class size).*** One initiative that gained some initial traction during the Clinton administration (1992-2000) was an effort toward decreasing the student to teacher ratio, or class size. However, this policy had mixed results. The subsequent George W. Bush administration pulled the funding from this policy, reportedly to pursue the new president's own initiatives (Ferguson & Mehta, 2004).

***No Child Left Behind (NCLB).*** One of the more recent changes in education initiatives aimed at closing the achievement gap is the federal initiative called the No Child Left Behind (NCLB) Act. It began during the G.W. Bush administration and is rooted in accountability measures to bring all low performing students to proficiency by means of testing (Ferguson & Mehta, 2004). The testing was designed to determine the quality of education being provided. Although as a model it was reported to have some strength, it has mostly been revamped by the present Obama administration to improve some of the program's associated challenges. For example, NCLB has received severe criticism for being an underfunded mandate. In fact, there are now waivers that allow states more flexibility in defining what a quality educational program encompasses beyond test scores (Jennings, 2012). There has been pushback on what is considered a lack of federal funding matching the increased costs to implement testing services and support for so called "failing schools" (Peters, 2012, p. 27).

***Race to the Top.*** President Obama's administration, while retaining NCLB, has aimed to improve its flexibility by broadening its definition of quality instruction beyond the singular method of evaluation via standards testing and expanding its goals to include career and college readiness. The Race to the Top initiative, for example, provides competitive grants for states that help to create conditions for innovation and sustainable reform (U.S. Department of Education, 2013).

***Voucher and school choice.*** Proposed in voucher and school choice options are politically debated reform initiatives that work like a market system. To address students required to attend schools perceived as *poor-quality*, a student would be given *choice* to select any school within his/her district. The problem is that while a voucher seems on the surface to be a good idea, its effects have been questioned. For instance, would the system exacerbate

stratification? Opponents argue that it may very well undo all the racial integration policies that took years of planning and policy to create (Peters, 2013).

**Current state of affairs: How inequality persists.** Despite decades of political debate, for-profit and non-profit efforts, and the recent programmatic and political initiatives mentioned previously, several characteristics of inequality endure. Child poverty rates are the highest in the U.S. among industrialized nations, and the U.S. provides fewer social supports comparatively to other industrialized nations (Darling-Hammond, 2010). In the U.S, disparity in reading and mathematics achievement data by ethnic groups remain (Aud et al., 2011).

One entity, the Opportunity Nation (n.d.), a proclaimed bipartisan campaign for closing the opportunity gap, has argued that access to the American Dream by way of providing access to public knowledge and skills related to employability is the very core of America. This organization offers an Opportunity Index, a statistical tool to be utilized by politicians and government agencies to understand how the achievement gap affects opportunities to climb the social ladder. This continued gap is said to affect all Americans in terms of the economy, a 2009 McKinsey & Company report titled *The Economic Impact of Achievement Gap in America's Schools* discussed the underutilization of human potential in terms of cost to the American people, estimating a difference of billions of dollars per annum in the Gross Domestic Product (GDP) should this gap close. For example, the report estimates that if in 2008 the gap had been narrowed to the achievement proficiency levels of other, better-performing nations, like Finland and Korea, the U.S.'s GDP would be anywhere from 1.3-2.3 trillion dollars higher. Likewise, "if the gap between black and Latino student performance had been similarly narrowed, there would have been between $310 billion and $525 billion higher" (p. 6). Essentially the failure to close this notorious gap contributes to the economy remaining in recession.

Furthermore, synthesizing a decade of research in her 1997 book, *The Right to Learn: A Blueprint for Creating Schools That Work*, Linda Darling-Hammond paralleled the configuration of large schools to industrial factories of a pervious era, calling it the Factory Model. The author held that at the dawn of the 20th century, schools were created amid America's transition in economy from the Agrarian Age to the Industrial Age; schools went from singular schoolhouses to large, cost-saving bureaucratic organizations. By Darling-Hammond's account, schools were developed like manufacturing industries, established to train large masses of children basic skills needed for appropriate work socialization, such as being on time, obedient, and able to perform lower cognitive-level demands.

Schools of today still teach from this model and continue to retain inequitable conditions. For example, over a decade later in one of her most recent books, *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future*, Darling-Hammond (2010) documented how globalization requires schools to transform; yet, despite substantial research studies that point to best methods to gain traction on educational improvement, inequity persists. For example, inequalities characteristic of high need schools serving low income communities include: less prepared teachers instructing the highest need students, lack of class availability (e.g., honors, or Limited English Proficiency (LEP) and English Language Learner (ELL) courses), and severe overcrowding that limits close connections between teachers and students. In fact, Darling-Hammond attributed much of the continuing limited access to best conditions for learning to the actual size of the institutional structure of most large urban schools. These kinds of inequities likely contribute to a significant difference in drop out rate, affecting non-White Latinos and Blacks disproportionately than Whites (National Center for Education Statistics, n.d.).

Darling-Hammond's (2010) research has detailed challenges associated with reforming schools, citing, for instance, a lack of investment in teacher preparation, curriculum resources and school supports, in addition to the continued debate by some congressmen regarding whether federal and state money spent truly makes a difference in children's learning. Darling-Hammond demonstrated how labeling schools (e.g., low-income and low-performing) creates conditions for good teachers to leave. These are all examples where hindrances to advancement keep needed effectual reforms from being financed. Of significance, her research concluded that funding is critical to schools' improvement and that the more appropriate conversation to be held is *how* to spend strategically for the greatest impact.

**Achievement gap summary.** According to several studies, the achievement gap between Blacks and Whites did narrow in key content areas such as reading and math, beginning sometime after the milestone 1954 case of *Brown v. Board of Education* that desegregated schools. Unfortunately, by all accounts, as per this literature review, the closing of the achievement gap came to a halt circa the 1990s, the reasons for which were associated with the social isolation that resulted from the White and Black flight era. The lack of social buffering left what one researcher termed the ghetto underclass (Wilson, 1987). The remaining environments of this subculture are predominately impoverished, of poor working condition, and lacking resources. Since the 1990s, several policy and programmatic efforts have been made toward narrowing the achievement gap once again. There are even proposed economic advantages attributed to the closing of such gaps. However, the current public school structures and content provided are deemed as inadequate to prepare students for current and future job markets (Wagner, 2008b). As for now, the achievement gap persists (Barton & Coley, 2010).

## 21st Century Skills

**Market demand for new skills.** America's economy has become increasingly based on knowledge and education (Powell & Snellman, 2004). The prerequisite knowledge and skilled application of technology are modern-day criteria of nearly all workforce environments. Beyond the suggested need for improved instruction and era-related structural changes to school composition (Darling-Hammond, 1997, 2010), the change in economy has created demand for yet another issue of equity: the need for public schools to prepare students for survival skills, such as savvy evaluation and assessment of ubiquitous information, made available from information and communication technology (ICT), necessary for future employability (Wagner, 2008a).

In education arenas the modern-day demands are often referred to as *21st century skills*, but are also known more generally as needs associated with the Knowledge Age or Information Age (Trilling & Fadel, 2009). No matter the moniker utilized, technology-integrated education is now imperative to student preparation for participation in a globalized economy (U.S. Department of Education, Office of Educational Technology, 2010). Consequently, the following sections offer a description of learning through time including Knowledge Age characteristics, and what, specifically, 21st century skills entail. Subsequently, specific questions related to school reform and why technology integration matters, what the barriers to implementation are, and how to integrate technology are considered.

**Learning through time.** According to several studies, in 1991 for the first time in recorded history the U.S. spent more on information and technology than traditional Industrial Era production goods associated with manufacturing (Friedman & Wyman, 2007; Neu & Stewart, 2009; Trilling & Fadel, 2009). This particular phenomenon, followed by a succession of

*flatteners* related to increasingly affordable and thus accessible technology, earmarked a new era known as the Knowledge Age. To summarize the economic transformation succinctly, "…brainpower [replaced] brawnpower, and mechanical horsepower [gave] way to electronic hertzpower" (Trilling & Fadel, 2009, p. 15).

In a book lauded by the American press as deeply important, *The World is Flat: A Brief History of the Twenty-First Century*, Friedman and Wyman (2007) described how the economic playing field has been leveled for competitive global knowledge work given the proliferation of technology, previously held primarily by the United States in the 20th century. The authors outlined the following 10 *flatteners* that contributed to a modern-day global economy:

1. 11/9/89- Fall of the Berlin Wall and the Emergence of the Windows Enabled PC
2. 8/9/95- New Age of Connectivity (The Date Netscape Went Public)
3. Workflow Software (Connected Seamlessly Computer to Computer)
4. Uploading: Harnessing the Power of Communities
5. Outsourcing (Taking a Business Function Offshore)
6. Offshoring (Taking the Whole Factory Offshore)
7. Supply-Chaining: Eating Sushi in Arkansas
8. Insourcing: Synchronizing Global Supply Chains
9. In-forming: Google, Yahoo!, MSN Web Search
10. The Steroids: Digital, Mobile, Personal and Virtual

In reflecting on these modern-day *flatteners,* exponentially expanding technology has unequivocally provided access to a global economy. It is reasonable, thus, to suspect that this increasingly accessible age of information may contribute to addressing the achievement gap locally in the United States for underserved schools and communities. In fact, evidence of this

very notion exists abroad. South Korea's notable curriculum reform focuses on core competencies, including having high speed Internet in each classroom and creating a policy for 10% of ICT usage for every subject (Darling-Hammond, 2010).

Previous eras. There are three notable eras in the history of the U.S. economy: the Agrarian Age, the Industrial Age, and the Knowledge Age. The Agrarian Age is characterized by farming land as the primary work of society. Most public school calendars are still based on an agrarian calendar. The Industrial Age is defined by increased numbers of citizens migrating to cities from farms. The industrial complex is centered in the many workers employed by factories that streamlined mass production; less management and financial skills were needed to administer the complex (Trilling & Fadel, 2009). The Knowledge Age as mentioned previously is our current era.

It is noteworthy that the principal moneymaking conditions of economy utilized in previous eras are still utilized today. Although the value of economy from manufactured goods to information goods have shifted according to the market, farming and manufactured goods will continue to be needed. Trilling and Fadel (2009) summarized the post-Agrarian eras in a sequence of products or services to indicate a value chain of work. As seen in Figure 2, during the post-industrialization period, also known as the Knowledge Age, heavy industry is no longer the primary value of the economy. This paradigm shift is not lost on researchers, politicians, parents, and school leaders that challenge schools on how best to reform for success.

| |
|---|
| **Industrial Age Value Chain** |
| Extraction – manufacturing- assembly- marketing – distribution- products (and services) |
| **Knowledge Age Value Chain** |
| Data- information- knowledge-expertise- marketing-services (and products) |

*Figure 2.* Value chains then and now. Adapted from *21st Century Skills* (p. 4), by B. Trilling and C. Fadel, 2009, San Francisco, CA: Jossey-Bass. Copyright 2009 by John Wiley & Sons, Inc.

**What are 21st century skills?** To equip students for the Knowledge Age economy, a repackaging of academic content is necessary to teach the skills required for employability (Wagner, 2008b). In traditional teaching and learning practices teachers present specified content; at the end of the lesson or unit, student learning of content knowledge is measured by exams for regurgitation (see Figure 3). Currently, given the increase in global competition, "leaders in business, government, and higher education are increasingly emphatic in saying that such tests don't do enough. The intellectual demands of 21st century work… require assessments that measure more advanced skills, 21st century skills" (Silva, 2008, p. 1).

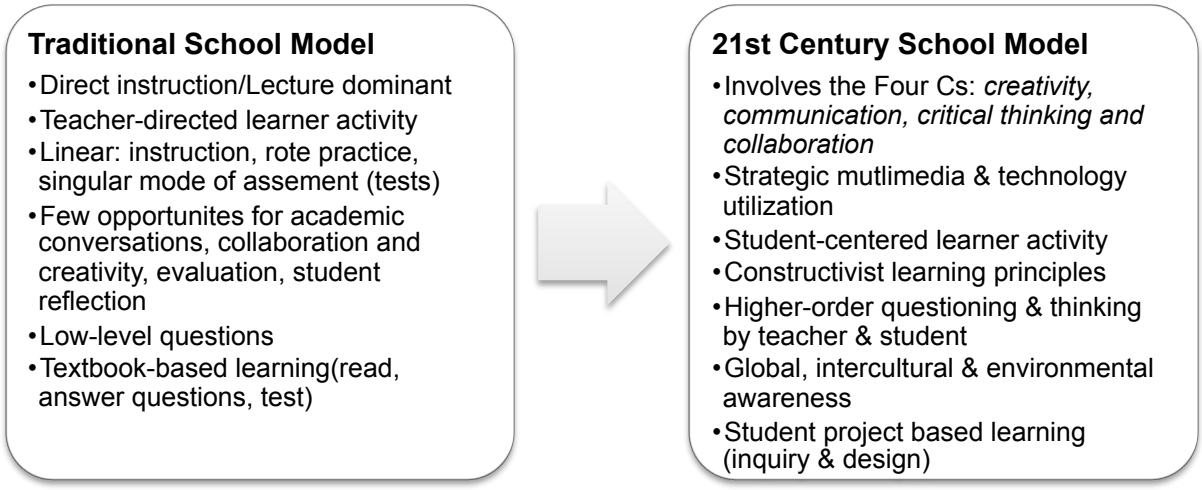



*Figure 3.* Instructional model transition: Traditional to 21st century.

As summarized in Figure 3, 21st century skills necessarily entails traditional school reform, involving role changes in leaders, teachers and students. The principals' role transmogrifies from chiefly managerial to transformational (the nuances of which are discussed at length later in this manuscript). As elucidated by a colloquialism, the teachers' role changes from being the *sage on the stage* indicating a lecture-dominant method of instruction, to being the *guide on the side* representative of teaching by facilitation of learning, evidenced by project-based lessons and higher-order questions. Students' role changes to one that is more

participative (Morrison, 2014), from mere recipients of teacher knowledge and textual input, to producers of knowledge application and meaningful problem solving (Trilling & Fadel, 2009). The latter, fittingly, is a manner of learning synthesized by the Four C's, whereby lessons necessitate student creativity, communication, critical-thinking and collaboration. For instance, given the preponderance of information accessible at one's proverbial fingertips, in defining the essential shifts of instruction for 21st century skills, Trilling and Fadel (2009) propose a new balance, from emphasis of instructor transmission of content, to advanced facilitation of student thinking and skills, for the purpose of "preparing students to contribute to the world of work and civic life…" (p. 40).

In summary, beyond a change in instructional methods, the new basics of 21st century skills are critical thinking and problem-solving (Trilling & Fadel, 2009), distinguished as being more advanced than merely demonstrating an "ability to recall or restate facts from reading passages and to handle arithmetic-based questions in math" (Silva, 2008, p. 1). Today's Knowledge Age economy operative must be able to "solve multifaceted problems by thinking creatively and generating original ideas from multiple sources of information" (Silva, 2008, p. 1). Twenty-first century skills, therefore, are characterized by the competencies related to market demands for new skills. Schools using a traditional model of instruction need take heed of the new modes of instruction and learning required in the current marketplace.

*Instructional frameworks.* To bridge the gap of content learned in isolation versus teaching specific critical thinking skills utilized for problem-solving necessary in the current economy, notable instructional frameworks have been created to inspire 21st century outcomes for leaning. Three such frameworks have been detailed: 21st Century Learning Framework, the Common Core State Standards Four Cs, and the Revised Bloom's Taxonomy Model.

The Partnership for 21st Century Skills (P21) is the most notable instructional framework mentioned in a number of sources: top landing page of a Google search for *21st century skills*, education journals, news articles, and more. P21 self-describes itself as "a coalition bringing together the business community, education leaders, and policymakers to position 21st century readiness at the center of US K-12 education and to kick-start a national conversation on the importance of 21st century skills for all students" (Partnership for 21st Century Learning [P21], n.d., para. 1).

Even though a critic has charged that the Partnership's framework operates under flawed assumptions by ignoring limitations of human cognition (Willingham, 2009), the P21's *Standards, Assessment and Professional Development Committee* is said to comprise over 35 member organizations, including the U.S. Department of Education (DOE), National Education Association (NEA) and global corporations such as Apple Computer, Inc. and Microsoft Corporation. They were tasked to create the now international symbol (Appendix A) called the *21st Century Learning Framework* (Trilling & Fadel, 2009), the components of which include learning and innovation skills, digital literacy skills, and career and life skills, also known as the 3Rs and 7Cs. The 3Rs refer to Reading, wRiting, and aRithmetic, and the 7Cs refer to Critical thinking, Communications, Collaboration, Creativity, Computing, Career, and Cross-cultural understanding.

Moreover, a related model for conveying 21st century competencies is observed throughout the CCSS, as mentioned previously, literature. The premise of the CCSS is to create a shared set of rigorous academic standards in lieu of content standards variations by state. The *CCSS Four Cs of 21st Century Learning* is defined as: *critical thinking, communication, creativity,* and *collaboration*. Interestingly, this commonly referred to model seems to be a

distilled version of the P21 framework, more specifically the learning and innovation set of skills found in the P21 framework. As depicted in a report titled as *Preparing 21st Century Students For a Global Society: An Educator's Guide to the "Four C's*" by the National Education Association (NEA, n.d.), the creation of the Four C's became a national imperative collaborated on by several national organizations are emphasized as essential to global citizenship and workforce. The report warns that students will not only need to be able to meet the challenges of current occupational needs, but will require the knowledge and skills to be able to reinvent themselves to grow and change with the global marketplace. This type of work is documented as requiring less routine work and more creative and analytical abilities to date. Instead of the traditional memorization of content and test, the Four C's integrated into each content area, are thought to provide practice in necessary skills required of tomorrows Knowledge-Age workers.

The *Revised Bloom's Taxonomy* is another framework that has been recreated and has gained recent popularity in view of the push for 21st century education. Inspired by on a 1950s era original taxonomy by Benjamin Bloom, 40 years later in the 1990s, Krathwohl and Anderson (2010) worked for over 5 years to explore how the taxonomy could be revised since its original publication in 1956 (see Appendix B). The result is an amendment centered on knowledge and cognitive processes, revealing a taxonomy of mental practices that led to the change of the model from cognitive ascending nouns to verbs (Krathwohl & Anderson, 2010). Additional changes included substituting the word *create* for *synthesis,* and changing the order of the apex of cognitive processes from *evaluation* ranking as the top cognitive demand to *create* as the peak process. The modifications were said to be due to a renewed view of complexity of that task. Kuhn (2008) pointed out that in light of educational technology development, increased utility of

existing educational paradigms are now accessed, citing how the Revised Bloom's Taxonomy has further facilitated complexity and depth of learning.

*Electronic learning tools.* Not necessarily in place of, but certainly in addition to, paper, pencil, and chalkboards—otherwise commonly referred to as learning tools of the past—today's learning tools are now increasingly electronic. According to Trilling and Fadel (2009), "today nearly two billion cell phones are in use around the world, and access to the Internet is rapidly increasing in schools" (p. 17). The speedy proliferation of accessible technology is creating a need for expanded curriculum of literacy from "beyond its oral and print-based tradition to embrace online and electronic texts as well as multimedia" (Holum & Gahala, 2001, para. 1). Students' primary source of information is now the World Wide Web (Badke, 2008).

While digital devices are too numerous to count, popular Internet-based social media sites—such as YouTube, Google, Wikis and other web 2.0 technologies—are increasingly being viewed as important eLearning tools. Utilizing electronic devices for learning is no longer a question of *should* it be used for learning – it is essential. According to Trilling and Fadel (2009), "Today nearly two billion phones are in use around the world, and access to the Internet is rapidly increasing in schools, homes, community centers, and Internet cafes worldwide" (p. 17). With discernible utility, the question for educators becomes how best to design and incorporate existing well-known technology for strategic engagement and learning within the classroom, for applicable skills of future employment. Likewise, Cisco and Metri Group (as cited in Trilling & Fadel, 2009) examined how critical thinking and digital and informational literacies, deemed necessary for future work, can be seamlessly integrated with the successful school characteristics attributed to rigorous student learning.

**School modernization and embracing the digital age.**

> Part of the philosophy…was not to be afraid of technology, not to be afraid of embracing it and using it in education. We need to teach our students to engage academically with the technologies they use in real lives outside of school. (Duvall, Jaaskelainen, & Pasque, 2012, p. 52)

In her foundational research on culturally responsive pedagogy, Gay (2002) asserted, "the academic achievement of ethnically diverse students will improve when they are taught through their own cultural and experiential filters" (p. 106). Akin to this culturally respectful premise, Prensky (2001) warned of a new culture that also needs to be embraced: the culture of the *digital native* versus the *digital immigrant*. Students of today who grew up with technology their entire lives are deemed digital natives. As *native speakers,* they fluently speak the digital language found on computers, video games, and the Internet. Those not born with this digital native experience are referred to as digital immigrants. Many, if not most of the teachers of any given school site, are in the latter group. Prensky opined that, "our Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language" (p. 3). Notably, as common with contemporary topics, the concept of digital natives as being in sole possession of those specific 21st century skills have been criticized (Bennett, Maton, & Kervin, 2008). However, the generation that grew up with technology abound, are also referred to as "net gen" (Trilling & Fadel, 2009, p. 27), short for the net generation, and "netizens" (p. 27), which are commonly referred to using technology integrated terminology given the generation's defining characteristics.

*Why does it matter?* In considering the extensive responsibilities of a school, most importantly, it is imperative to help all students be college and career ready so as to provide the

next generation with the skills to contribute to society. Knowledge work will be the type of employment most will need, accordingly "education becomes the key to economic survival in the 21st century" (Trilling & Fadel, 2009, p. 6). The challenge is that schools are primarily staffed with teachers who have taught in traditional ways (Prensky, 2001), and are thus reluctant to change (Cummings & Worley, 2005; Prensky, 2001; Senge, 2012). Many schools are simply grappling to integrate the digital platforms that are the norm in both post-secondary schools and most high-paying careers. Debate on strategy aside, today's workforce is one that is digital. To not teach students how best to evaluate, access, utilize electronic information and contribute digitally could be viewed as schools shirking their responsibility, and ultimately handicapping students' preparation for the workforce (Trilling & Fadel, 2009; Wagner, 2008a). It is the responsibility of the school to teach literacy; incorporated in that task is to educate students to be media and information literate, and to exhibit good digital citizenship, which is a kind of online decorum that is parallel to good manners in person. To teach in instructionally sound culturally responsive ways now requires a digital repertoire.

For instance, while particulars of traditional teaching remain unchanged and valued such as some direct instruction, teaching of 21st century skills requires teachers to be less of a "'sage on the stage' and more of a 'guide on the side' who supports students research, discovery and sharing of their own findings in leaning projects" (Trilling & Fadel, 2009, p. 39), which are often strategies of *inquiry-based* and *design-based learning*. In these 21st century instructional styles of teaching, not only the teachers themselves require facility with technology, but also the instruction guides students to use technology to problem solve and propose solutions. One such learning project that illustrates the difference in skills that teachers would use is noted in a vignette mentioned Trilling and Fadel's 21st Century Skills book described earlier. Students in a

tenth grade biology class studying the medical benefits of gene alteration, in lieu of learning about and memorizing the contents of a teacher lecture about genes, instead guided students to use 21st century skills by requiring students:

> To clearly communicate their questions, research [using technology] and find answers, learn from each other's findings, collaborate in teams to design and perform an experiment, solve problems, write up their results, present their findings, and mange their learning–all important 21st century skills. (p. 96)

*What resources exist?* Schools have ample potential to modernize and embrace technology. There are a multitude of *edtech* resources to support a transformative technology-enriched school culture. Schools presently have responded to this clarion call by hiring media literacy specialists, technology coordinators or coaches, and teachers who are technology enthusiasts. Formal instructional standards have been written by entities such as the International Society for Technology in Education (n.d.), called the National Educational Technology Standards (NETS) for administrators (See Appendix C), technology coaches, teachers, and students. There are technology skill-enhancing conferences, such as the Computer Using Educator (CUE) conference, as well as webinars offered for learning technology-enhanced instruction that one can attend from the comfort of one's home. There are journals, magazines, podcasts, and even features on the aforementioned social media platforms, e.g. YouTube videos, uploaded by business organizations, professors, or other educational professionals that educators and students can use to potentially update a skill set in minutes.

*What are the barriers?* In a book titled, *The Secret Reasons Why Teachers are Not Using Web 2.0 Tools and What School Librarians Can Do About It*, Creighton (2012) uncovered common themes found in research discussing barriers to utilization, despite the aforementioned

abundance of resources. Reasons that teachers whom are slow to use technology in their classrooms include: lack of time, lack of training, lack of tech support, school culture, lack of incentive, age of faculty and personal characteristics. The latter two, the author asserts, are based on fear of change and failure. These inhibiting factors were corroborated in a separate study examining professional teacher development and technology support. As part of the study, teachers were provided a laptop for personal and professional use and were given site-based in-service support. The study concluded after 5 years that while significant increase in personal use of technology was realized, classroom computer usage was relatively low. The barriers identified included pedagogical beliefs and lack of a collaborative culture (Parr, 1999).

*Implications for instructional leaders.* The existing challenge of getting teachers to overcome barriers to utilize the rapidly increasing access to technology in their classrooms, despite plentiful resources, has profound implications for instructional leaders. The behavior/actions of school leaders can influence or hamper change (Fullan, 2014). Leadership can increase technology-infused teaching that is vital to creating a school culture that identifies and overcomes barriers to use (Barth & Guest, 1990). In summary, the savvy use of knowledge and skills of school *leaders*, their ability to provide *andragogical professional development trainings* and implement *organizational change strategies* can modernize schools for 21st century teaching and learning.

## Leadership Makes a Difference

**School leaders.** Although many factors contribute to school improvement, research has confirmed time and time again that school leadership reliably, albeit indirectly, impacts the environment for increased student achievement (Hallingera & Heck, 2010; King & Bouchard, 2011; Mulford et al., 2008; Robinson, 2008). For example, following an extensive review of

leadership literature, Leithwood, Harris, and Hopkins (2008) found substantial evidence that school leaders are second only to teachers in their ability to affect student learning.

However, school leaders often a lack the flexibility, time, and resources available to develop the organizational capacity to reform (King & Bouchard, 2011). Effective leaders inspire improvements that enhance student outcomes (Hert, 2010). A 21st century leader's goal is to engender impactful, positive actions that affect motivation and yield the implementation of best practices by their staff. It is suspected that the difficulty associated with achievement of these principles may be given to the tremendous increase in school leaders' responsibilities (Kochan et al., 2002). The very role of a school principal has changed from a chiefly managerial, political authority in the mid-century, to that of a present-day *instructional leader* (Bauer & Brazer, 2012; King & Bouchard, 2011).

This role expansion, and more specifically the title of instructional leader, is peculiar, given it is very rare for an administrator to be directly involved in instruction (Elmore, 2000). Take, for instance, the daily demands of the job of school principal: overseeing every aspect of the school, attending nearly all school events, observing and evaluating teaching, securing and appropriating funds, ensuring legal compliance, and more. Moreover, leaders of public education organizations experience near-constant political pressure to adhere to federal and state mandates.

Interestingly, the science of attention and the resulting impact of having the ability to be flexible and mindful in how attention is used is the subject of cutting-edge performance research. As shared in Daniel Goleman's (2013) most recent book, *Focus: The Hidden Driver of Excellence*, leaders are said to become star performers when they possess a triple focus: inner, other and outer. Goleman warns that if one is "indifferent to the larger system within which they operate they will be blindsided" (p. 4) as how attention is applied shapes and defines experience.

The good news is that this mechanism of mind can be strengthened. The bad news is that the present era of omnipresent technology endangers human connectivity and dominion over one's own attention.

These multi-faceted challenges faced by school leaders can negatively impact the school environment as the time and resources needed for a school leader to build educational organization capacity to achieve goals are limited. Discussed in greater depth later in this chapter, the consequences often adversely impact teacher professional development. As mentioned previously, teachers are undeniably acknowledged as the primary conduit to increased student achievement, and it is the foremost job of school leaders to ensure quality teacher instruction (Bauer & Brazer, 2012). However, several studies have documented teacher dissatisfaction with professional development time (De Casas Szemcsak, 2011; King & Bouchard, 2011; Swackhamer, Koellner, Basile, & Kimbrough, 2009). School culture (Barth, 2006; Deal & Peterson, 1999; Fullan, 2001; Goleman, 2000) and teacher training (Darling-Hammond, 1997, 2010; Deal & Peterson, 1999) fall under the purview of the school leader. Subsequently, successful leadership characteristics are detailed below to provide information that may improve the existing lackluster principal-staff dynamic.

**Contemporary leadership theory.** Leadership research is extensive. In fact, Peter G. Northouse (2010), the author who literally wrote the market-leading textbook on leadership theory and practice, defines leadership, as " a process whereby an individual influences a group of individuals to achieve a common goal" (p. 3), and detailed over 10 different leadership approaches, including the following:

1. Trait Approach
2. Skills Approach

3. Style Approach
4. Situational Approach
5. Contingency Theory
6. Path-Goal Theory
7. Leader-Member Exchange Theory
8. Transformational Leadership
9. Authentic Leadership
10. Team Leadership
11. Psycho-dynamic Approach
12. Women and Leadership
13. Culture and Leadership

Each construct possesses distinct characteristics, strengths, criticisms, applications, and more.

Conversely, Campbell (2012), writing a chapter for the *Oxford Handbook of Organizational Psychology*, titled "Behavior, Performance and Effectiveness in the Twenty-first Century," posited that at a particular level, as related to leadership performance, factors are invariant. In lieu of factors, Campbell distilled leadership performance to six characteristics:

1. Consideration, support, person-centered
2. Initiating structure, guiding, directing
3. Goal emphasis
4. Empowerment, facilitation
5. Training, coaching
6. Serving as a model

Campbell (2012) summarized these principles as an attempt to specify the latent structure of leadership, indicating that despite varying "taxonomic-appearing research" (p. 172), "leadership and management each involve a distinct set of functions to carry out, or roles to perform" (p. 170). The *Proposed Set of Basic Factors Comprising Leadership and Management Performance*, as they are referred by Campbell, are thought to represent leadership and management functions in varying contexts.

Accordingly, contemporary leadership theory encompasses a spectrum from narrowly defined characteristics to generalized performance themes. In this literature review, sought is a specific focus on dynamics appropriate to school leadership change initiatives to a 21st century instructional model. Consequently, the scope of this review has avoided a singular approach to school change. Instead, in subsequent sections, characteristics that have notable, contemporary critical acclaim as what successful school leaders are utilizing for optimal OD and change, include skills of *transformational leadership, emotional intelligence,* and ideal *organizational leadership structures*.

*Transformational leadership.* With several leadership styles documented by scholars of leadership theory, the transformational leadership style is one of the most popular among researchers to date (Northouse, 2010) and arguably most befitting of today's modern times. It emphasizes a leader's ability to tap into constituents' motives. Motivating employees to do their job is a critical aspect of job performance (Robbins & Judge, 2011). Transformational leadership implies in name that a leader does not merely manage task completion, as compared to and characteristic of transactional leadership, but rather models the values he/she wants his/her followers to adopt. Made popular by the work of James MacGregor Burns (as cited in Northouse, 2010), followers and leaders are said to be inextricably bound; "this type of leader is attentive to

the needs and motives of followers and tries to help followers reach their highest potential" (p. 172).

This leadership style elicits a level of respect that has been documented to stimulate employees' intrinsic motivation, inspiring them to go beyond what is expected. As explained by Bass (as cited in Northouse, 2010), by

> (a) raising levels of consciousness about the importance and value of specified and idealized goals, (b) getting followers to transcend their own self-interest for the sake of the team or organization, and (c) moving followers to address higher level needs. (p. 176)

The transformational leadership style is influential, most notably because the leader is viewed as genuine and accountable. Transformational leadership style inspires staff desire to go above and beyond, not because they are told to, but because they hold the same vision as the leader.

*Emotional intelligence.* Another aspect of leadership research that has shown statistical significance in yielding success in a person's life and career, commonly referred to as Emotional Intelligence (EI), involves a heightened awareness of self in relation to working with others. Daniel Goleman (2000) coined the term EI to describe that elusive skill of a worker who advances quickly among peers despite relatively equivalent IQ and experience. There are five main categories of both personal and social competencies to develop in EI: *self-awareness, self-regulation, motivation, empathy,* and *social skills*. *Given* the immense responsibilities of a present day instructional leader however, possessing strength in each of these areas may be difficult. Nevertheless, if one is weak in one of these areas, "interpersonal ineptitude of leaders lowers everyone's performance: It wastes time, creates acrimony, corrodes motivation and commitment, builds hostility and apathy" (p. 32). In Goleman's multiple studies emotional

competencies were found to be twice as important as intelligence and technical skill alone, an important implication for school leaders.

*Organizational leadership.* Lastly, certain organizational leadership structures are being mentioned more frequently in academic journals that are regarded as influential to school leaders' effectiveness; one such structure is called *distributed leadership*. Just as it sounds, its defining characteristic is delegating leadership decisions and cultivating leadership among esteemed staff in a way that allows colleagues and subordinates to contribute their strengths and expertise, which is said to create a democratic and collaborative educational environment (Park & Datnow, 2009). In fact, Trilling and Fadel (2009) state, "developing a successful 21st century education program requires both distributed an coordinated leadership " (p. 123). A distributed leadership perspective enables the school site to build on the strengths and skills of its staff. A case study by Park and Datnow (2009) indicated that schools with distributed leadership characteristics possessed:

> (1) leaders at all levels co-constructed the vision and implementation of productive data-driven decision-making by creating an ethos of learning and continuous improvement rather than one of blame; (2) in order to give data relevance, leaders also distributed decision-making authority in a manner that empowered different staff members to [utilize] their expertise; and (3) the school systems directed their resources on building human and social capacity mainly by focusing on modeling and knowledge brokering amongst their staff. (p. 477)

Deemed highly compatible with the next highly studied phenomenon, *organizational learning*, distributed leadership is characterized as a means to creating organizational effectiveness (Leithwood et al., 2007).

A complementary organizational leadership configuration that a leader may benefit from embracing is creating a school culture and capacity that defines the school as a *learning organization*. As first defined by Peter Senge (1990), a learning organization is an entity that enables the staff of an organization to continually broaden their learning, where innovation and new ways of thinking to attain results become cultural norms since they are deliberately nurtured.

One of the ways a leader can support his/her school in becoming a learning organization is to be data-driven, employ action research, and widely share learning among staff for collaboration. For example, when teachers attend trainings, a protocol may be implemented to share the information learned with the staff. To illustrate this strategy, a study of a school initiating a 1:1 tablet rollout described the sharing of apps that worked best with their students by creating a Google Docs spreadsheet where the entire staff was able to access and post relevant information (Cohen, 2005). Broad sharing for learning and collaboration may also occur when teachers post a screencast of keynotes from training or simply posting the concepts learned on a school webpage designated for teacher learning and sharing.

Ultimately, the culture of a learning organization emphasizes the importance of a safe environment where all stakeholders can make and learn from mistakes and share lessons learned. A culture of collaboration is the result, a key to sustainable change (Beabout, 2012). The leader's ability to foster the building of *trust* is a key ingredient in yielding a progressive learning organization. The transformational leadership style, a principal's EI competencies, and the education-organization leadership structures provide research-based ingredients for creating conditions to facilitate an improved school culture in which staff can take the professional risks associated with teaching with new tools.

Another such ingredient to manifest educational reform is creating enhanced PLOs (Darling-Hammond, 1997, 2010). Over time, Senge (2006) suggested that "superior performance" of an organization is dependent upon "superior learning" such that the learning organization is "continually expanding its capacity to create its future" (p. 14).

**Andragogical PLOs Make a Difference**

The role of leadership is integral in creating the context for learning to transfer and proliferate in school professional development trainings. However, teachers often report the grim experience of being underwhelmed during traditional professional development trainings (De Casas Szemcsak, 2011; King & Bouchard, 2011; Swackhamer et al., 2009). In an effort to uncover the reasons for this, and more importantly determine what can be done to improve this dynamic, the following sections detail three themes of organizational behavior research-based approaches with which leadership ought to be familiar when seeking to train teachers for improved learning and instruction: (a) structured training for adult learning (aka andragogical PLOs), (b) assessment of staff perception, and (c) self-efficacy and motivation to improve morale. Note that each of the methods addresses a familiar critical standard of education: meeting the needs of the learners, which in this case are adult teachers.

**Andragogy.** Andragogy, as opposed to pedagogy, is specifically related to the way that adults learn. Malcolm Knowles first popularized the theory of andragogy in 1968. However, Merriam (2001) noted that opponents contest the theory as not specific to adults in all cases (as cited in Biech, 2008). Nevertheless, andragogy is emphasized and deemed relevant in present day guides for training and development, such as the authoritative *ASTD Handbook for Workplace Learning Professionals* (Biech, 2008), published by the distinguished American

Society for Training and Development (ASTD), now renamed the Association for Talent Development (ATD). Adult learners are described as individuals that:

> (1) [have] an independent self-concept and who can direct his or her own learning,
>
> (2) [have] accumulated a reservoir of life experiences that is a rich resource for learning,
>
> (3) [have] learning needs closely related to changing social roles,
>
> (4) [are] problem-centered and interested in immediate application of knowledge, and
>
> (5) [are] motivated to learn by internal rather than external factors. (Merriam, 2001, p. 5)

Attention paid to andragogy, or the specific way adults learn, is of heightened importance to school leaders who are required to provide professional development (PD) or professional learning opportunities (PLOs) to their teaching staff as a part of their required annual training hours. Teachers, especially new hires, require quality PD both before and throughout their careers (Darling-Hammond, 1997, 2010), and, as learned earlier, their doing so is critical to the school organization's learning (Giles, 2007; Senge, 2006).

Skill development in adult education calls for the skillful use of tactics to engage adult audiences in learning. For instance, step 1 of Malcolm Knowles' famed theory of Andragogy in Practice (see Appendix D) asserts that adult learners need to know the *why*, *what*, and *how* of what is being taught (Knowles, Holton, & Swanson, 2011). Planning purposeful and clearly stated facts, as well as answering questions in an adult training will be of acute significance to school principals interested in the engagement in their adult teaching staff. As outlined further by Knowles, acknowledging prior experience of adult learners is a principle thought to confer respect, which is a necessary characteristic that affects job satisfaction (Robbins & Judge, 2011). Furthermore, involving teachers in the planning of their learning, facilitating internal readiness and motivation to learn by helping the adult learner perceive a personal goal that learning will

help to achieve, has also been found to be important to an andragogical approach (De Casas Szemcsak, 2011).

**Assessment.** Secondly, according to Knowles et al. (2011), effectual professional learning offerings depend, in part, upon knowing the unique perceived needs of training recipients. Applied to the typical school milieu, teachers' work is notorious for being primarily independent, with leaders rarely having direct oversight. This dynamic is important to note given that it can be challenging to determine the unique support needs of a school staff. As learned in OD research, employees often do not state their needs candidly. Despite the best efforts of approachable leaders who may be seen as supportive, most workers will not take the risk to disclose a perceived inadequacy. This unwillingness to disclose needs occurs for many reasons, including embarrassment, fear of diminished job security, and fear of appearing incompetent (Robbins & Judge, 2011).

Subsequently, assessment of perception or creating focused mechanisms for a teaching staff to provide anonymous feedback can greatly inform leaders of *perceived need and general perceptions*. The anonymous assessment method of retrieving perception information is in keeping with the U.S. Department of Education's push for scientifically based decision making allowing school leaders to gain data that will inform professional development planning. As discussed in length in Scott Bauer and David Brazer's (2012) text, *Using Research to Lead School Improvement: Turning Evidence into Action,* incorporating action research significantly aids planning. Conducting an assessment is the first step in determining priorities, developing and implementing an action plan, and evaluating the results thereafter (Bauer & Brazer, 2012).

The good news for school leaders is that in today's Knowledge Age, multiple electronic methods exist by which to assess staff with significantly less burden. There are several online

survey and poll providers available, many at no or little cost. Gone are the days where a leader would be required to write out survey questions, run copies, administer the survey, collect and tally results, then facilitate fellow administrators to code answers received. Present day vendors, such as Survey Monkey and Google Forms, will not only enable a leader to create an online assessment, but also be able to administer it repeatedly if desired and receive computerized analytic results in record time. Acquiring anonymous data that provides perception of need to guide the creation of elevated PD planning is now more convenient than ever before.

**Self-efficacy, motivation and morale.** Third, morale is critical to work production. A strong relationship between an individual's attitude toward work and his/her success or failure is substantiated in motivation research (Hertz, as cited in Robbins & Judge, 2011). Similar to the abundance of leadership research, theories of motivation date back over several decades. Maslow's Hierarchy of Needs Theory is probably one of the best-known theories of motivation, yet current research trends do not validate it (Robbins & Judge, 2011). In contrast, contemporary theories, more strongly supported in organizational behavior research, emphasize various factors, summarized in Table 1. The implication for leaders is to utilize these current motivational theories as a deliberate method to nurture intrinsic motivation in teachers and provide andragogical PLOs.

Henry Ford was famously noted to have said, "Whether you think you can, or you think you can't—you're right" (Andersen, 2013, para. 8). As indicated in this quote, research has found a positive correlation between teacher perception of self-efficacy, or belief that one can produce a desired result, and increased student outcomes (De Casas Szemcsak, 2011; Swackhamer et al., 2009). That is, when challenged with difficult situations, people who rank high in self-efficacy do not give up; they are documented to have more confidence in their ability

to succeed (Robbins & Judge, 2011). In contrast, being unmotivated can create adverse affects on the school environment. Those who demonstrate lower levels of self-efficacy tend to taker fewer risks and are less willing to try new things, be decisive, or initiate an uncharted task. Low levels of self-efficacy have significant implications as it relates to the new skills required of teachers to develop 21st century savvy skills among students.

Table 1

*Emphases of Contemporary Motivation Theories*

| Theory | Emphasis |
|---|---|
| Self-Determination Theory | • People prefer to feel they have control over their actions, so anything that makes an enjoyed task feel like an obligation will hamper motivation<br>• People want to exert influence over their work |
| Goal Setting Theory | • Evidence strongly supports the value of goals<br>• Intentions to work toward a goal are a major source of motivation<br>• Four ingredients:<br>1. Goal specificity<br>2. Decision-making participation in setting goals and objectives<br>3. Time period explicitly stated<br>4. Performance feedback |
| Self-efficacy Theory | • Belief that one is capable of performing said task<br>• Higher the self-efficacy the more confidence in one's ability to succeed and willingness to persist<br>• Bandura's 4 Ways of Increasing Self-efficacy:<br>1. Enactive Mastery- gaining relevant experience<br>2. Vicarious Mastery- observe someone else<br>3. Verbal Persuasion- someone convinces you that you have the skills<br>4. Arousal- energized state drives completion of task |
| Social Learning Theory | • People learn through both observation and direct experience<br>• Models are central to learning, but watching must be converted to doing |
| Expectancy Theory | • Employees will exert a high level of effort if they perceive a strong relationship between effort and performance |

Self-efficacy theory is an outgrowth of Bandura's (1977) seminal work on human motivation and learning. "Teacher self-efficacy is evidenced when teachers reflect on beliefs that

they are capable of influencing student outcomes even when faced with unmotivated or difficult students" (Robbins & Judge, 2011, p. 50). Thus, a critical advantage a leader can use to enhance learning and instruction is to tailor PLOs, perhaps using Bandura's methodology, in order to focus on increasing teacher self-efficacy. Enhanced PLOs involve understanding adult learning needs, managing perceptions, and utilizing contemporary motivation tactics to increase self-efficacy. Utilizing the best resources to improve PLOs is tremendous work; it requires that the principal leader and the respective leadership team be willing to access and apply these research-based tenets to build capacity in teacher development offerings.

**Modeling.** Considering the context of the pressing challenge of the achievement gap and the new skills that are required of schools, reform is imperative to transition schools from traditional to 21st century skills. The circumstance begs the question: what increases savvy technology integration in schools? One could describe the pertinent literature in a word: modeling. This common theme was reflected across the research in various ways, such as the advent of vicarious learning experiences, collaborative time with peers, on-site coaching, and receiving mentoring from a technologically proficient partner (Al-Ruz & Khasawneh, 2011; Denton et al., 2005; Koh, 2011; Mierzejewski, 2010; Wang, Ertmer, & Newby, 2004). The modeling of technology was found to be a highly influential factor to technology integration, as it affected technology self-efficacy and proficiency (Al-Ruz & Khasawneh, 2011). More specifically for leaders designing improved PLOs, the modeling requires teaching-related examples and multiple mastery experiences of technology integration practices (Koh, 2011). Additionally, the "professional development needs to include differentiated, collaborative, real time opportunities on a frequency of at least monthly" (Mierzejewski, 2010, p. 94). Moreover, as learned from barriers to technology utilization, such as feelings of inadequacy, can be

circumvented with organizing a strong support structure that increases self-efficacy (Al-Ruz & Khasawneh, 2011; Parr, 1999). In summary, creating a more effective 21st century PLOs that have the potential to reduce the achievement gap involves considering a deliberate design that included andragogy, assessment, motivation, self-efficacy, and modeling, all of which will require that leaders have facility with change strategies for sustained OD.

**Strategic Change in Schools Make a Difference**

Change experts have agreed that school leaders need be adept at instituting strategic change theory and practice (Fullan, 2013b, 2014; Kezar, 2001; Kotter, 2012; Senge, 2006, 2012). Current trends indicate that students are inadequately prepared for employment after graduation. Traditional test-preparation and test-centered instruction, prevailing in many schools, is lamented as not serving students well for 21st century jobs (Senge, 2012; Wagner, 2008a, 2008b). Citing research conducted with hundreds of conversations with leaders from both for-profit and non-profit sectors, a change in academic rigor for 21st century is extolled. Based on this research, Wagner (2008a, 2008b) synthesized seven required core competencies for career readiness:

1. Critical thinking and Problem-solving
2. Collaboration and Leadership
3. Agility and Adaptability
4. Initiative and Entrepreneurism
5. Effective Oral and Written Communication
6. Accessing and Analyzing Information
7. Curiosity and Imagination

Moreover, the CCSS, mentioned previously, in which 45 of the 50 states self-selected to participate, explicitly calls for integration of 21st century technology and media literacy in

content lessons (Common Core State Standards, 2010). However, despite many existing resources, teachers are simply not utilizing technology in the classroom (Creighton, 2012; Parr, 1999). Leaders responsible for providing applicable PD for increased technology integration need to be offering more differentiated kind of training and multiple mastery experiences (Mierzejewski, 2010). Given the great responsibility of schools to society, these factors combined indicate an urgent demand for school organizations to further develop their collective delivery model. The rapid departure expected of an institution from an estimated 150 years of instruction (Darling-Hammond, 2010; Senge, 2012) using a traditional school model (refer to Figure 3) practically by definition necessitates a strategic planned change.

**Strategic change defined.** What is OD, or strategic planned change? According to *Organizational Development and Change* textbook authors Cummings and Worley (2005),

> organizational development is directed at bringing about planned change to increase an organization's effectiveness and capability to change itself [referred also as capacity building]. Organizations can use planned change to solve problems, to learn from experience, to reframe shared perceptions, to adapt to external environmental changes [such as in this case - technological innovation], to improve performance and to influence future changes. (p. 22)

Said another way, OD is "a collection of change methods that try to improve organizational effectiveness and employee well-being" (Robbins & Judge, 2011, p. 598). Notably, despite the seeming simplicity of the concept, organizational change is unanimously described as a notoriously difficult and lengthy process to sustain (Cohen, 2005; Fullan, 2010, 2013a, 2013b, 2014; Kotter, 2012; Kotter & Cohen, 2005; Robbins & Judge, 2011). Subsequently there are a robust number of recognized change models.

**Change models.** Like leadership theory, OD or change research has been thoroughly investigated. Many theories or models1 of change help determine characteristics and methodology, including processes and outcomes necessary for specific contexts. For example, Kezar (2001) performed a critical review of organizational change literature integrated in a monograph titled *Understanding and Facilitating Organizational Change in the 21st Century: Recent Research and Conceptualizations*. Although the text is primarily focused on post-secondary change applications, Kezar's groupings of change literature are applicable to secondary school change. The groupings are as follows: "Six main categories of change assist in understanding, describing and developing insights about the change process: (1) evolutionary, (2) teleological, (3) life cycle, (4) dialectical, (5) social cognition, and (6) cultural" (p. iv). The teleological change model, which is an organizational process that proceeds to a goal or end state, is likely the best-known strategy in OD, as strategic planning and adaptive learning approaches come from this construct.

**Contemporary organizational change models.** Given the challenge that organizational change presents, a number of notable contemporary models have amassed national attention: Kotter's (2012) Eight-Step Change Model, Senge's (2006) Learning Organization, and Fullan's (2001, 2010) change models grounded in complexity or chaos theory.

Kotter's Model enumerates a linear process of achieving and sustaining change in eight steps:

1. Establishing a Sense of Urgency
2. Crating the Guiding Coalition
3. Developing a Vision and Strategy

[1] The terms *theory* and *model* are used interchangeably in the research, yet it is noted that there is not an actual change theory, only models (Alvarez, 2010).

4. Communicating the Change Vision
5. Empowering Employees for Broad-Based Action
6. Generating Short Term Wins
7. Consolidating Gains and Producing More Change
8. Anchoring New Approaches in the Culture

Whereas Kotter's model is criticized for not reflecting the dynamic reality of influencing multifaceted human beings to change, its simple configuration for application has been lauded.

In contrast, Peter Senge's (2006) book, *The Fifth Discipline: The Art & Practice of the Learning Organization*, embraces a complex systems thinking approach that encompasses four core disciplines and a *fifth* integrating discipline critical to innovating a learning organization: (a) Personal Mastery, (b) Mental Models, (c) Shared Vision, (d) Team Learning, and (e) Systems Thinking. With these disciplines, a learning organization can be achieved and is defined in relation to change as *metanoia*, defined as a shift of mind that occurs when people perceive themselves in a new way: not as separate, but rather as a connected part of the whole, "part of something larger than themselves, of being connected, of being generative" (p. 13). A learning organization is "a place of where people [in the organization] are continually discovering how they create their reality. And how they can change it" (p. 12). Although the premise of this theory is noted as requiring more empirical evidence, the learning organization (LO), also known as organizational learning (OL), has gained considerable popularity among researchers who praise its value in application (Cummings & Worley, 2005).

Lastly, educational researcher, professor emeritus and notable change expert Michael Fullan, having authored nearly 30 books on OL, has integrated principles from several change models, including the previous LO model, yet also rebuffed Kotter's (2012) linear change plan as

impractical if one is using it to plan change. In fact, in one of his books *Leading in a Culture of Change* (2001), Fullan explained why his concepts are grounded in complexity science, negating a linear model and dedicating the book to the *chaos theory*, which was developed to explain complexity. In this text, Fullan asserted that "a recent convergence of theories, knowledge bases, ideas, and strategies…help us confront complex problems that do not have easy answers" (p. 3) and accordingly derived five components of what he describes as effective change leadership:

1. Moral Purpose
2. Understanding Change
3. Relationship Building
4. Knowledge Creation and Sharing
5. Coherence Making

Fullan's systemic model of change offers elements from both systems thinking and chaos theory.

**Barriers to change.** Change experts appear to agree on the fact that organizational reform is a challenging and drawn-out process. Moreover, "few institutions are more immune to innovation than public education" (Senge, 2012, p. 45). Consistent in the literature as an all-encompassing barrier to change is simply permitting obstacles to remain in existing cultures. This inclination to the status quo takes many forms, such as: fear of change, weak culture, allowing for too much complacency, tolerating subcultures to undermine the new values, and leadership neglecting to lead implementation of change (Fullan, 2014; Kotter, 2012; Robbins & Judge, 2011).

The school organization, a highly bureaucratic entity, with nearly 150 years of traditional instruction methods, is known for being particularly difficult and resistant to change efforts; schools are generally definitively traditional, bureaucratic, and political (Senge, 2012). As a

relatively stable organizational culture, the present bureaucratic structure took years to build, which ultimately thwarts change initiatives (Robbins & Judge, 2011). “In even the most tightly controlled and authority-bound organization, it is so easy to sabotage new directions during implementation” (Fullan, 2001, p. 43). Leaders should note that derision of change initiatives might be hard to recognize, given that even in the appearance of success, the seeming new behavior may simply be insincere compliance (Fullan, 2001). In fact, the most significant barrier to change may be the singular fact that it is impossible to force change. “People will find a thousand ingenious ways to withhold cooperation” (Kotter, 2012, p. 38). Given these significant challenges, it is critical for school leaders to be aware of the knowledge, skills, and applications that deliberate change models incorporate.

**Key factors in organizational change.** An understanding of strategic change is required to leverage and sustain new methods of innovation in schools, according to the aforementioned change and school reform experts. Despite schools’ highly bureaucratized change efforts often facilitated through their administrators (Cummings & Worley, 2005), when seeking new behaviors from their staff, school leaders will need to transition their own personal leadership style while initiating strategic change to ensure they are (a) creating the climate for change, (b) engaging and enabling the whole organization, and (c) implementing and sustaining the change (Cohen, 2005). Thus, leaders’ awareness and strategic behaviors and actions as synthesized across the literature on change acuity will be critical to the success of creating capacity for the 21st century instructional model.

Driven by greater global competition and increasing advances in 21st century technology, “reformers advocate changes in all aspects of the bureaucratic network that constitutes and surrounds public education… In short, it asks school personnel to attain higher standards, carry

out their tasks differently and organize differently to do so" (Cummings & Worley, 2005, p. 590). Consequently, as summarized in Table 2, studies have acknowledged critical factors that are necessary for school leaders, or change agents, to know necessary for successful change to endure.

Table 2

*Summary of Key Factors Required of Savvy Change Leaders*

| Factor | Fullan (2014) | Goleman (2000) | Kezar (2001) | Kotter (2012) | Senge (2006) |
|---|---|---|---|---|---|
| Leadership | X | X | X | X | X |
| Moral Purpose | X | | | | X |
| Relationships | X | X | | X | X |
| Self-Awareness/Personal Mastery | X | X | | | X |
| Shared Vision | | X | X | X | X |
| Urgency | | | | X | |
| Systems Thinking/ Complexity Understanding | X | | X | | X |
| Shared governance/Collective decisions | | | X | X | |
| Lead Learner/Model the Change | X | | | X | X |

The most critical factor shared by all reviewed sources is the importance of leadership itself. As indicated previously, a central barrier to change is simply weak leadership. Thus, the leader's role in transitioning to a new instructional style is paramount in order for school organizations to change. This notion is echoed by yet another key factor highlighted across the literature: being the *Lead Learner* or *Modeling the Change*. Interestingly, in order to act on this dynamic, another related skill is necessary—Self-awareness—that is critical to the second most emphasized factor: *Relationship Building*.

One may argue that the attributes identified in change research are interdependent and necessary for subsequent overlapping factors, such as to create a *shared vision* and *urgency*. As learned from Goleman (2000), social skills are critical to exacting a desired level of influence. To be deemed highly skilled in interpersonal competency, one must possess a high level of self-

awareness, along with the ability to handle another's emotions skillfully. These two factors are necessary to build enhanced relationships and garner trust, enabling others to share in the vision and feel connected to the organization and the urgent new direction requested.

**Summary**

A comprehensive literature review of studies germane to school leaders' role in accelerating change in the school organization to an instructional model that exemplifies 21st century teaching and learning revealed emergent practices and interrelated themes. Substantiated in an understanding of the education field itself, the context of the nation's achievement gap was reviewed. Subsequently, studies from academic scholars and scholar practitioners echoed four connected concepts: demand for 21st century skills, significance of school leadership, andragogical PD, and the utilization of strategic school change.

**Achievement gap.** First, examining literature on the challenges encountered in K-12 schools revealed the achievement gap as the field's enduring challenge. The achievement gap is generally defined as the difference in assessment scores historically between Whites and Blacks, yet additional subgroups have been included recently. Of particular significance is the fact that from approximately 1960 to 1990, the achievement gap did in fact narrow. Although the duration of and the causes for this narrowing are debated, the research generally acknowledged that the narrowing period ended and the problem persists to date. White flight and the lesser known Black flight are conjectured as contributing factors to dilapidated inner city school environments and low-income home characteristics that one researcher described as resulting in a truly disadvantaged/ghetto underclass and posited was a cause for the *educational retardation* observed in schools and communities (Wilson, 1987). Given the ample research on the problem, a synopsis of both policies and programmatic efforts to close the achievement gap was provided.

Lastly, corresponding to the achievement gap, a lack of 21st century skills threatens to perpetuate barriers for students of color in particular. However, achieving equity in this domain is portrayed as the potential mechanism to narrow academic, economic, and social differences (Trilling & Fadel, 2009).

**21st century skills.** To illustrate the potential equity-enhancement idea, for-profit, non-profit, and public sector leaders alike have concurred that 21st century learning and practice of applicable skills are imperative to student preparation for future career prospects. These areas are of critical importance to schools, given that more jobs are requiring knowledge of ICT for work (Organisation of Economic Co-operation and Development, 1996). However, as viewed from the lens of history, nearly 150 years of traditional schooling has been in place, which means most educators are digital immigrants lacking the fluency required to be culturally responsive to the new generations of digital natives (Prensky, 2001). The literature reveals that while there are many resources to enhance technology skills available, such as electronic learning platforms (i.e., You Tube, Wikipedia, and Skype), many educators grapple with fear, lack of time, training, and support (Creighton, 2012) as barriers to utilize the increasingly available technology. This paradox has significant implications for school leaders as the acknowledged change leaders of educational organizations.

**School leadership.** The research conclusively depicts school leaders as critical in affecting student achievement. However, it is problematic that school organizational capacity is notably lacking (Elmore, 2000; Fullan, 2001; King & Bouchard, 2011). A well-documented role expansion of the school principal has been implicated as a causal factor for why principals have limited opportunities to respond appropriately to problems that arise in their school organization. Given the burden of time, leaders are observed as often reacting to competing priorities, which

can cause organizational inadequacies such as underwhelming PD trainings. However Transformational Leadership, EI and organizational leadership configurations, such as distributed leadership and learning organization for capacity building, are espoused by researchers and practitioners as ideal for change agents.

**Andragogical PLOs.** One of the primary ways leaders impact students is through coordinating PLOs for teachers. However, research studies indicate that educators are generally dissatisfied with PLOs (De Casas Szemcsak, 2011; King & Bouchard, 2011; Swackhamer et al., 2009). This seems to be for a good reason as "principals' work is marked by variety, fragmentation, and brevity of activity" (Kochan et al., 2002, p. 290). As such, leaders are often left with little time to assess, plan, and deliver strong trainings. However, a number of studies suggest that leaders should focus on the provision of andragogical PLOs for increased impact. Andragogy, or the study of how adults learn best, can be summarized in six adult learning principles to utilize for improved offerings. Moreover, theories of organizational behavior advocate for leaders to be knowledgeable of assessment strategies and contemporary theories of motivation. Lastly, as related specifically to accelerating the skillful utilization of technology, coordination of PD designed for adult learning, processes for peer modeling, and experiential application are the resounding results found in technology integration studies as the best methods by which to enhance PLOs: a construct interestingly corroborated by the contemporary motivation research: social learning theory.

**School change.** Finally, literature from organizational leadership research advises that school leaders be familiar with strategic change practices. Many researchers acknowledge organizational change as a difficult and lengthy process in and of itself (Cohen, 2005; Fullan, 2010, 2013a, 2013b, 2014; Kotter, 2012; Kotter & Cohen, 2005; Robbins & Judge, 2011). What

may make organizational change more challenging for school leaders is that change agents in schools are leaders who not only have approximately 150 years of traditional instruction to modify, but also an organizational environment that is highly bureaucratized (Darling-Hammond, 2010; Senge, 2012). As such, change theorists alike warn of the difficulty of exacting school change, and caution about barriers to identify and dismantle. In lieu of being ignorant of change research, key factors are emphasized to employ for goal attainment of successful change.

# Chapter 3: Methods

This chapter presents a discussion of the grounded theory research design and methodology selected for the study. The chapter begins with a restatement of the research problem, purpose, and research question, authored to provide context for an overview of the study. Next, a discussion on the characteristics and appropriateness of the study design is presented, followed by an overview and description of grounded theory literature, which illuminates the philosophical underpinning of the study's design and rationale. Subsequently, the chapter articulates the positionality of the researcher, the processes for data collection, data sources, and protection of human subjects. Biases, validity, reliability, and trustworthiness of the study design are discussed. Lastly, the data analysis method and summary conclude the chapter. This chapter aims to explicitly describe the methods utilized in this qualitative investigation.

## Restatement of the Problem

To remain globally competitive, today's students must acquire not only content-centered mastery and the associated thinking skills, but also a 21st century skillset: utilizing the powerful technology-enhanced tools for acquiring, evaluating, and more importantly, applying knowledge gained to existing problems (Trilling & Fadel, 2009; Wagner, 2008a, 2008b). Teachers are responsible for facilitating this specific skillset of increasing students' comprehension, yet, paradoxically, the educators themselves are the ones who have been observed as needing to learn newer technology-savvy methods.

This inherent complication can be resolved by change agents of a given school site–its leaders. However, teachers are not readily impressed with PD offerings (De Casas Szemcsak, 2011; King & Bouchard, 2011; Swackhamer et al., 2009), which are the primary vehicle leaders administer to increase staff learning. Teachers often negate the usefulness of the time spent to

attend school-mandated trainings. It is suspected that the tremendous role expansion of the school leader—coupled with either an unfamiliarity with, or ignorance of organization transformation principles associated with lasting change, or simply a lack of time to apply acknowledged principles—contribute to schools' failing for relevant professional development of teaching staff, which in turn may impede accelerated reform.

**Restatement of Purpose**

With respect to the problem, the purpose of this qualitative study is to explore how school leaders best accelerate the notoriously difficult initiative of organizational change (Fullan, 2001; Kezar, 2001; Kotter, 2012; Robbins & Judge, 2011) to speed up the implementation of a 21st century teaching and learning model. The study is designed to uncover and understand the intricate processes of accelerating organizational acquiring of today's 21st century instructional tools and methodology, a phenomenon encapsulated by the following substantive research question.

**Restatement of Research Question**

What leadership competencies do 21st century change-savvy school principals perceive as critical to accelerate successful change to a 21st century instructional model?

**Research Design**

**Design of the study.** The grounded theory methodology of the qualitative research design was selected to conduct this study. As opposed to other qualitative approaches, such as case studies, narratives, ethnographies, and phenomenological studies, the grounded theory model is thought to offer, and what is viewed by the author, an advantage of possessing the flexibility to "move beyond description and to generate or discover a theory" (Strauss & Corbin, as cited in Creswell, 2013, p. 83). This design engages the broadest utility of participant

responses where they "might help explain practice or provide framework for further research" (Kumar, 2010, p. 94). Consequently, the mere hypothesized capability of a grounded theory method was determined as highly relevant to this study's research question as to address the identified research problem.

**Characteristics of grounded theory methodology.** The grounded theory qualitative design encompasses a "theoretical orientation in sociology, grounded theorists held that theories should be *grounded* in data from the field, especially in the actions, interactions and social processes of people" (Creswell, 2013, p. 83). Since this theory has a basis in studying the functioning of human society, it appeared apropos to apply this methodology to a study that aims to help foster behavior change in people who lead and teach in schools. It is noted that "grounded theories, because they are drawn from the data, are likely to offer insight, enhance understanding, and provide meaningful guide to action" (Strauss & Corbin, 1998, p. 12): the ultimate goal of this research study, and a key characteristic of the grounded theory research design.

An additional discriminating characteristic, different from many empirical research designs, is how grounded theorists' view theory itself. Where one usually begins with a theory, theoretical framework, or hypothesis to be tested, the grounded theory "researcher *seeks* theory, constantly working with data records and records of ideas to tease from them the concept and the linkages that might generate theoretical insight" (Richards & Morse, 2013, p. 63) as part and parcel of the methodology itself. As such, in keeping within a grounded theory research design, "advocated [was] *developing* theories from research grounded in qualitative data rather than *deducing* testable hypotheses from exiting theories" (Charmaz, 2014, p. 6), as specific to this methodology.

**Diverging views of grounded theory.** Historically, two sociology researchers are known as having developed grounded theory in 1967: Barner Glaser and Anslem Strauss. They believed that theories "used in research were often inappropriate and ill suited for participants under study" (Creswell, 2013, p. 84) and thus sought to gain more descriptive insight about participants versus queries of action or beliefs in insolation. Yet, notably, a diverging view of processes ultimately separated the researchers. The Glaserian grounded theory is said to be "more objectivist" (Richards & Morse, 2013, p. 65), prescribed or systematic, while the other is said to be more constructivist (Creswell, 2013). Glaserian grounded theory method is thought to be more external, or independent with emphasis of analysis on the processes and components of the theory (Richards & Morse, 2013). Straussian grounded theory approach interacts with the data and "brings to bear every possible contingency that could relate to the data, whether it appears in the data or not" (Stern, 1994, p. 220 as cited in Richards & Morse, 2013, p. 65) to cultivate more abstract conceptualizations not necessarily stated. Straussian methodology begins with an inductive approach, or attaining inferences from specific instances. Subsequently, in acquiring data while negotiating analysis, as inquiry proceeds, deductive reasoning is then used to both conjecture and check for accuracy (Charmaz, 2008).

**Straussian grounded theory.** For the sake of coherence, the direction mutually held and expressed by research methodology expert John W. Creswell, along with Strauss and Corbin's systematic conception articulated in their 1998 text, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*—a Straussian approach—was selected for this empirical study. Fittingly, the procedures of grounded theory appear germane as a design to capture the complex, systems, or interrelated factors experienced by school leaders challenged with leading reform. The grounded theory methodology is "a way of thinking about and studying

social reality…one way of gathering knowledge about the social world" (Strauss & Corbin, 1998, p. 4). The grounded theory method begins with the researcher inquiring about the perception of participants who have all taken part in a particular process (Creswell, 2013) for the purpose of yielding theory from the data, yet an additional key feature of this method is critical: the role of the researcher.

**Positionality: Role of the Researcher**

In grounded theory the characteristics of the researcher are *not* unobserved; grounded theorists "are unafraid to draw on their own experiences when analyzing materials because they realize that these become the foundations for making comparisons and discovering properties and dimensions" (Strauss & Corbin, 1998, p. 5). Moreover, the authors hold that while the inquirer's professional experience can hinder perception, it could also empower the researcher to accelerate the study, as not as much time is taken acquainting themselves with the setting or proceedings. Yet, it is cautioned that as such two important details are to be remembered in the data collection:

> The first is to always compare what one thinks one sees to what one sees at the property or dimensional level because this enables the analyst to use experience without putting the experience itself into the data. The second is that it is not the researcher's perception or perspective that matters but rather how research participants see events or happenings. (Strauss & Corbin, 1998, p. 47)

As a former teacher and coordinator in school organizations for over a decade, the researcher is very familiar with the environments and phenomena related to schools. For instance, observed firsthand were the challenges that school leaders appeared to experience when addressing mandates to reform technologically or otherwise, while seemingly possessing little

capacity to do so. Given this observation, questioning what empirical research had been conducted about the issue began during the researcher's doctoral studies. Through a comprehensive review of the literature the researcher determined that despite many studies of methods addressing different aspects of change, leadership application studies, particular to schools, or more specifically the robust overhaul required of traditional public schools to prepare their student population for the 21st century skills key to success in today's Knowledge Age economy, was not as pervasive. Therefore, after completing curriculum in organizational leadership, what began as an anecdotal observation evolved as topic of dissertation study for empirical investigation.

As one might suspect, according to aforementioned literature review, and from a professional experiential account, gleaned are many reasons why change is slow to take hold. Given that most school environments, like ordinary for-profit organizations, are dynamic, they too have intricate interrelated activities, much like the inner workings of a clock, that work together to affect performance. In the author's previous role as teacher and later as a coordinator for more than a decade, this understanding of how schools multi-dimensional processes impact culture and the capacity to change, is one example of how the researcher utilized her experience to gain more specific detail from participants. Furthermore, the researcher possessed many contacts within a large school district, the author's former employer, and invited a select few of them to participate in the study.

**Philosophical Assumptions and Bias.** According to Creswell (2013) "whether we are aware of it or not, we always bring certain beliefs and philosophical assumptions to our research" (p. 15). The significance of questioning, identifying and explicitly articulating the researchers underlying assumptions is seen as a preemptive strategy to eliminate, or at least mitigate,

inherent researcher bias. That said, after careful consideration and reading of pertinent literature, the researcher subscribed to a transformative/postmodern ontological belief as described by (Creswell, 2013, p. 36). This transformative framework, described by Mertens (as cited in Creswell, 2013), holds "that knowledge is not neutral and it reflects the power and social relationships within society, and thus the purpose of knowledge construction is to aid people to improve society" (p. 26). This study, in alignment with this framework, has an inherent action agenda that was endeavored to improve the circumstances of those who have similar lived experiences in school organizations.

Other assumptions of school leadership influencing the researcher include the beliefs:

1. Principals should be accountable to the teachers and students they affect.
2. Principals should be great leaders to affect great results.
3. Principals should be aware of both the leadership and change strategies they employ.

**Sources of Data**

The sources of data consisted of leaders who have experienced and have been recognized as *savvy change* leaders—primarily in the state of California, but also in three other states and primarily in public schools, but also in charter, independent and private schools—given that they have led their teaching staff from traditional instructional methods to those methods characteristic of the 21st century model (refer to Figure 3).

**Sampling strategy.** While there are several distinct types of sampling strategies in qualitative inquiries, in general, "the concept of purposeful sampling is used in qualitative research" (Creswell, 2013, p. 156). That is, "qualitative researchers may seek bias, deliberately choosing the worst case or best instance of an event rather than the average experience" (Richards & Morse, 2013. p. 221) to gain appropriate and accurate representation of a given

phenomenon. Therefore to access data sought by the guiding research question, a purposeful, alternately called *purposive sampling* method was utilized, whereby the researcher carefully selects participants that can best inform the research study.

To meet this objective, 21st century school leaders/principals/administrators were invited to participate in the study, and operationally defined as *savvy 21st century change leader* if they met both of the following criteria:

- He/she has been referred to as such, or similar, by a superior/director/professional peer
- He/she has successfully initiated, led and/or sustained, 21st century instructional model at either an existing or previous school site.

The form of the sampling was consistent with the Straussian grounded theory method as aforementioned. Moreover, given that in qualitative sampling it is unnecessary that only one method is utilized, as "sampling can change during a study" (Creswell, 2013, p. 156) , three methods within the realm of purposive sampling was utilized:

1- Network Sampling: contacting inquirer's professional social network

2- Snowball Sampling: "identifies cases of interest from people who know what cases are information-rich" (Miles & Huberman, as cited in Creswell, 2013, p. 158)

In summary, when sampling, it said that a researcher should pay attention to the scope of the sample, knowing when one is using an inductive approach versus a deductive, verifying approach (Richards & Morse, 2013). Subsequently, flexibly utilizing varying sampling techniques, ending with saturation, aims for data collection that is theoretically substantive and representative.

**Sample size.** The size of one's qualitative sample, contrary to comparisons made to quantitative studies, remains an important consideration in the data collection process (Creswell, 2013). The sample size of a qualitative study emphasis is less about attaining enough participants for generalizability, as would be priority for quantitative studies, but rather to have a fair number of participants by which to gain extensive and specific detail from each individual to acquire a well-saturated theory (Creswell, 2013). Nevertheless, recommended for the grounded theory method, Creswell (2013) suggests a sample size of an estimated 20-30 participants.

Yet, according to Strauss and Corbin (1998), "when building theory inductively the concern is with representativeness of concepts and how concepts vary dimensionally" (p. 214) demonstrating less emphasis on a sample size per se, but rather that representation is primary over a particular number of participants. The Straussian approach to grounded theory proceeds to mention that, "naturally, the more interviews, observations and documents obtained, the more incidents that will accumulate (evidence of their validity as representative concepts)" (p. 214) and as such the sampling size or method is complete "when categories are saturated" (p. 214). This study aimed to include at least 15 subjects, yet resulted with 22 subject participants given both the yield of the snowball sampling method mentioned above and the author intention to address the charge that "grounded theory studies have long been accused of building analyses on haphazard, skimpy data" (Lofland & Lofland, as cited in Charmaz, 2014, p. 33).

**Data Collection Procedures**

Data collection includes, among other tasks, "gaining permissions, conducting good qualitative sampling, developing means for recoding information both digitally and on paper, storing the data, and anticipating ethical issues that may arise" (Creswell, 2013, p. 145). But first, data collection involves distinguishing *how* to collect rich data (Charmaz, 2014), what the study

will require (Richards & Morse, 2013), actual types of data, and the procedures utilized to access it (Creswell, 2013). In keeping within a qualitative design described by Creswell (2013), this study followed a set of data collection steps that were carefully aligned to the grounded theory methodology. Described subsequently are the interview guide development, pilot test, modifications, and recruitment procedures.

**Interview guide development.** The first consideration was to design substantive interview questions that could answer the research question. According to Charmaz (2014), the "interviewing style outlines the context, frame and content of the study" (p. 63), so deliberate consideration was given to the context of the research problem, which is essentially that despite nearly 15 years of access to technology, the 21st century instructional methodology is not used as commonly as one would expect. As such, the context needed to be stated explicitly and was eventually a preamble to the questions in the interview guide. The context was provided to participants by asking them to associate the questions to leaders who may struggle to get their faculty to embrace change. Additionally, although the single research question was designed to address critical competencies, the frame and content of questions was nuanced purposely to yield rich data. For example, given the researcher's experience in the education field, it was understood that the key method of both communication and influence that a leader provides for teachers is through professional learning opportunities, also known as professional development. As such one of the questions addressed this sub-topic. Moreover, attention was paid to themes gleaned in the literature review that exposed challenges inherent to schools, such as change management, and one's own leadership development. These sub-topics appeared germane to answering the research question.

A second consideration was the type of questions that should be asked. It was determined that open-ended, semi-structured questions would best elicit data to answer the research question. Open-ended questions are not closed questions that can be answered with a simple yes or no, closing off the potential for a detailed response. A semi-structured interview is a method of interviewing that allows for flexibility of questioning in the interview. Although a set of *structured* questions is asked, the *semi*-structured nature provides for follow-up expansion, specificity, or new ideas. Ultimately, the developed interview guide included context explicitly stated as the preface to the interview, five open-ended semi-structured interview questions, and a footnote providing an operational definition of 21st century teaching and learning. The described interview guide is presented in Appendix E.

**Validity measure.** Although all the measures taken will be explained in more detail in a subsequent section in this chapter, it is necessary to share one such measure here. Once a thoughtful draft of the interview questions was developed, it was submitted to the author's faculty chair, committee, and institutional review board. Upon receipt of institutionally confirmed approval, a subsequent review of the interview questions was sent to two colleagues who were both familiar with the organizational leadership doctoral curriculum, and had lived experience as professional leaders integrating 21st century tools in school organizations. Both colleagues agreed that the submitted questions' content was in fact valid; they would appropriately answer the research question.

**Pilot test.** As requested by the author's research methodology advisor, a pilot test of the study was conducted of a participant who fit the criteria of the sample. This process provided an opportunity to further refine the data collection interview guide, practice the flow and diction of the questions, and gain comfort and familiarity with an actual interview process.

**Interview guide modifications.** Keenly aware that the grounded theory methodology is foremost concerned with theory grounded in the data, and as such, intensive interviewing is key to the success of such a methodology, two slight modifications were made to the interview guide. The modifications were deemed slight given that the content of the questions did not alter. Only the phrasing and the order of the questions were slightly adjusted for better interview flow that was in accordance with Charmaz's (2014) *Do's and Don'ts of Intensive Interviewing*. The slight modifications of the first set of interview questions can be seen in Appendix F.

**Recruitment procedure.** First, a network sampling method was employed as mentioned previously; participants in the study were first sought by surveying the researcher's social network of professional alliances. For instance, existing and former school leaders who either matched the criteria were telephoned, emailed or both (see Appendix G). Individuals agreeing to participate received an acceptance email (see Appendix H) of gratitude, confirmation of participation, letter of informed consent and a copy of the final interview questions. Individuals who did not respond, received up to two further emails inquiring about interest in participation that explicitly stated that replying *no* was acceptable, see a template for second or third notice in Appendix I. Second, a snowball sampling method was utilized whereby participants were purposefully asked at the end of their interview if they knew of someone who met the criteria to be referred. Third, a password-protected Microsoft Excel database was utilized to keep track of potential participants and communication. For example, the status of invitation stated either no communication, agreed-awaiting date, agreed- date not yet scheduled, declined, or complete. Also, the spreadsheet stated the interview date, contact information, discovery means (name of contact if referred), and more. This was particularly useful to ensure potential subjects were minimally inconvenienced and appropriately communicated.

**Interview procedure.** Individual interviews occurred in a setting of the interviewee's convenience and/or desired location/modality, controlling to the extent possible for the interview background to have the acoustics amenable to audio recording and an effort toward minimal distraction. It was thought that the interviews would be held mostly at the leader's work site in his/her office. However, that prediction was valid in merely five of the 22 completed interviews. Most of the interviewees preferred a more convenient modality (physical proximity notwithstanding) by virtual interview. The general preference was for an Internet communication platform, namely Google Hangout (GHO) that provides free videoconferencing, by phone or both.

Each interview consisted of the same open-ended interview questions. Follow-up content-related probing questions were asked for clarification, if needed. Twenty-one of the 22 interviews were audio-recorded as permitted, and all were transcribed. The participants were informed of their rights, and reminded that they may request to stop, or pause the recording, or interview at any time. The researcher asked the questions conversationally, listened intently and wrote copious notes of the participant responses during each interview. Each participant was told explicitly when the recording had begun and when it had ended. To ensure interviews were conducted appropriately and reliably, the researcher utilized a semi-structured interview protocol checklist as follows:

1. Meet participant at desired location with option for synchronous online/virtual interview
2. Discuss gratitude for participation, confidentiality clause, audio recording and if questions remain about the letter of informed consent to participate

3. Interview the participant using the semi-structured interview guide, ask for clarification if needed
4. Thank the interviewee for participation, conclude the recording, ask for further information-rich participant suggestions

**Protection of Human Subjects**

To demonstrate consideration of the rights and welfare of the individuals participating in the study, several measures were taken to ensure ethical practices and precautions were implemented. Informed consent was provided in form of a written document that clarified the central purpose of the study, participants' rights and protections and the measures for protecting confidentiality to be followed (see Appendix J). Additionally, identification (and consequent actions) of benefits and risks of participation were disclosed, as well as the level and type of participation involved as required by the Federal Guidelines for Human Subjects Research.

The study was approved by the Institutional Review Board (IRB) under the classification of Exempt Review, Category 2 as per Pepperdine University compliance policy with the Federal Policy for the Protection of Human Subjects, Federal-wide Assurance, and the Office for Human Research Protections, under the Department of Health and Human Services. The qualitative investigation of strategies utilized by savvy school leaders' to accelerate 21st century instruction fits the proposed category 2 because identifying information about leaders were recorded. If responses were to be accessed outside of the research, potential risk of the participant could be experienced. For example, the research study's subjects may consider disclosure of his or her identity a risk that may be feared to be stigmatizing or affect their professional reputation. Moreover, a participant of this study may be concerned about his or her opinions becoming public, which could threaten job security and, or financial standing; or, a subject may fear that

sentiments stated or believed could be misconstrued and would get back to their immediate or past employers. Consequently, to minimize potential risks:

- Subjects were assured confidentiality by the use of a coding system to separate their formal identity to their interview transcripts.
- Participant pseudonyms were used in the manuscript; and real names, audio files of the interviews, and printed memos are stored in the researcher's home in a locked filing cabinet.
- Electronic software was secured by passcode on a single computer. The code list indicating the true identity of each subject was stored separately from the transcript interview data in a separate password protected spreadsheet.
- Anonymity of research participants were respected in the findings, as pseudonyms or rather case codes were used instead of their true identities.
- The data will be kept for at least three years after the study is completed and then destroyed.

All of these measures combined and individually will ensure the greatest level of protection and minimization of risk to participant.

**Data Analysis Procedure**

Grounded theory is one of the most widely utilized qualitative designs (Creswell, 2013). Accordingly, there are several process adaptations of grounded theory data analysis (Charmaz, 2014; Creswell, 2013). As mentioned previously, even the founders of the theory eventually diverged in process, which speaks to the inherent suppleness of grounded theory methodology itself. Given this latitude of processes, the author began the procedure of credible data analysis by first reviewing several adaptations of grounded theory data analysis models via methodology

texts, articles, and review of methodologically similar dissertations. The selected data analysis procedure appeared to be the best fit by which to process and analyze the data to answer the research question: Creswell's (2009) *Data-Analysis in Qualitative Research*, a six-step plan for an interactive process of a seemingly linear nature:

1. Organize and prepare data
2. Read through all data
3. Code data
4. Develop categories/themes
5. Representation/process model
6. Interpretation

**Step 1: Organize and prepare data.** The first step involves organizing and preparing the data. Upon completion of each interview, notes taken during the interview were reviewed and notes of clarification, such as highlighting provisionally strong concepts, were added. Afterward, the audio recording was replayed and transcribed in one of three ways: 1- by the researcher using a transcription software tool called HyperTRANSCRIBE; 2- by employing a respected transcription company called Way With Words, or 3-by procuring the talent of a professional dissertation consultant, Ms. Rebekka Helford. Twenty-one of the interviews that had been audio-recorded were transcribed verbatim. The participant ($n$ = 1) that declined for the interview to be audio-recorded was transcribed by copious notes written during and after the interview.

**Step 2: Read through all the data.** The second step involved reading through all the data to gain a "general sense" of the data, for example, asking the question, "what's happening here?" (Charmaz, 2014, p. 34). The researcher asked questions about the collective data, regarding meaning, and began writing reflections to flesh out emerging ideas.

**Step 3: Code data.** In the third step, to begin coding, all the transcriptions were first uploaded by numerical pseudonym case names, beginning with P201 and ending with P222 using qualitative analysis electronic software, HyperRESEARCH. This tool leverages sorting, categorizing, report builders, frequency reports, and more, to support the researcher's analysis of the data. Secondly, a decision was made on *how* best to code the data. The author reviewed and noted the flexibility advocated or mentioned in using differing methods within grounded theory methodology texts (Saldana, Charmaz, Creswell, Kumar). Ultimately Charmaz's (2014) initial and focused coding was selected over, for example, Strauss and Corbin's (1998) common process of initial, axial, and selective coding. The author felt confirmed going with this selection given that, in response to grounded theory coding processes furnished by the founders, Charmaz (2014) noted "axial coding has received some accolades and considerable criticism" (p. 147) and was even deemphasized in the most recent version of a Strauss and Corbin (1998) text, *Basics of Qualitative Research*. In part for this reason, Charmaz's own process was preferred and involves the following three phases: initial coding, focused coding, and theory building. (Note: phase 3, theory building, is discussed in Step 4).

***Phase 1: Initial coding.*** To begin coding, the researcher followed closely the guidelines established by Charmaz (2014) in *Constructing Grounded Theory*, where she defines coding as "labeling bits of data according to what they indicate for conceptual development (p. 19)." Based on this definition of coding, this process is when emerging theory begins. As mentioned previously, grounded theory is an inductive process that involves going beyond verbatim statements captured in the interview "to [make] analytic sense of stories, statements, and observations" (p. 111).

In the initial coding phase, the researcher began by labeling fragments of data closely aligned to the participants' statements. Pre-established categories related to the content of the interview guide questions were ignored at this point in the analytical process so as to avoid rendering early interpretation and permit the researcher to first explore all possibilities (Corbin & Strauss, p. 64). Instead, the intention, as suggested by grounded theory guidelines, was to "stick closely to the data" (Charmaz, 2014, p. 116). A conscious effort was made to detach from the author's partialities, in an effort to create codes that were grounded unequivocally in the data. The first 11 interviews no categories were created, to uncover the data in context.

Initial coding involved paying close attention to naming data for process and action (Charmaz, 2014); capturing emerging data to the extent possible; and coding for topics, gerunds, and preserving the respondents' experiences. At times, some of the codes were actual words used by the participants, a coding mechanism acknowledged in methodology primers termed *in vivo* coding (Charmaz, 2014; Creswell, 2013; Richards & Morse, 2013). Furthermore, in the initial coding phase the researcher began writing notes of questions, thoughts, and speculations, known as *memoing,* in keeping with the analytical processes that Charmaz (2014) described whereby "grounded theorists stops and write whenever ideas occur to them" (p. 18).

***Phase 2: Focused coding.*** After codes have amassed from rich data, "it is time to proceed to studying, sorting and selecting them" (Charmaz, 2014, p. 137). Focused coding of the data commenced after the initial coding of the first half of data, 11 interviews. The codebook that had amassed hundreds of individual codes was then printed out from the HyperResearch software, and analysis proceeded. Because codes are provisional, they sometimes need to be reworded to better keep in alignment with statement or emerging theory (Charmaz, 2014). The first attempt to redress and condense the hundreds of codes was to rid the codebook of obvious

duplications. That is, codes that were phrased slightly differently, but pertained to the same content and context, were merged into a singular code.

Subsequently, remaining codes were then compared for comparable content. Codes that shared similar attributes were sorted and grouped into predominately descriptive topics. Those topics were abbreviated and the researcher labeled the initial codes with the abbreviations of categories by hand, essentially sorting the remaining codes into categorical topics. All existing codes were sorted into a pre-fit category. The HyperRESEARCH codebook was then updated to reflect the new categories and sorted codes. Frequency distributions of codes by category were reviewed periodically for a quantitative perspective of the qualitative data throughout the analysis process. The remaining 11 interviews were coded one by one, utilizing the first set of categories as a filter.

Focused coding is thought to accelerate the analysis process because it allows flexibility to concentrate and refine the coding, while maintaining the detail contained in the data (Charmaz, 2014). Consequently, in review of the concentrated categories, essential participant statements, and frequency of particular codes, the researcher began to abstract the data. That is, upon interrogation of the data, the researcher was able to work *up* from specific details or descriptive codes to categories to conceptualizations of emerging analysis, what Richards and Morse (2013) call *abstraction*.

**Step 4: Developing categories of themes.** In this step, theory building (Phase 3) commenced. From reviewing memos, analyzing and rechecking codes-in-context, and the conceptual definitions of existing categories, intentional abstracting and theorizing commenced. The investigator used *theoretical sorting, diagramming* and *integrating*, as advised in constructing grounded theory by Charmaz (2014). Theoretical sorting was used multiple times.

For example, when the unfiltered codes of an interview were sorted into existing or newly created broader categories. Theoretical diagramming was also utilized as "diagrams can offer concrete images to our ideas… They provide a visual representation of categories and their relationships" (Charmaz, 2014, p. 218). Ultimately, in the quest for "broad patterns, generalizations, or theories from the categories" (Creswell, 2009, p. 63), and through the aforementioned process of coding, constant comparison, and memoing, the author arrived at five broad themes that were the foundation of the proposed grounded theory explained in detail in Chapter 4 and 5. Once the five themes were reached, several attempts were made to corroborate that the theory was in fact grounded. For example, the select data were resorted and re-coded to determine if the data fit within the predicted themes; this criterion was met. Additionally, a scholarly peer performed a peer review of the coding iterations to validate consistency; this criterion was met.

**Step 5: Representation/process model.** After themes were secured, the codes weighted most frequently within the themes were analyzed, and representations were drafted. Several iterations of diagrams were created using both the software code map feature and drafted by hand (see Appendix K). These were later added to the memos, as the content of the memos was integrated to the theory (Charmaz, 2014). A theoretical framework was drafted (see Chapter 5). Lastly, *member-checking* was implemented: the process of requesting a participant to preview the proposed theoretical framework for authenticity and relevancy.

**Step 6: Interpretation.** The completion of the study brought about several lessons learned. As mentioned earlier, throughout the analysis memos were created and were utilized to facilitate such learnings. Chapter 5 provides a thorough interpretation of the data and its

implications. Moreover, a sub-section in Chapter 5 ties the literature review themes to the investigative findings.

In conclusion of the data analysis process, tools such as questioning; analysis of a word, phrase, or sentence; and analysis through comparisons were utilized "to build creative, grounded and dense theory" (Strauss & Corbin, 1998, p. 99). The investigator aimed to answer qualitatively, the research question beyond mere description.

**Means for Ensuring Study Validity**

**Validity.** Qualitative researchers are distinct from quantitative researchers in that they seek qualitative depth over numerical breadth of data. In fact the concept of validity in qualitative studies in general is contentious, some researchers preferring a term specific to qualitative studies, such as *credibility* or *understanding* instead of the quantitative construct of validity (Creswell, 2013). Despite debate, such as it is ensuring validity/credibility of a qualitative study involves a researcher questioning at every turn of the process if the central guiding research question is being answered to the point where saturation of theory is reached. Ergo, ensuring *methodological congruence* between the research question, the selected methodology, and the processing of data was used to ensure validity (Richards & Morse, 2013). For example, addressing issues such as the representativeness of participants, is planned for by using grounded theory–appropriate sampling techniques in qualitative investigations, which is critical to the validity of a qualitative study (Creswell, 2009, 2013; Richards & Morse, 2013). Consequently the selection of a purposive sampling method, ensuring those with "lived-experience" are selected, began with social network sampling, snowball sampling, as one definitive measure used here to ensure the findings will be valid/credible. Furthermore, it is noted that when "qualitative researchers locate evidence to document a code or theme in

different sources of data, they are triangulating information and providing validity to their findings" (Creswell, 2013, p. 251) and as such this method is utilized as an additional strategy toward validity. Lastly, *member checking*–asking the participants their view of the credibility of finding, as described in Creswell (2013) and corroborated by several studies listed therein, is a concluding strategy that will denote validity of the findings.

**Reliability.** While there are many methods for ensuring reliability of a qualitative study (Silverman, 2005 as cited in Creswell, 2013), the select methods in this study involved audio recording each interview, with exception of one who declined, then transcribing that interview into an electronic version for storage. An additional strategy to ensure reliability, recommended by Richards and Morse (2013), was to code consistently, that is "to develop and record definitions used for particular codes" (p. 223) across documents, or if modification is utilized to develop interpretive theory, then "the key is to keep track of coding decisions, [as] researchers use memos to track changes in the development of categories, recoding and relabeling the categories as often as necessary"(Richards & Morse, 2013, p. 224). This method was utilized in the development of a codebook. Also, several reviews of the data were utilized. Additionally, a colleague participated in a review of select coded passages of the transcripts to ensure a reliable coding process has occurred; this measure was met. Tools within the qualitative analysis software were used to support interpretation including code distributions, theory-building tools and word clouds: "image[s] composed of words used in a particular text or subject, in which the size of each word indicates its frequency or importance" ("Word Clouds", n.d., para. 1).

**Summary**

A research-based, systematic qualitative approach is proposed to answer the overarching research question of how leaders best accelerate a 21st century instructional model. In this

chapter, specific steps were utilized in this grounded theory study have been detailed. First, considerable thought was given toward selecting an appropriate research design, with the qualitative design determined as the best possible method. Next, compared to differing qualitative approaches, the grounded theory approach was chosen for its capacity to not only develop theory, but also create an actionable framework that may be utilized to solve real-world problems. Prescriptive strategies suggested by the originators of the grounded theory model and other grounded theory methodology experts were used to identify a purposive sampling of participants that have lived experience in the phenomenon under study. With thorough effort paid to human subject protection, data gathering instrumentation, procedures, and processes of methodology were explained.

# Chapter 4: Data Analysis

This chapter presents detailed results of the dissertation study—five competencies deemed critical by change-savvy leadership (discerning, authentic, facilitative, collaborative, and communicative). First, a restatement of the context and restatement of the research question are offered. Second, the characteristics of the participants are delineated, complete with graphic representations to view the occupational roles and demographic information at a glance. Third, the results of the data analysis presented as the five foundational themes are elucidated, delivered with evidence from the data with thick description.

## Research Question and Study Overview

Over 15 years in the current 21st century, integration of the 21st century instructional model is still not as common in public school classrooms as one might suspect. Given the potential that technology-infused lessons hold for students universally, the fact that school institutions, like their for-profit counterparts, grapple with organizational challenges to expedite change, and the fact that leaders of schools are critical to the success of schools, the author wondered how school leaders everywhere might accelerate adoption of the 21st century teaching and learning model. This inquiry resulted in the current dissertation study utilizing a qualitative design of grounded theory to learn specific behavioral factors of action and process (Creswell, 2013) exploring the following research question:

- What leadership competencies do 21st century change-savvy school administrators perceive as critical to accelerate successful change to a 21st century instructional model?

**Characteristics of the Participants**

Twenty-two subjects contributed to this dissertation grounded theory study. Exceeding the goal of data collection to amass at least 15 participants, as stated in Chapter 3, an additional seven participants responded and participated. This occurrence is attributed to the spirited effort to appeal to existing participants to refer further knowledgeable colleagues for participation, a method known as *snowball sampling* (Creswell, 2013) This additional effort was exerted after a short lull in participant responses. All of the final participants met the criteria for participation (refer to Chapter 3). With the intention to respect the confidentiality of participants, a semi-detailed table portrays the participants' demographic characteristics (see Appendix L).

All participants were asked to state their title or role. Given the specificity of job title information, for quantitative purposes of data analysis, roles were either deemed Principal, Director/Administrator of Education Technology, or Other-education related role (see Figure 4). The roles were generally quantitatively split principals to administrators of education technology. (Note: The investigator defined *leader* broadly.) Corresponding to notable a 21st century leadership paradigm, this operational definition included the often-untapped knowledge of school directors/administrators of education technology. This role is usually an out-of-the-classroom leadership position responsible for developing the 21st century teaching and learning integration in schools that have funded such a position. (Refer to Chapter 5 for the researcher's explicit recommendation for further study of this faction of leaders.)

Additionally, reported years of experience were inclusively defined. That is, most subjects were inclined to aggregate all of their years of education experience, including their teaching years culminating into their current role, thus the total years of experience were recorded. If years of experience are commensurate with dependability, it is interesting that 23

total years of experience was the average amount of professional experience related to education. The median amount of total educational experience as 20 years, with the least amount of total years of education experience being 12 years. There was an equally split gender distribution: 11 females and 11 males (see Figure 5). The most common age range of participants was between the ages of 40-49, with 50-59 as a close second (see Figure 6). Moreover, the participants were primarily school leaders in California, with 16 participants from the researcher's home state of California, and the others in single digits from Texas, Ohio, and New Mexico, in ascending numerical order (see Figure 7).

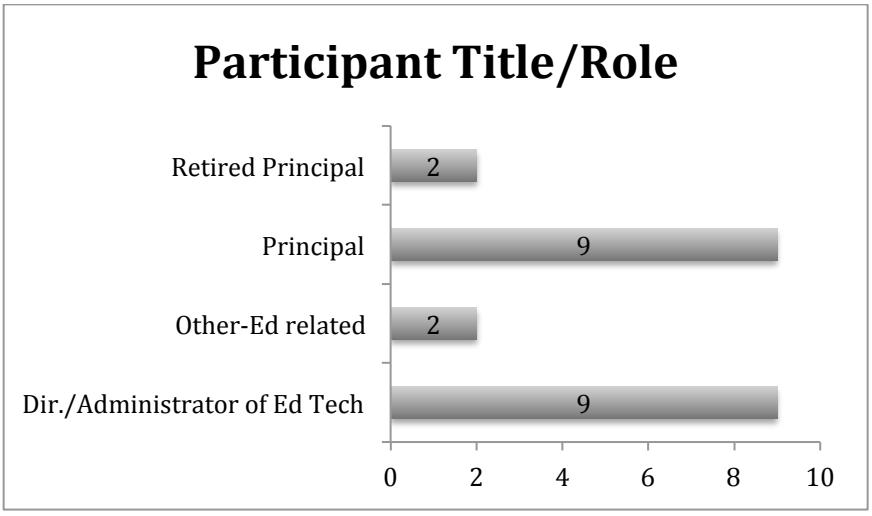



*Figure 4.* Count of participants by role.

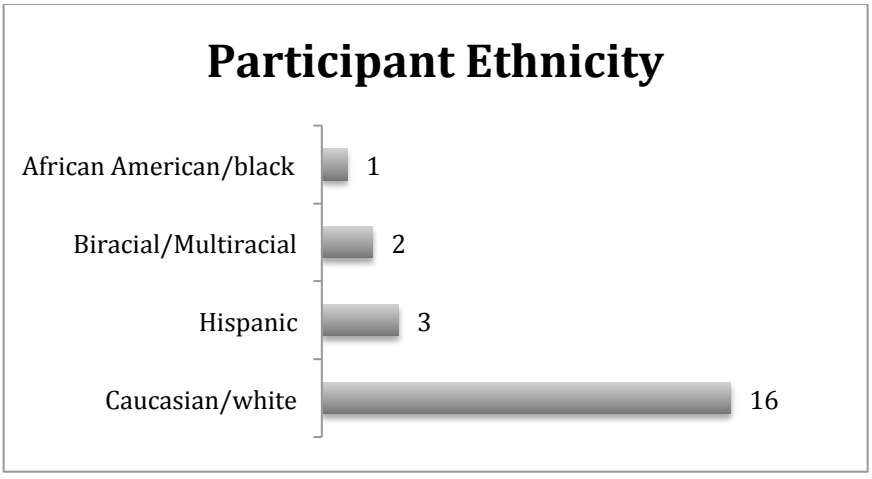



*Figure 5.* Count of participants by ethnicity.

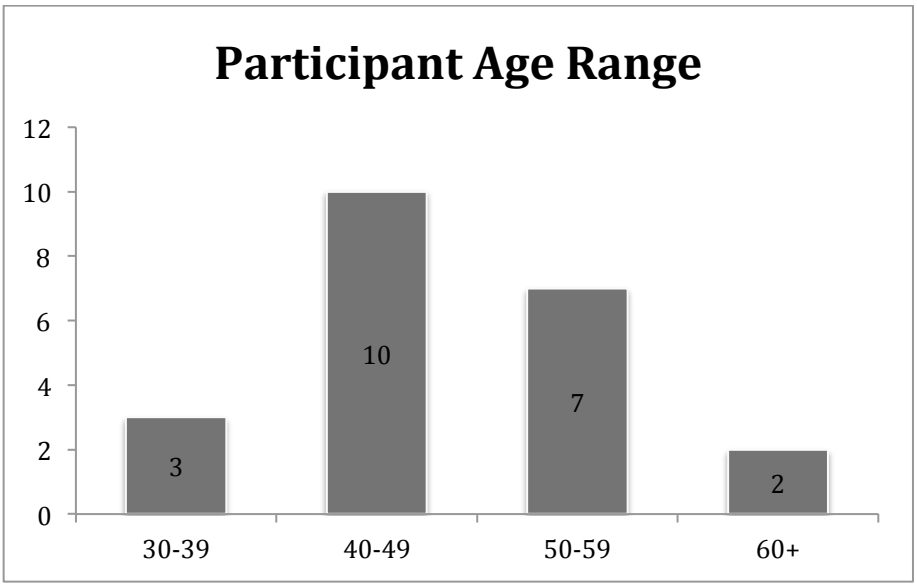



*Figure 6.* Count of participants by age-range.

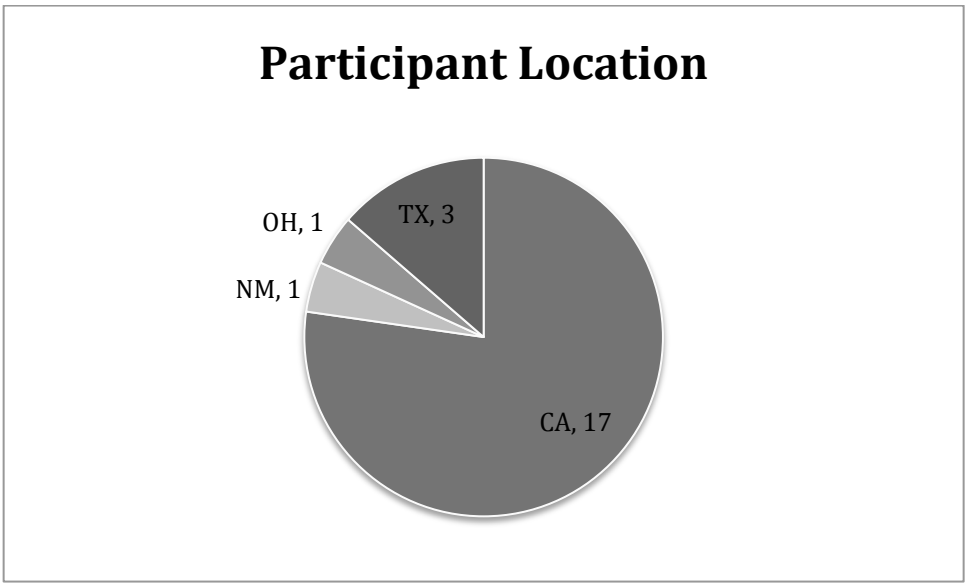



*Figure 7.* Count of participants by location.

**Data Analysis Findings**

The grounded theory data analysis model by Charmaz's (2014) is regarded as iterative and non-linear, since "A flash of insight or instantaneous realization of analytic connections can happen at any time during the research process" (p. 17). Despite this nonlinear aspect of data analysis, the analytical process in what can be viewed as successive phases that may shed light

on how the results were rendered. Accordingly, in an effort to provide explicit detail and clarity for the reader, the analysis is presented through the lens of three phases.

**Phase 1: Initial coding.** The first 11 interviews were coded with the intention of "staying close to the data and, when possible, starting from the words and actions of [the] respondents" so that the results "preserves the fluidity of their experience and gives [one] new ways of looking at it" (Charmaz, 2013, p. 121). That said coding was utilized that was descriptive or spoke to the topic, or action, often using *in vivo* codes. At this point, the codes were amassed without reference to the interview guide categories. From this process, the unfettered, free-flowing initial coding of 11 interviews elicited nearly 400 hundred codes, providing rich data for the next phase of analysis.

**Phase 2: Focused coding.** In the second phase, advanced forms of coding were applied. As mentioned in detail in Chapter 3, the focused coding began with analyzing initial codes for duplication, then category. Initially, 24 categories were created, and each of the 400 codes was sorted and subsumed into one of the categories. All codes were accounted for and inserted into a context-relevant category.

Next, each interview following the initial 11 interviews was coded with the filter of existing categories, if relevant. If an existing category did not exist or if the unique code did not fit within the existing categories, new categories were either created, or the classification of a category was expanded. Thirty-five categories and over 600 codes was the greatest number of categories and codes amassed for the 22 participants. The mechanism of flexible focused coding was utilized throughout.

Focused coding tends to be more conceptual than initial coding; the focused coding phase not only has the potential to improve the wording of initial codes, but also "condenses and

sharpens what [the researcher] has already done because it highlights what [the researcher] finds to be important in [the] emerging analysis" (Charmaz, 2014, p. 138). Re-categorization occurred four more times, integrating and separating categories when conceivable, while intentionally making the effort to preserve unique codes in the context provided. Consequently, the resulting categories and their properties appeared well-defined and rich (Charmaz, 2014), enabling the researcher to begin building theory.

**Phase 3: Theory building.** The investigator interrogated existing data. Ideas written in memos were revisited, intensified analytic thought clarified initial inklings–theoretical insights occurred. Ultimately, the researcher engaged in *theoretical sorting, diagramming,* and *integrating*, an integrative process that grounded theorists utilize to develop their theoretical analysis (Charmaz, 2014). As such, inductive reasoning questions of threads or themes from the data premises that could provide strong evidence were studied to validate an emerging theory. Conclusively, the data were re-sorted a final time into the five foundational themes. A final grounded assertion emerged from the data, which reads as follows: *If a leader dares to enact an authentic current-century leadership style, then a growth culture results that accelerates 21st century teaching and learning school transformation.*

**Themes that emerged in the analysis.** The findings of the analysis resulted in five foundational themes that describe *current-century school leadership*. Consequently, in answer to the research question, the leadership competencies that 21st century change-savvy school administrators perceive as critical to the acceleration of successful change to a 21st century instructional model are distinguished as discerning, authentic, facilitative, collaborative, and

communicative. The themes are detailed subsequently by an operational hybrid definition[2] used by the investigator to sort by theme and are grounded in participant narratives as evidence.

***Note to the reader.*** Participants are identified with pseudonyms that are in numeric form from P201-P222. That is P201 can be read as Participant 201. Additionally, verbal utterances known as fillers, such as *um*, or *uh*, or repetitions, such as *so, so* have been omitted to support verbal to print legibility. Moreover, the reader may notice very fine nuance between the themes. The author tried to select quotes that demonstrated the theme, as many of the themes themselves overlap, and are thus *not* mutually exclusive, yet subtly different and mutually beneficial.

**Discerning.**

- Able to see and understand people, things or situations clearly and intelligently
- Showing or having good or outstanding judgment; strategic
- Aware/focused

This theme highlighted how the participants not only described their views of critical awareness to help facilitate implementation of the 21st century instructional model, but also juxtaposed their opinions by expressing non-examples, or by sharing knowledge of what the characteristics of the model is *not*. Said another way, the change-savvy leaders indicated a higher-order thinking mechanism of evaluation, whereby their awareness led to a judgment or discernment, heightening their understanding and application of a the 21st century process. This perceptive competency of *discernment* is explained through the following three subsections: *Awareness*, *Knowledge of What Doesn't Work* and *Judiciousness*.

[2] The hybrid definitions were searched most recently in March 2016 and are derived from Apple's New Oxford American Dictionary Copyright © 2010, 2013 by Oxford University Press, Inc.; Merriam-Webster.com. Copyright © 2015. http://www.merriam-webster.com; dictionary.com and, as an authored interpretation or operationalization of the terms

*Awareness.* Both being sensitive and informed are key to awareness. The participants referenced being aware of the people they work with, politics, the 21st century instructional model, and difficulty of change, among other factors, to support decision-making and strategies utilized. Seven participants mentioned the importance of *knowing one's staff.* P202 reported getting to know teachers in their environment. Both P219 and P206 spoke to key benefits of knowing one's staff, such as knowing their unique skills and strengths that can enhance the leader's initiative. For instance, P219 recognized certain staff members who enjoy researching, and P206 discovered staff talent that was utilized to co-author grants with her to attain funding for school technology.

P216 articulated the value of being sensitive to the people with whom a leader works when discussing facilitating change.

> You need to be very, very mindful of individuals, so you have help them manage their stresses in a number of different ways so [to understand] their time and energy and their intention. And you have to realize that there are times to pull and there are times to push with that particular individual, so you have to know where that individual is because there may be external outside factors that have nothing to do with school that are keeping them from devoting the energy that they might need or the time that they may need. And you need to honor and cherish that, which will then gain you the respect of that particular individual so that they will then be more willing [to change].

P208 echoed a need for keen awareness of one's staff, stating, "When you have human nature you have all kinds of different personalities and idiosyncrasies within a group of adults that you need to take into account." The significance of being cognizant of individuality is key, especially when it comes to change. This sentiment was further underscored by P209, who

conveyed that key to leaders gaining respect is first to come from a place of human compassion in getting to know one's staff.

> Recognize…teachers' humanity really goes a long way. Because to recognize it and say, this is an initiative that we're going to be doing in our school, this is the direction that or school's going in, and I recognize that some of you are really excited about this, and for some of you it absolutely freaks you out. And that's okay.

Identifying with a leaders' staff on different levels can lead to garnering an *earned* respect. How a leader connects on a human level, or based on common human experiences, can create an environment where one embraces the initiative proposed, even if it is scary. As learned earlier in the literature review, change can is often met with trepidation.

Additionally, in keeping within the theme of awareness, six participants offered a general suggestion for leaders to *stay informed*. P214 stated that "being aware of what's happening outside your school…that's a [leader's] role, knowing more that just what is happening inside your school, but then being able to bring back [that knowledge] to your environment." This topic of knowing what's going on outside the school was echoed several times. P219 stated how a leader "has to be aware of what's going on and keep up…with reading and with what's going on outside [of the school],…the professionals and the industry that they're working within." One the reasons this topic is so significant, P219 shared, is that schools "can become kind of insular," and so "keeping current, helping [staff] to see what's out there" helps combat this, which is a noted inherent challenge of the physical school structure (Barth & Guest, 1990; Darling-Hammond, 2010).

*Knowing what doesn't work*. Key to awareness in the effort to be discerning is the ability to be discriminating: that is, knowing with wise intellect what does not work, and thus, what one

needs to avoid. P222 noted how the "best schools, are willing to work with and to talk about best practices, what works and what doesn't [work]." To be discerning, one must be not only aware and sensitive, but also informed of the actions that can thwart progress, or worse cause an initiative to fail. For example P206 warned a leader to be sure his/her staff has basic needs met before starting a new initiative.

> You can't implement anything unless you take care of the basics. Number one: clean school. Second of all, good discipline...the third thing is the good infrastructure. And then, you know, once teachers…they feel safe, they feel like…you provide them with the tools that they need, [then] they're ready to listen to a new idea.

Likewise, P208 talked about the potential pitfall of the absence of trust; "If they don't trust their leader, then it's very difficult to work towards implementing anything; any innovations, or any district change." P203 discussed the misstep in large group meetings; "If administrators are trying to see their adult learners as a mono-culture, they're gonna take a beating every time they roll things out."

As stated earlier, nearly all of the participants mentioned cautionary non-examples, and can be understood as another powerful aspect of the discerning competency. In fact, one of the earlier categories during the focused coding stage generated by the investigator, was named *pitfalls*. See Appendix M for a list of *pitfalls* mentioned by the 22 change-savvy school leaders to avoid. More examples of knowing what doesn't work will be discussed in forthcoming sections, as multiple nuanced topics emerged. Primarily, the pitfalls addressed leadership strategy as it is related to change, professional development or facilitation of meetings or trainings, and a 21st century instructional model.

*Judiciousness*. Lastly, critical to becoming a sharp, discerning leader, is to practice excellent judgment. This leadership characteristic, mentioned by 10 participants, is predicated upon the former two qualities of being aware and possessing knowledge of what doesn't work. The participants demonstrated judiciousness when they mentioned strategy, or more specifically *focusing efforts/commitments,* which is a critical skill for 21st century school leaders given the myriad tasks a leader has to manage (Kochan et al., 2002) and the current rapid advancements of technology and innovation that is part and parcel of present day culture.

In an effort to bring about successful change, it is clear that participants see value in being selective or judicious in initiatives. For example, P222 stated, "Look at the progress…made. Deepen, what [has been done] so far instead of constantly [being in] change mode." P218 detailed a professional development strategy, stating that "first we identify outcomes." In discussing change management, P210 described an effort to be discriminating;

> I try not to take on too many things at any given time, so usually what we're doing is looking at maybe taking, adding one to two new initiatives…per year, but then the other time is spent developing the ones we already have. So that you know, I hate the idea of investing time in something, and then it just kind of goes away, you know, and it's like we don't do it. So that also helps to get the staff to buy in to it, because they know… if we say we're doing it, we're going to really do it, we're not just going to like, do a couple of PDs, have a couple of class visits, and then nobody's expecting you to do it any more. So all the things we've added are still there.

P201 stated, "Assessing the situation and clarifying goals are two things I would hold out firstly." He went on to give an example of the importance of goal setting.

> I mean, it sounds really basic, but you need to have really clear goals, and kind of going back to Ralph Tyler and [John] Dewey and all those kind of classics that inspire 21st century learning, you need to know what you're trying to do before you can do it. So, to manage the change you need to know where we're going on the map. It's kind of like putting the coordinates in the GPS.

P205 spoke to the inherent difficulty of being judicious by focusing on commitments.

> And those are the two. That's it. That is all I'm committing to this year. There are other, much larger things, equally impactful things that need some attention, but if I dilute our energy too much, nothing's going to change. We're just going to have a sort of mediocrity everywhere. So…I've tried to let the rest go. Which is incredibly difficult. But I know from experience I have to do that, and then those will be next year… Rome was not built in a day, and so I've chosen two.

As indicated by P201 and P205, to attain clear goals, discern, or be judicious, one not only has to be aware, but also needs to have solid information upon which to base critical decisions. To do this, one must have pertinent information that some participants obtained through *assessment*, often described as *feedback.* Among other things, staff-based *research* was mentioned and seemed to help leaders weigh the value of one initiative over another; this factor will be revisited in the *Communicative* theme. Another strategy when weighing the value of an initiative was to be sure it was aligned to the vision and or educational bottom line. For example, P217 stated:

> So the one thing that I try to do…is…focus on things that we really need. And so as a principal I don't think…or as an administrator, you don't want to go and start doing things just to do them. So I think your first thing [to do]…is focus on what is going to

> help students grow. So what helps students grow is something you would bring into your building tech-wise. But you have to have that mindset is how are you going to foster student growth?

P217 highlighted the strength of highly focused, judicious decisions as a basis for how to determine priority. This critical discerning competency leads to the next competency widely shared by participants, the need for authenticity.

***Authentic.***

- Based on fact, genuine, worthy of acceptance or belief
- Executed with all due formalities, true/accurate
- Made or done in a way that faithfully resembles original

Directly connected to trust, nine of the participants weighed in on the consequence of leaders *walking the talk*, or ensuring their action is consistent with their words. More specifically, the most important actions relevant to authenticity are to (a) *understand the 21st instructional model*, what it is and what it is not, which implies; (b) embracing a *growth mindset*, because it *takes time* and *taking risks* so that one can; (c) *lead by example* by endeavoring to demonstrate in action and communication that one is an authentic 21st century leader, and a *lifelong learner* (*n*=11), alongside teachers and students.

*Understand the 21st century instructional model*. Fifteen participants mentioned the importance of being aware of the actual 21st century teaching and learning model. Several times when participants were asked what they thought was effective about their personal success in getting their staff to embrace the 21st century model, they began by discussing how they know the model well and use it. For example, P213, emphasized the importance of being "really reflective as you roll out [the model], because it will require strategic focus on understanding

what the 21st century skills are, what the common core is, what is it asking." P205 mentioned an authentic and demonstrative awareness of the 21st century instructional model as key, "Modeling in the way I communicate with staff, in the way I run our meetings, in the way I integrate technology with them or in the way I integrate Four Cs kind of work. I should be walking the talk in the way I work with staff." This acknowledgement of *understanding the model* was discernable across participant responses, and the authenticity that the leaders themselves employed was highlighted as constructive to accelerating 21st century transformational change.

Still, what are 21st century skills? To better convey the results of this analysis, illuminate the distinctions of the 21st century instructional model, and ground the participants' responses, a clear operational definition of 21st century teaching and learning model is included (see Figure 8). Furthermore, refer to the aforementioned Figure 3 to gain a more detailed distinction between 20th century (traditional) and 21st century models.

Operational Definition of 21st Century Teaching and Learning Model

Teacher facilitation of student learning via student use of electronic learning tools (i.e. computers, tablets, the Internet, computer programs, apps, etc.) for the purpose of one or more of the following:

- Acquiring, evaluating and applying knowledge gained to existing problems
- 4Cs of 21st Century Learning: critical thinking, collaboration, communication, and creativity
- Global and, or environmental awareness

*Figure 8.* Replication of 21st century model operational definition.

As one might observe, inherent in this operational definition, teaching in what P215 calls the "current-century model" is redefined as facilitating strategic access to and integration of technology for the purpose of authentic application of learning, as opposed to merely lecturing, rote practice, and testing. For instance, P208 asserted "that the administrator definitely needs to be familiar with not only the technology in his or her school but with the programs that are being

implemented" within the content areas for example, as to support integration and implementation of "using technology in the classroom." P208 indicated that to assuage the natural "discomfort and fear of the unknown" one needs to utilize it and "have the ability, the know-how, to be able to assist teachers in doing that."

This utilization and experiential understanding of the 21st century model was confirmed several times. For example, P218 shared from personal experience, despite not growing up with this contemporary technology-infused model, how a leader must be willing to learn, underscoring the significance of leadership having a keen understanding of the 21st century model.

> I'm of a generation [whereby] it's going to take me longer to learn it, and if I can't learn with [the teachers] and if I can't struggle with them and be vulnerable, then how am I modeling that? You also have to go through this process and some of the discomfort of learning... So, I think that that's huge for leadership development.

A similar personal account by P206 speaks to the need to be willing to learn.

> I was handed a laptop when I became a principal. I didn't even know how to type... I had absolutely no knowledge, so that I…so I actually learned and…I developed my own skills, technology, you know, technological skills along with many of the teachers.

P207 stated emphatically and unequivocally, "You have to be technologically savvy, you can't run away from it."

However, P208 warned "it's a lot more than just the technology; it's shifting to a more rigorous curriculum and changing this [technology-centric] view." An example of this shift was indicated by P210, who stated, "In terms of developing instruction…how do you take yourself as the teacher sort of out of it…and let kids be creating and learning these things, standards, while

they're in the process of using this tool to create it?" Noting that a 21st century classroom is more student-centric as opposed to teacher-centric, she continued, "So that's the mindset that kind of has to be changed for teachers… [It's] important for leaders to kind of be aware of…or be competent in…in order to support that."

*Growth mindset.* These last two advisements overlap with another key aspect of understanding the 21st century model, a concept put forward by Dr. Carol Dweck (2006) in her book *Mindset: The New Psychology of Success,* which essentially analyzes the differences found in her research of the *growth* versus *fixed* mindset. This theme was reiterated by eleven participants, as well as discussed in the literature review. For example, as deemed critical for leadership development, P201 explained what he meant when mentioning the significance of possessing a *growth mindset*:

> If I'm a good teacher and I see that as a fixed characteristic of my personality, then I don't want to try anything new at which I might fail because it would disprove a truth that I believe deeply. So instead of talking about being a "good teacher" or being "good at math" or being "good at technology" or anything like that… It's about embracing the struggle and embracing the fact that it's only when we expend effort and struggle through something and perhaps fail at that that actually learning and innovation can happen.

He continues exposing how authentic facets of growth mindset can pose a counterintuitive challenge to leaders; "So, that can be really challenging, I think, for many leaders to develop, because part of the persona of [being a leader is] seeming cool, calm, and collected, runs counter to that ability to show some struggle."

In this way, the *growth mindset* is not only authentic to the 21st century model, but also genuine to learning itself. It is also touted as the goal of school altogether. Oddly enough,

however, failure in a traditional instructional setting is taken out of context, but in the growth model, authenticity includes the fact that failing, or attempting and not succeeding, is part of the learning process. This renewed frame of the concept of failure is acknowledged as so important, that P204 shares the growth mindset explicitly with new staff as part of the culture:

> I do have an orientation at the start of every school year for all of our new faculty, and one of the things I talk about is just that we're open to risk taking and, "I expect you all to have a growth mindset. I know that you're all going to fail sometimes and that's okay. Learn from it. You reflect on it and move forward." And so, I share that out with them. I have department chairs give examples of their own failures and [tell them], "Look, I'm still here."

However, parallel to the growth of an organism found in nature, change in human behavior, takes time and proper ingredients for growth.

*Takes time*. The growth mindset is no easy feat for schools to integrate into their traditional, often bureaucratic ways: as if it weren't challenging enough to infuse technology into teaching. This essential feature of the 21st century instructional model, and the actual model in its entirety, is recognized as a massive shift from traditional instructional practices, a transformation of practice, hence the significance of this dissertation study. Despite the title of this study referring to the acceleration of the 21st century model–acceleration, indicating speed–the participants widely acknowledged that implementing a 21st century teaching and learning model *takes time*. P205 said it simply; "There is just nothing fast about it." P206 confirmed that, "Whatever change you're going to facilitate at your school, it's going to take time because teachers, people don't change overnight."

So given this inevitability, P201 clarified, "It's not an overnight kind of thing, right?… But you have to…get there, and you have to get there by building…some small successes along the way." P207 shared the implicit reasons why this transformative model takes time.

> I think that this is an interesting one because it's a combination of doing some really difficult things but then also doing only a few things. So if you want to push them in the direction of something like blended learning or having students have a lot more voice and choice in what they learn, students doing STEM…I'm just kind of listing some of the things I think of as 21 century, you can't do them all at once and you can't do them all in one PD.

Similar to being aware of the genuine challenging aspects of the 21st century model and how it takes time, knowing what the 21st century model is *not* is important as well.

*What it's not.* A distinct feature of the growth mindset is to omit statements that place an evaluation of an action as good or talent-based; instead, effort is commended and highlighted. Accordingly, opposite of a fixed mindset, the growth mindset encourages one to filter habits of judging something as all or nothing, or zero sum. This awareness is an apt example of what the futurist Alvin Toffler (as cited in Trilling and Fadel, 2014) indicated when he said we need to *unlearn* too. P212 explained the difficulty in divorcing oneself from habits of what the 21st century model is *not*:

> We've got to be able to let go of things too, which is part of that. The willingness to take on new, learn new, is also the willingness to unlearn or to drop, to leave behind. And that's a hard thing to do. I find that really hard.

In making this distinction and taking on the challenge of what an authentic 21st century instructional model is, it's also helpful, as addressed in the previous theme, to discern or understand what something is not and then act on that knowledge.

For example, P206 shared an experience whereby a veteran teacher jovially shared a antagonizing comic strip about the former days of teaching–it made mention of "'shut up and learn,' which is diametrically opposed to this [21st century instructional] approach." At risk of the relationship, P206 felt she had to address the gaffe because she felt it was his true philosophy. The teacher was protective of the old way, but as leader she recognized the mentality would be subversive to the mission. Pointing out how classrooms of today are *not* like those of years past is essential. Often the ignoring or inauthentic practice of the 21st century model is not necessarily apparent. Leaders need to be cognizant of this fact. For instance, in discussing the importance of training, P207 admonished leaders to be aware of what can seem like standard silent compliance.

> What I've seen a lot is…that kind of quiet obedience and people go like mmm, hmm, and they sit there and they nod their heads and then they walk out of there and they're like, yes, I don't know what's going on. And it's not that they necessarily were confused, it was just too much, too much information without actually applying it.

Again, P219 underscored how insincere practices of feigning the 21st century model does not work. A 21st century leader needs to know that even if things appear as they should, recognition on the part of the leader may still be needed.

> [A leader needs to] really look…because for a while…it was about, well, engagement, students are engaged. You see, students are engaged, but now it's more like—what are they engaged in doing, and what level is that? So they could be engaged on lots of things,

like cutting out pictures from magazines, or things like that, and they are all happily engaged…[however] in high school though, maybe there's a better use of their…time and their critical thinking skills. So there's a lot…the leader has to also be able to see that.

To truly possess an authentic competency, it is seen here, one must have a keen understanding of the 21st century model, foster a growth mindset, grasp that it takes time, and know what is not, but to truly be authentic, it also takes practice.

*Lead by (lifelong-learner) example*. As mentioned previously, the competency of authenticity is directly related to trust (Covey, 2008). Participants acknowledged that one has to walk the talk; if one expects his/her staff to change ingrained ways and experience the vulnerability and discomfort of change, then a leader needs to do so as well and lead by example. P212 reflected, "Being at it as long as I have, you've got to change. You've got to be willing to change. To transform our school, we need to transform ourselves first." A leader's *willingness* was also regarded as *taking risks* and being open to learning: real, authentic learning that a few participants termed as being the chief *lifelong learner*.

*Take risks*. Several of the principals ($n$ = 10) stated that an ability to take risks that requires a certain comfort with discomfort is critical to practicing the 21st century teaching and learning instructional model. As mentioned in Chapter 1, not only are teachers asked to teach with new, often technological tools, but also the very way they offer learning itself is changed. Under this 21st century model, teachers' job requirements have changed. Therefore, it's imperative that the environment or culture fosters a certain level of comfort with the discomfort of change.

This perspective was coincided by P222, when asked about transitioning staff to this 21st century instructional model, he stated that his success was in creating "comfort with

imperfection." He felt that teachers needed the "space to try new things out." He specified that "teachers feel they have to be experts," speaking to the traditional role of teachers as experts in their content areas. It was critical for him as the leader to support his staff in "taking risks" and "supporting them not to be perfect at the same time." He went on to discuss the importance of students', teachers', and administrators' "willingness to take risks methodically and carefully but willing to try new things or risks." When he was probed to describe further what he means by methodically, he stated it is "strategic when aligned to [the] vision [of the school/initiative]… [The change provides] evidence for why to try that [method]."

As seen from these examples, school staff needs to feel safe to take risks, to try things on for size, and to "tinker" as P220 called it. She said,

> Being able to take risks and make mistakes… I feel that's important for us to model that…because so much to me…in terms of 21st century, is about tinkering. It's about iterations of something, it's about making mistakes and learning and believing that it's the process that will get us there.

This supportive environment to take risks is especially needed given the requirement of 21st century schools to integrate technology into classroom lessons. Encouraging teachers is key, as demonstrated by P221.

> Creating an environment within the school, the technology environment such that people can try. That they can take risks…having an infrastructure that encourages and supports that, having rules and policies while protecting the school, protecting the individual, protecting the student also allows…and encourages that.

However, to truly encourage this change, the environment is cultivated not only by the culture leadership puts forward, but also by example.

*Lifelong learner.* All participants mentioned leaders' learning in various ways. Eleven participants spoke to being a lifelong learner, which is highlighted given the vast amount of information that is available in relation to how professional roles have changed. For instance, akin to a teaching credential or even in other fields like a medical certification, it is now no longer standard for someone to attain lifetime certification. Now, one earns authorization for a period of time, and it is commonplace that continued learning hours are required to sustain certification.

Accordingly, key to being worthy of acceptance or belief, or to garner staff trust in the authenticity of the 21st century instructional approach is the expectation is to observe school leaders partake in the pursuit of knowledge and practice too. To illustrate, P206 weighed in on the importance of practicing what one preaches in discussing leadership skills.

> You have to be a visionary, you have to be a lifelong learner, and you have to be student centered, and you have to be a risk taker. And so when I say a lifelong learner, you have to be kind of ahead of the game…because…that's the learning that you bring to your staff…the latest research for instance. And…if you really want the teachers and the students to use technology, you have to be able to do it; you have to be able to use it yourself.

She went on to state that her strength in supporting her staff to embrace the 21st century model was indeed having a thirst for knowledge.

> I would say definitely open mindedness. I think you yourself have to model being a lifelong learner… I think you either have to have had a lot of experience or have a lot of curiosity so that you can inspire that in your teachers and then of course in your students too. So this idea of like sort of master of nothing but learner of everything.

P204 emphasized how communicating the language and actions of being a lifelong learner was a method of modeling the learning she continuously amassed, even as leader.

> And then really embracing that idea of being a lifelong learning and modeling what that looks like. I share out articles and books and professional learning opportunities. I'm constantly sharing that stuff out and when I come back from conferences, the next time I'm in a classroom, I try to make a point of, in my comments back to the teacher, "Hey, I love that you were doing X. I would love to talk to you about this other thing that I saw at the conference I just got back from that I think would really give you either new options or enhance what you're already doing." So just always being willing to share out so that they know that I'm always learning stuff, that I don't have all the answers and there's always stuff they need to learn, and encouraging them…also to pursue…or really adopt, I should say, not pursue, but adopt that attitude of being a lifelong learner themselves.

To become a lifelong learner one needs to assess one's own knowledge or strengths and be introspective. P208 indicated that while a leader needs to be confident, he/she also "needs to recognize his or her own strengths and weaknesses and focus on getting better at…whatever…those areas of weakness are." In response to being asked how a leader may become more self-aware, P208 said,

> Be reflective; you know, I don't think that we reflect enough. I think that teachers and leaders should step back and take a look at their characteristics as a leader, and look at where they are strong and also determine their areas of weakness and work towards improving those.

Additionally, P212 asserted that one has

> to be open to the change and be willing to be… to realize that you're going to have to constantly be learning because there's always something new that's coming down the pipeline. And what we did yesterday is actually no longer really the best way to do it.

P207 confirmed, "Probably the most important thing is that you either know it, learn it on your own or learn it from someone else." Lastly, P219 showed that the new role of leadership involves a shift in definition from being all knowing to knowing how to be a principal learner.

> Because things are changing so quickly and that we, in order to like keep up with that, you know, you have to think of yourself as a learner continuously. So you have to have a stance as a leader that you are also a learner… And how to use that, like you're not going to be the one who knows everything because it's impossible know especially with the amount of information… It's not about the person who knows everything. It's the one who can find out and who can get their resources.

Consequently, to be authentic, one needs to practice being a lifelong learner, be reflective, be willing to learn, and improve upon shortcomings. Perhaps, however, more important than the traditional leadership role of never showing fallibility is instead modeling the vulnerability of authentic learning. This shift still requires skills, especially the skill of knowing how to obtain and provide resources to sustain the honest work of providing the best preparation for students' futures. This skill is notably tied to creating an environment of a growth culture, with the leader being strategically facilitative.

***Facilitative.***

- Helps cause something, or makes easier or less difficult
- To assist the progress of (a person/action)
- Structures/processes

As shown in the last theme, accelerating the change to a 21st teaching and learning model is about supporting the authentic implementation of the model. The participants shared that a leader develops this culture of growth chiefly by being *facilitative*, among the other critical competencies set forth in this analysis. Through *provisions of resources* and creating *supportive processes,* trust develops that is required for experimentation and risk taking that supports growth. No longer is it anticipated for a leader to have all the answers; instead, the expectation is more aligned to a leader being *facilitative* to achieve the initiatives sought.

*Provisions of resources.* Half of the subjects ($n$ = 11) identified the role of leader as ensuring first and foremost that teachers and students have what they need in terms of financing and allocation of resources. In ensuring implementation of the 21st century model, P202 discussed the necessity of:

> Providing tangible goods and services, making budgetary [decisions]…making it available in the budget to purchase the needed devices or programs or whatever it might be, so you're not only investing time and training in the people that you want to be physically devoted to the transition.

In addition P204 discussed the benefits of assigning a position to support teachers in their technology integration.

> I think it's important to provide support for the faculty. We are really fortunate. We have a part-time ed-tech specialist even though our school, it's really small, and she is fabulous, and she goes to the teachers and works with them. And she will find out, okay, what is it that you're trying to do? And then she helps them to identify the tools that will help them to do that. If they're stuck on something, she will go and work with then. And it's not just tech based - she's a very innovative teacher, uses a lot of project-based

> learning, so she's a great resource for them, and just being able to commit the resources to having somebody like that on staff so the teachers know, "Okay, it's not just, I'm being told to do this, but there is some level of support for me as I learn."

Securing resources for some schools can be a tricky matter, but knowing what assets a leader has in one's school is good place to start. For example, P206 tapped the skillset of her own staff to write grants.

> I always sent [teachers] to conferences...we were very lucky in that we had a lot of money when I was there, and part of it was because of my efforts to write grants, you know. I would put teams together to write grants, so we really had an abundance of money, a budget, so teachers were able to go wherever… All of that took grant writing, you know. Like I said, I never miss an opportunity to write a grant to get more resources so that I could have the money to buy the technology, to send teachers out to conferences, to, you know, to get whatever we needed.

P214 described the priority of resourcefulness as "Getting the resources in the hands of the teachers." This theme was echoed by several participants as critical to facilitating a growth culture, because as P214 continued, "If they don't have access to the appropriate technologies, it's kind of hard" to implement the 21st century model. However, provision of resources is only one way of being facilitative; there are many ways a leader can lead through assistance or support.

*Supportive processes*. According to the data, intentionally creating *supportive processes* is key to being facilitative of the 21st century model. In particular *modeling the model,* ensuring *relevant professional development* time is used appropriately, and helping staff integrate a

change by *starting small* can genuinely be supportive to staff in their work of shifting instruction to a 21st century style.

*Modeling the model.* The participants overwhelmingly coincided about a particular facilitative action called *modeling*. Whether enacted by a leader or designated staff, modeling, defined as a person or thing regarded as an excellent example of a specified quality ("Model," n.d., para. 5), was considered necessary to accelerate change to the 21st century instructional model. Leaders both modeling the appropriate 21st century leadership style, and deliberately creating processes and structures for ease of 21st century learning and practice in professional development or trainings, appeared to be key to the change requested of staff. P201 shared that utilizing critical time in PD, mandatory in most schools, has value.

> I think using things that all faculty have to do like the staff meeting or the way professional development is organized, and just taking those experiences and promoting things that are in your operational definition like collaboration or opportunity to be active as opposed to passive…could be incredibly powerful ways to foster those things as a culture.

Additionally, P210 saw the professional development time in particular as key to modeling the aspects of 21st century teaching and learning as well. He stated,

> If your whole purpose in a PD is to teach teachers how to do something, the pedagogy is really the same as it is with [students] in that it actually makes the task easier because the leader simply becomes a facilitator of [teachers] controlling their [own] learning.

This is because leaders want to take the opportunity to model what's being done in the classroom, as P221 explained:

> We're trying to teach our teachers to let the students…direct the learning, be more project based, you know, delve into the real world more…and all of that. We've had to transition our professional development from…this is how you do this in Word, or how you do this online, or this is how you build a PowerPoint to now…immersing them into, say, an online…video editing program and not giving them the ones that teach them how to do it, but actually giving them a project, you know something to start. So, we're actually trying to mirror what we expect them to be doing in the classroom as well.

Participants discussed modeling the model in trainings, as well as using all interactions as an opportunity for modeling. For example, P204 stated,

> First off, just as we expect the students to fall in line with the idea of the four Cs, I think we need to have that embedded in how our faculty work, and using those four Cs in our own interactions.

Moreover, P215 discussed how inauthentic a leader might look when not modeling appropriate tactics.

> Do we want to have student-centered classrooms? Project-based classrooms?… We expect certain things about the learning environment that's created in the classroom for students, and then when we [create] professional development models or we run meetings…we run them in the most 20th-century manner possible, right, with somebody standing in front!

Conversely, when leaders model 21st century strategies in meetings, P202 said, "You're showing them that you went and learned how to do it yourself," which is key to accelerating the faculty transition, as it conceivably goes a long way to inspire replication. He stated,

> Showing those capabilities, either through [the] know-how of the technology or the programs used, through classes the leader has taken or classes that the leader might be able to teach or being able to stand up in front of the class or…staff or through leading professional development centered around the technology.

*Relevant and timely PD*. Another critical function of being truly facilitative of the 21st century instructional model was for a leader to ensure that the training offered to teachers, called professional development in this analysis, but also known as professional learning time in schools, is effective. P212 stated plainly, "Teachers have to see it as relevant." Multiple methods were suggested, but most included respecting staff's time, as P216 shared:

> With part of that you have to manage the time and the meetings that they're working within so that, therefore that you can make sure that you stay very, very on task and on time. You don't want to waste people's time, they'll see right through that…in terms of the staff development that you really are honoring their time and their growth.

Another participant, P206, remarked on the relevance of training, "There had better be…something I want them to do soon so that they practice what they've just learned."

Fundamental to making training relevant is making it personal. Four participants mentioned the advantage of *meeting people where they are.* For example, P221 stated:

> I think…being able to meet [teachers] where they're at, and hold something for them that is best for their situation… It's really and truly no different than what we're trying to teach about [individual] learning styles and learning differences, in learning strengths for their students.

To be facilitative, P201 stated, "You have to take people where there they are and move them one step closer every chance you have." Said differently, by meeting people where they are, a leader provides flexibility for them to be themselves. P204 stated that,

> People who are really uncomfortable can feel safe in just taking the little baby steps, and the people who are ready to jump off the high dive know that they can jump off the high dive and just go with it.

To accomplish this task, P211 remarked on the effectiveness of providing choice; making training personal means that staff can self-select what works for them.

> Key is that staff are provided opportunities that they opt into instead of being imposed upon, so leaning…whenever possible, there are…we are encouraging in getting people to either sign up or pursue support on their own as opposed to expecting them to come for traditional training.

To make training relevant, another strategy involves *teacher-led PD.* P206 underscores teacher versus leader persuasiveness, "Because a teacher is always going to pay more attention…to what another teacher is telling them." Nine more participants indicated that including teacher-led proposals is a strong method of influence to change ingrained habits. To demonstrate, P210 recalls a time when a teacher-led PD worked to get others on board.

> You know we changed our grading system a while ago, so we had a couple of teachers who tried it, used it…and then did a PD where they're like, "Oh my God, I can do this, I can do that," and everybody just immediately wanted to do it.

P212 described how he summons teachers to be willing to present in teacher-led training,

> When we're working with them, I let them know that often, "Oh my gosh, this is great. You've got to share this… this is…good work you're doing. Have you shared this with anybody? Or would you mind if I put this out more publicly?"

He stated in his experience that a teacher tends to appreciate the achievement; he calls it "shining the spotlight," and this highlight becomes contagious.

*Start small.* Last, but not least, a supportive process twelve participants highlighted was a method related to initiating successful change: *staring small*. Because change can be deemed challenging, starting small helps staff attain some form of continuity. It helps bridge the old to the new, with the result of letting things expand somewhat organically. For instance, P206 increased technology utilization with this method strategically.

> So, you don't start big, you start small. [At my school] it was the six grade teachers that were in core teams…being collaborative in their teaching, having banks of computers in their classrooms, so that the seventh and eighth grade teachers could see that it worked, it was effective, it gave results. So, you start with maybe like a demonstration model… You have to show [teachers] that it's effective and that there is success and results.

She went on to say that those teachers go on to become experts in the implementation, and teacher leaders can then show others. "Then you call on them…to provide professional development to their colleagues…you have to have a gradual transition and you need to start small and build on your successes and your results." This sentiment was echoed by P212.

> Find these small success stories. You know, if you have the opportunity to phase something in rather than…basically flip the switch and everybody just goes from one platform to another, or one methodology to another…if you can phase it in, in smaller groups…that's a really good approach.

Consequently, phasing in a change is another way of starting small; additionally, it helps to maintain some form of continuity, bridging the old to the new. For example, in discussing change, P213 remarked that one needs to "be really consistent and strategic in doing [the change] over time, rather than changing it up." P219 spoke to the challenge of being facilitative.

> And that's hard, I mean difficult I think to do. Like it's easier…to say, well, we all got to change… And then you kind of leave a lot of the people behind and you've got a few people that are, yes…charging with you.

Accordingly, to gain more buy-in, she explained how to help make the change easier.

> So I think like sort of how to bridge what we've done in the past and then what we want to do to be more, you know, in the 21st century, like [looking more closely at] what does that mean. And then also looking at like what are employers and business people saying you know that they need...to be college and career ready. So what are those things that are needed? And then to help people feel like it's possible that they could…like where could they enter this change, you know, and where is it possible that they could use their skills and make the changes that aren't needed.

P219 showed how the competency of being facilitative is challenging but worthwhile. This leads to the next competency, collaborative, which is reminiscent of the African proverb: *If you want to go fast, go alone. If you want to go far, go together.*

***Collaborative.***

- Work with another person, or group to achieve or do something
- To work jointly with others or together especially in an intellectual endeavor
- To cooperate with an agency or instrumentality with which one is not immediately connected

It is important to note that a principle of leadership clearly implies that one is not leading if there are not followers. Consequently, it is not surprising that all 22 participants mentioned implicitly or explicitly the importance of the leadership aptitude of working well with others, i.e., being collaborative. Whether it is the 21st century organizational norms brought about by newer generations like millennial preferences, or the onset of a global economy, or technology that imbues access to competitive choices, 21st century etiquette is more collaborative and networked than ever before. Even in contemporary schools notorious for teacher isolation as a result of working in close-door classrooms, participants emphasized the absolute necessity of collaboration essential to building a culture of growth. More specifically, participants voiced the importance of creating a *shared vision*, *yielding to collaboration*, *distributing leadership,* and lastly, how 21st century leaders *network*, or rather has a team of trusted advisors.

*Shared vision*. Ten participants explicitly mentioned *vision* as key to a 21st century change effort. P206 said that an important leadership quality is to first "have a vision." P201 asserted, "It takes a whole team of people having the same vision going in the same direction." In fact, some participants even believe the vision not only should be shared, but also co-constructed; for example, P220 discussed how vision is the foundation of collaboration.

> I think with that then [any change] has to be connected to a very clear vision of what we would want to see in our students. And it's also co-constructed. I feel that's really important that people buy into that… The original mission, vision was co-constructed with parents, community members…from the inception of the school… We sort of have rituals where at least twice a year we go back to that mission and vision to ground ourselves in the core competencies we embrace.

When asked directly about change, like others, P208 said, "That entails, you know, having a real strong vision and a plan and implementing and executing that plan and, you know, selling it to the faculty as well." The latter point, addressing how one's staff engages and participates, is discussed subsequently.

*Yield to collaboration*. As mentioned previously, every participant spoke to the importance of collaboration in one way or another. P208 stated, "I firmly believe in professional learning communities and working within that collaborative model." She described such a model as "a collaborative group of adults working towards a goal and…moving towards that goal…implementing it, monitoring it; all of these things" generate trust. To collaborate, a leader must share decision-making; to err on the side of collaboration means that one's leadership is *not top down.*

P222 said that "Folks need to feel included, heard, and understood." He noted that in working with others bringing people in, one needs to be "collaborative, not dictators." P203 underscored this idea, stating that a leader needs "to have a sense of empathy. You cannot take people through this [change] in a draconian style process. You have to actually be interested, and care in people to be able to do it." Why? P218 stated that collaboration is key,

> Because the school leader doesn't do it by him or herself. It has to be something that the faculty is joining in, and we're doing it together. So, whether that's using protocols like Adaptive Schools protocols or Critical Friends protocols or these kinds of tools to support collaboration and build capacity.

Therefore, "no, just blanket top-down" decisions, P204 said.

> There needs to be collaboration. Again, you cannot have that just straight, siloed, top-down decision-making. It needs to be done in collaboration because there a re a lot of

> smart people that work for you, theoretically, you're not hiring dumb people if you're working in a school… So [a leader should] access that intelligence and those ideas and creativity.

Additionally, as the leader, it's important to set the example. P206 explained how not being collaborative can thwart progress; "You can't ask your teachers to be collaborative if you're not collaborative…just like the teachers need to be collaborative in order to be able to teach their students how to learn collaboratively… So it all…trickles down." If one yields to collaboration, the benefit of gaining momentum in this 21st century model should be recognized. P210 explained.

> Sometimes there are things that I would prioritize higher than them, but they choose what they get behind, because for me, anything that they are passionate about doing is going to be, have a better chance of being successful… And so making a step, even if it's in a slightly different direction than I would have anticipated, but making a successful step forward, is much more powerful and being action oriented that way, than me really sort of pushing an initiative all by myself, and trying to get everybody on board, and convince them that it's good…it's not effective.

That said, participants indicated accordingly that a leader must be a part of the team and distribute leadership.

*Distribute leadership*. This concept, which is gaining a lot of momentum in 21st century teaching and learning models, was highlighted by eight participants. P210 stated, "We distribute leadership so that they're not looking at me as the person who is making all the decisions and creating all the initiatives, and sort of handing things down." Collaborating in this way is a successful method; P219 showed how it helps her staff accelerate successful change.

> You can't be a leader that is not collaborative, and then want everyone to collaborate which sometimes happens in our district...someone who knows how to distribute leadership too, which is about collaboration, but someone who…is able to have people use their strengths, and then build a team, and then also give meaningful feedback to the team members. So it's also challenging them in growth.

However, collaboration is not necessarily without incident. In response to accelerating the 21st century model with resentful veteran or reluctant staff, P202 discussed how he might utilize teacher leaders in aiding in the oft-challenging transition to a 21st century instructional model.

> It would take a leadership team that is greater than just administrators. I think that's when the teachers leaders really come in, like the department head, we'll have that conversation with them several times before we actually bring out this [to] the staff as a whole. I really do think that if the teacher leaders, as long as, in addition to the school leadership, is championing for this change, it'd be a lot easier to bring about.

Yet, P219 cautions that despite increased distributed leadership, the role of principal is still necessary, "You do need to have teacher leaders but you also need to have a…leader, a principal that is helping to bring [the collaborative efforts] together or in charting kind of like the course," detailing the critical role authentic 21st century leadership still plays. P207 provides a rationale for why both distributed leadership and the important role administrators have in tandem:

> Everybody has to acknowledge that you lose some credibility when you leave the classroom. And I think it's true. It's true…every year I know less and less about what it's like to be a classroom teacher, I'm not going to pretend it's any other way. But if I can engage people and get people I trust and respect to pull it off then I know [the initiative] can work.

"Fostering leadership on the site" is key to successful change, according to P205. Other change-savvy participants shared that ideology. Distributing leadership creates a culture that is like a team. P220 talked about the successes gained as result of collaboration:

> I mean it's a collective success. As a leader I think you can set up certain structures and an infrastructure to create that sort of environment. And that's exciting...you can be sort of a catalyst in all that, but in the end you need your people to do things different. You need them to see and embrace new things, try new things. Because you're not going to be teaching the 40 classrooms you have…so it has to be a collective thing.

*Network*. Another related aspect of the collaborative competency, but slightly different from what has been mentioned so far, is collaboration with not just teachers and stakeholders, but also fellow leaders. Eight of the change-savvy participants stressed the importance of making connections with other leaders. P204 summarized the value leaders gain in having a strong network.

> If you want to be a change agent for your school, you first of all [have to] get off of your site and see what other people are doing and make connections, whether it's via conferences or social media, or, [in] some other ways - you join professional organizations, whatever it is, to make connections with those like-minded people that are going to support you in your successes, and they're going to be there to help you work through your failures, to think beyond what it is that you wanted to do, so that you can continue to improve. And, have a team of trusted advisors.

This group of peers, referred to in the above statement of P204, is valuable to have during leadership triumphs and challenges, because as P218 shared, being a leader "can get tremendously lonely if you don't have allies and other people to communicate about the work."

She went on to share an example of how she connects with others, stating, “I’m part of networks within the district, so I see people once a month in that capacity, but the real support comes from the phone calls to respected peers.” Support from contemporaries really helps during challenging times. P221 suggested practical techniques to thrive, noting, “I think that having people who have gone through different aspects [of leadership] and being able to pick their brains and see how they’ve got on really helps [one] get through … it helps to have that support group.”

Utilizing a team also is key to supporting leader learning. For example, in addressing how a leader might stay atop of 21st century skills, P219 indicated that knowing what resources are available and what people are using can “help you to think about something differently or to use different technology, different programs or other things that you might not … be aware of.” P217 also related having a strong professional network to learning and being a savvy 21st century leader, stating, “You always have to be looking out there in looking to grow and using different applications and making a strong personal learning network in growing with people in order to stay out the front [as the leader].”

When the participants were asked for suggestions on how a leader might go about cultivating this personal learning network, both online and offline networking were emphasized. In addition to finding people that one respects, such as in education leadership conferences, P222 suggested, “social media is a great place to start.” Some participants shared how online relationships helped them to link up with like-minded leaders. For example, P204 discussed how a particular application has helped.

> I very much rely on a core group of administrators around the country who are part of my support group…because we are in a Boxer [online application] group together, we see each other at conferences now, where we follow each other on Twitter, but it was the

> Boxer group that brought us together, and it's an amazing group of people, and I really think that leaders who are serious about accomplishing change at their school site and making learning better for kids need to find their tribe of like-minded people that will not just be their yes-men, but will push them to be better.

P205 has also used this application, and said,

> I connect with others a lot on applications like Boxer, where I can have very rich conversations, they get very deep… [Scheduling] face-to-face time with people [is] really hard to come by, and so some tech tools help me [with getting together with peers].

Lastly, several participants cautioned others to not rely solely on online networks, but to be sure to make the effort to meet offline too. This was underscored by P221:

> You know, you hear a lot about online social networking and I'm one to say, what about your offline social networking? Who are you getting together with, who are you talking with, those kinds of things…? And that can be virtual but, you know, sharing a meal together, sharing a drink together. It's unbelievable how that environment creates camaraderie and allows for better discussions, questions [and] those kinds of things. My own development has come about [by] talking with other people, seeing how they manage, how they lead.

After acknowledging the benefits of technology, P205 stated that even though it is hard to schedule, face-to-face time is important:

> But then also to go with that, it is important that I find face-to-face time with my colleagues, that's an absolute necessity. And I know the go-to people that I call when I'm trying to think through a dilemma, not my entire collegial group. There are certain people

that foster my better ideas…You know the best people that bring out the best in you and help you think about things differently, ask you good questions.

Participants viewed networking, or creating a "personal learning network," as P222 called it, as essential. Change-savvy participants conveyed that collaborating with fellow leaders provides immense value to a leader's work. To benefit from this strategy, it is suggested that a leader adopt a communicative competency as detailed, subsequently.

***Communicative.***

- Two-way speaking and listening
- The act or process of using words, sounds, signs, or behaviors to express or exchange information
- A process by which information is exchanged between individuals

It is critical for an effective transformational leader to be able to speak and listen often, or be communicative. More precisely, two-way communication is important to accelerating the 21st century teaching and learning model, given the anxiety that often comes with change, especially one of the magnitude that is proposed. The following three subsections are offered to highlight communication aspects of great 21st century leadership: *communicate the change,* be *open and transparent,* and *ask and listen.*

*Communicate the change.* Fifteen participants responses coincided when discussing how a leader need be a good communicator as a critical competency to facilitate the work of shifting away from a deeply entrenched traditional model of instruction. P212 said, "You need to be a great communicator both verbally as well as written and through video."

Often, when addressing why communication is significant, participants spoke to alleviating fears and helping teachers understand why a change is being asked of them. For

example, with respect to leaders managing change, P222 stated that being a "great communicator" is required; "Often [teachers] feel threatened," as one can imagine, given how their role in instruction itself has transformed in the 21st century model, with new tools to perform their craft. Consequently, P222 continues, stating that leaders "need to form a path of growth" for teachers by stating to staff explicitly, "We will help you get there," as it is "not often said. Leaders will need to say, 'Here is your support, here's the path, professional learning available…[and the] process of how we're going to get there.'"

Leaders should publically profess not only the need for change, but also the support mechanisms that are available. P215 explained the inherent occupational concerns of teachers and how a leader might mitigate them through his/her communication.

> So…learning certain techniques that are going to move the locus from teacher-centered to student-centered may make a lot of cognitive sense, but plays into this fear of losing control in the classroom, or with technology, this fear of, if you're the teacher, you're supposed to know more than your students, right?... So…if the leader is very attuned to the fact that that is happening, and can therefore develop some creative strategies…help teachers see or feel, or creatively understand, that they're supported and they're not viewed as a poor teacher because they know less than their students about…this technical tool, for example. It's important.

To mitigate the awkwardness in staff behavior change, P213 stated, "Let [the teachers] know that [to have fear is] okay, but we have to motivate them so that they feel like, 'Okay I can…go back…do the work,' because change is … hard. Change is uncomfortable for everyone." It is therefore critical that a leader communicate the change from the perspective of being on the same team, that there is a mutual mission to be lifelong learners in that making

mistakes and being vulnerable to lessons learned from trying is what is normal and expected. P213 explains how a leaders communication about the change from a team perspective is critical:

> We're learning together, this is a new way, but we must be willing to change. We're lifelong learners, and continue to communicate that, continue to develop those systems, and let them know the value in collaboration, and working together to accomplish the 21st learning skills.

Articulating this message of purpose and support should be communicated often and with consistency, as participants emphasized. P202 specified, "Framing…why we want to…make this change" is key, perhaps by providing "research and articles and basically allow[ing] the faculty and staff to make meaning of the reasons behind why we would want to make this change." He went on to explain how messaging must be consistent.

> You have to continue throughout the year. You can't just introduce [the initiative] at the beginning of the year and hope people jump on board. It has to be intertwined with basically every faculty and staff activity that you do.

As observed from these participant statements, communicating the change is important given the natural implications that can be experienced by a faculty that is asked to change its fundamental norms. Being clear and very transparent in a leader's communication, to the point of sharing vulnerabilities, was also deemed important in communication.

*Open and transparent.* Contrary to the past norms of leaders communication tendency to be circumspect, eleven change-savvy participants emphasized the benefits of a leader being open and transparent. P201 suggested that a leader needs to be very clear and public.

> I think it's particularly important…for the top leaders–the one that people ultimately believe is responsible for the institution and for their own position in the school or

> organization–to be invested and to be kind of publicly invested and clearly invested in the change that you want to have take place… It's important for the public face of the school—the leader, the head, whoever that is, the principal, to be very clear and public in embracing the change, or the changes being proposed… Also to kind of be clear that it's not really an optional, transitory, or fad kind of task at hand, but rather *the task* of the school at that time.

In a contemporary model of teaching and learning, a leader shows all his or her cards. To gain *buy-in*, a term used in the field that means teachers really believe in and become champions for an initiative, P212 proclaimed, "You have to be entirely transparent. You need to…show that you have no hidden motives… what you say is what you believe and that there's…not a hidden agenda, and there's not a political piece that's in the back end." To build trust, he emphasized that a leader should "show [his/her] own vulnerabilities, and…part of that is [his/her] own failures, what things might not have worked, and acknowledge those particular failures." True collaboration, it appears, means communicating often and to the extent of exposing a leader's own humanity, as opposed to the facade associated with the stature of one's role. P220 explained how a leaders' ability to be humble—an adjective not commonly associated with leadership—inspires trust.

> You realize how much [eliciting trust] is about coming from…a place of humility. [It is a] humbling experience…to know and to fully embrace that I don't know everything. I don't know how to do everything; many things are new to me. I'm going to make mistakes and I'm going to make them in a very public way because I'm the principal.

However, P212 stated that one can be comfortable and still confident in expressing mistakes made, showing the staff an example that "[we] learn from that experience…so that [we] are continually growing."

Moreover, another method to contend with humbling realities of growth is to not only re-focus criticisms or challenges to being the chief lifelong learner, but also always return to the ultimate goal of being student-centered and communicating that. For instance, as P213 argued, acknowledging what will and will not work, knowing " how to transfer a conversation… [and being] able to say, okay it's not about me, it's about our students" helps ground discourse in authentic purpose. P202 also discussed re-centering on the task at hand, preparing students for college and career, and otherwise providing the staff with the big picture.

> I think it's about being transparent about what it is you're hoping to accomplish. People really benefit from seeing… "Okay, this is the goal and this is the map for how we're going to reach that goal…these are sort of the checkpoints in what we hope to [to achieve], where we hope to be, and…[some] checkpoints." And just sort of laying out the whole plan from the get go, with the whole staff, so that they know that we've really been thoughtful about it. We spent a lot of time meaningfully planning this transition.

Transparent communication helps give teachers the comfort associated with being informed and supported. "Always give it the context," said P205, "be very explicit." This in turn builds the trust needed for change. Likewise, when asked for an example on how a leader can help build trust needed for behavior change for instance, P208 voiced the upside of being open with her staff.

> Openness, transparency; I firmly believe in including the faculty and the parents and the community in the school in all things related to how best we can help the students move

> forward. Anything having to do with the budget, curriculum, assessment—all of those important aspects have to be shared. I think that doing that kind of, exhibiting that kind of transparency…for example, when I took over the principalship at this school I just left, I went over the budget explicitly with all of the teachers in the faculty, and the comments that I got were: "Well, we've never been privy to this kind of information in the past." So building that trust helped me to—you know, I'm not going to say 100% implementation with fidelity and cooperation, but it did help ease the difficult decisions that we had to make at times.

Sharing openly, without a hidden agenda, is what transparency looks like. It helps teachers feel safe to join in on the initiative authentically. Furthermore, an additional legitimate method by which leaders can accelerate trust, and the 21st century model as well, is to hear the thoughts and suggestions of their staff.

*Ask and listen*. In keeping with the idea of authentic communication, participants emphasized another quality that is discernably the role of a 21st century leader: *listening* intently to one's staff, and even *asking* explicitly for input. In fact, a vital, sometimes overlooked, aspect of communication on the part of leaders is to simply *listen*, as P204acknowledged:

> It's great to have ideas, but everybody has ideas, and so we really need to be willing to [listen to teachers'] concerns and listen to what it is they want, and what they need in order to figure out the best approach for changing whatever it is that [the leader] wants to change. Whatever new ideas or process or if you want to change an actual policy to be able to make any of that happen effectively, it has to start with listening.

Similarly, P212 stressed the fundamental importance of listening intently to one's faculty.

> You've got to listen. Your faculty will tell you a lot. It's not just sitting there listening to your faculty gripe. It's really sitting there and trying to then parse the words and figure out what they're really trying to tell you.

Listening intently means listening with the goal of understanding, accomplishing, problem-solving, or supporting. This type of listening was expressed as vital to accelerating the model. P215 said,

> Yes, I mean, I think it's sort of like listening to those sparks of interest that are coming up from…the teachers…[they] are bringing, and really figuring out a way to harness those and sort of fan the flames, so to generate a lot of momentum from those elements.

Listening to someone in a genuine way is a method of conveying respect and is a basic element of a good working environment. P220 emphasizes listening to teachers as essential to understanding the environment a leader oversees.

> Be a good listener, I mean, it's interesting to me that they give 21st century, you know, because it's like advanced, it's the future, and yet in many ways I feel we go back to very essential basic things like listening, to have you understand how maybe your teachers are seeing things and the challenges they're facing. That you don't see necessarily day to day, because you're not in the classroom.

Seeing through the eyes of teachers entails seeking input and asking directly for feedback; when a leader does not do this, it can pose potential hazards. P220 stated, "I feel that's where people have run into problems, because no one's asking the students or the teachers or the families…what do you want, how do you see it?" She went on to compare this oversight to when district officials not asking their school leaders for input prior to rolling out a new initiative, when it is the school principals who are most informed about their sites.

As noted by P220 and mentioned by five other change-savvy principals, beyond asking teachers for their input, *student input* was emphasized as significant to accelerating the 21st century model. In fact, P217 shared that in being truly student-centered, a high level of student input has been instrumental.

> I don't make changes unless students…unless we have a need for it in our student body. We just don't do things to do them. So…when it comes to making changes in building 21st century style…students always have a lot of input. And they share with the assistant principals and myself things that they think are needed at the school.

Additionally, P222 not only agreed about the benefits of the incorporation of student input, but also found that it helps motivate teachers. In discussing facilitating teachers' comfort with imperfection, he mentioned that in addition to tapping into teacher leadership, building student leadership helps facilitate the impending change. For example, he stated that as students are invited to participate in planning, such as "deployment [of devices, or]...supporting assessment of new technology," that ensuring authentic value in the school culture; students are "given real responsibility, supporting [the students] to work with adults, to actually implement the change, [and take part in] decision-making…. Students become partners with teachers." He believes this has helped teachers combat the natural concern of appearing not to be experts in front of students, and instead become "partners in the classroom more willing to…not [be] perfect, the first time."

Gaining input or feedback from stakeholders was a widely endorsed practice. P213 asserted, "As an educational leader you have to be willing to receive honest feedback, be reflective, and be deliberate in your intention and in your work." The ability to ask and listen

took on different forms, including polling, surveying, and interviewing face to face. P202 shared multiple methods for candidly asking for feedback from her staff.

> I think it's really important to keep a poll on how people are feeling about [a given change]. So, what I mean by that is, you have a series of trainings but then at each of those trainings you're continuing to get feedback [about]…what they were able to implement, about what their questions are, what their concerns are, and then maybe halfway through the first semester, you send out a survey and or maybe even just informally have conversations with several people and say, "Okay, what are some things that we need to work on that might help you implement this with better fidelity…in the classroom?"

These varying methods of gathering faculty input helps a leader become more effective; P205 declared that to "provide some just in time…support and feedback is really important." Endorsed by P210, varying the method for gathering information by appreciating the sensitivity of subject matter ensures feedback is credible. Using "anonymous polling…if it's a more sensitive [topic] where people might be a little reticent to share their name with what their feeling…to get a real honest pulse of what's going on" allows participants to feel safe to express their views. Other participants recommended simple surveys, as P204 stated.

> If it's a policy or practice that is perhaps, I guess, less life and death, if you will, within the life of the school, I put out a survey. "Here's a Google survey, I want your feedback." And at the end of each school year I sit down with every single faculty and staff member…that is a direct report to me, and we talk about their year and we assess their year and I listen to what they think went well and what they would change.

Subsequently, asking for and listening intently to feedback helps accelerate successful change to the 21st century instructional model. As P219stated, this process is not easy, and a leader's contemporary role is often the opposite of what one might think.

> This is something that takes…time. [Instead of] …the model of…the change leader - that you're just going to go in there and turn [things] around,…with the school and you're going to tell people what to do and how… So that doesn't really work so well, but it persists because people think that's what is needed… But I think there's other kind of leadership where you're acknowledging…you're kind of wondering how do people change, like how does that really happen?

Questioning and taking a pulse on how one's staff feels, supports the change initiative, "I think it doesn't happen by people being told, mandated to do something." P219 continued "It's really about…listening, so getting feedback and input, and having structures in place to do that."

In conclusion, being communicative is more than just getting the leader's vision publicized or administering post-training surveys. The participants stated that it is really about seeking input from stakeholders, as P220 put it, "ask your users." The emphasis is on two-way speaking and listening to understand how best to move the initiative forward for the sake of students.

**Summary**

This chapter detailed the data analysis findings of critical competencies that are thought to help a leader accelerate the 21st century instructional model. The chapter began by reframing the research study and successively provided the characteristics of the 22 school leader participants for context. This chapter then explained the grounded theory analysis process as divided into three phases: (a) initial coding, (b) focused coding, and (c) theory building.

Finally, this chapter presented the findings as themes emerged from the data to answer to the research question of identifying critical competencies that support successful change. The findings detailed the critical leadership competencies: discerning, authentic, facilitative, communicative, and communicative. Direct quotations from participants, each with *lived experience,* regarded as authoritative sources provide the results of this empirical investigation. Their statements are captured to inform the scientific knowledge base, as well as to accelerate practitioners' school-led initiatives of 21st century school transformation.

In the next chapter a calibration of this study's results to the themes found in the literature review is offered, and the foundational competencies are interwoven into a process framework to be utilized as a guide. Lastly, recommendations are proposed for further research.

## Chapter 5: Framework, Conclusions, and Recommendations

This final chapter is the culmination of the study; it concludes the author's investigation of an instructional challenge experienced in many present-day schools nationwide and provides a capacity building framework as a possible solution. The investigator interviewed 22 ($n$ = 22) willing change-savvy school leaders who elucidated methods on transforming schools. This chapter integrates all aspects of the study. It begins with the original problem and purpose from which the exploration was first initiated, the research question investigated, and the grounded theory methodology utilized to conduct the study. Next, the findings interpreted as a 21st century leadership framework are presented for ease of access and implementation, along with a summary of the findings related to the literature review found in Chapter 2. Subsequently a conclusion of the study and potential limitations for critical review are offered, followed by implications for future leadership practice. Finally, recommendations for further research are suggested, as well as the author's concluding remarks.

### Review of the Study

This study was based on an identified problem that recognizes an instructional disparity in present day K-12 schools. Despite the elapsed time of over 15 years into the current 21st century, classroom technology integration—an arguably key and all-encompassing factor on which the 21st century instructional model is based (Trilling & Fadel, 2009)—is not taking root at the level of expansion as one would anticipate given (a) the access to technology, (b) the number of years since the creation of the model, and (c) the economic needs schools are preparing students to meet. As such, it is determined that the necessary reform required of schools begins with school leadership. However, recent role expansion of leaders has been called into question. Perhaps the mere load of leadership responsibilities is impacting the progress of

such initiatives. In such case, OD principles, synthesized as *planned chang*e, are germane to the study and are identified as a key aspect of a school improvement strategy. Consequently, the purpose of the study was to ultimately create a framework that may help time-burdened leaders accelerate the shift from a deeply entrenched traditional model of instruction to one more in alignment with design and inquiry-based learning technologies associated with the 21st century instructional model. A single research question provided the focus of the study:

- What leadership competencies do 21st century change-savvy school administrators perceive as critical to accelerate successful change to a 21st century instructional model?

The interview guide covered four domains, including leadership skills, professional development, change management, and 21st century skills. The investigation utilized a grounded theory methodology, as it was considered the best fit for the stated purpose. The grounded theory qualitative design begins with purposively sampling participants that have lived experience in the area under investigation. Next, interviews were recorded, transcribed, and analyzed. The grounded theory methodology, true to its namesake, grounds the study in the participants' responses.

**Summary of Key Findings**

Subsequent to three phases of intensive investigator analysis of the data the key findings are both five critical leadership competencies (see Chapter 4) emerged from the data, and a consequential competency-integrated framework presented in detail below. These competencies are deemed essential to leaders charged with wide scale transformation required of schools that are still overwhelmingly utilizing a traditional model (See Figure 3):

- Discerning

- Authentic
- Facilitative
- Collaborative
- Communicative

These competencies are thought to be attributes of an authentic 21st century leader. As such, from the results of this empirical investigation, a proposed process framework grounded in the data was fashioned for school leader implementation and scientific study. The premise of the framework is as follows:

- If a leader dares to enact an authentic current-century leadership style, then a growth culture results that accelerates 21st century teaching and learning school transformation.

More specifically, the framework is based upon the premise that as a leader develops this authentic 21st century skillset (see Chapter 4) a growth culture results, defined as an environment where shared learning and innovation are the standard behaviors of staff. This subsequent culture creates the antecedents necessary for mass transformation of practice. Accordingly, the 21st century capacity building leadership framework is a proposed user guide for oft time-burdened leaders to build capacity at a time that is notorious for complexity and chaos (Fullan, 2001).

**Authentic 21st Century Leadership Framework**

The purpose of this research was to support a school leader in this era of current-century ambiguity, recognized as complex change by Fullan (2001). This effort was achieved by fastening what some consider a rather abstract 21st century model, to familiar practices of flexible structure for assistance in goal attainment. Presented is *Authentic 21st Century*

*Leadership Framework*, shown in Figure 9. This framework aims to provide a user guide through the experience of leading authentic change from a traditional model to a 21st century instructional model. In the following section, an overview of the framework is described, followed by a detailed summary of the findings via competency-integrated five Steps to 21st Century Leadership, accompanied by related literature.

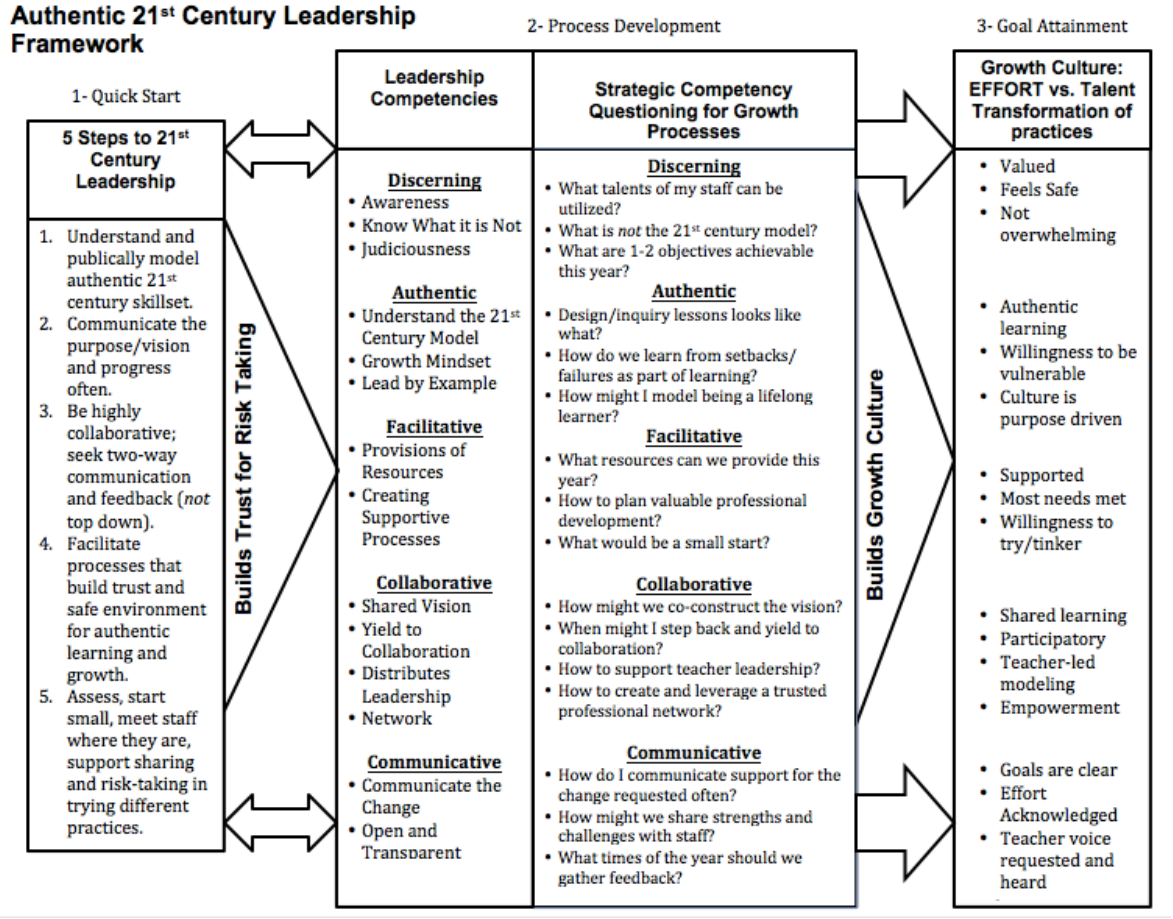



*Figure 9.* Authentic 21st Century Leadership Framework.

**Framework Overview**

The Authentic 21st Century Leadership Framework, herein referred to as *the Framework*, includes three components: (a) Quick Start, (b) Process Development, and (c) Goal Attainment. These components were created to guide school leaders through a flexible process of developing site-specific capacity for change to the 21st century instructional model. The first two

components are interchangeable, and stand to offer the user flexible steps and questions to arrive at the third component.

The framework is read from left to right and from top to bottom. The first component, *Quick Start,* lists five competency-integrated steps to provide leaders an at-a-glance perspective on necessary actions to cultivate the central characteristic of a transformation of practices: a growth culture. The second component, *Process Development,* details both the emergent themes and sub-themes titled *Leadership Competencies,* as derived from the results of the study, complemented by corresponding questions of reflection. The strategic competency-focused questions are intended to initiate competency-based ideation regarding site-specific characteristics and processes. The third component is a snapshot of criteria that may help a leader recognize and realize goal attainment. That is, fundamental to a growth culture are certain attributes, such as teachers feeling safe to try new practices by setting aside fear regarding expertise. The triangular arrows between the components in the center of the framework further indicate aspirational aspects of school culture recognized as necessary for authentic 21st century transformation of practice: building trust for risk taking and building a growth culture.

**Step 1. Quick start, five steps to 21st century leadership.**

***1. Understand and publically model authentic 21st century skillset.*** The first step relates to the key findings related to competencies of discerning, communicative, and authentic. As mentioned previously, participants spoke emphatically to the need to begin principally with understanding the 21st century model: both what it is and what it is not. It is suggested that a leader first gain a firm conceptual grasp of the 21st century model, so as to become keenly aware of what is necessary in one's school. Goleman's (2013) most recent book, *Focus, the Hidden Driver of Excellence*, corroborates this perception. It underscores that beyond an *inner* and *other*

focus, a leader needs to have an *outer* focus, indicating an awareness of the importance of context: a trait that is key to discernment. Before a leader can suggest change, he/she must possess a firm understanding of the 21st century model, its intricacies, and the context.

Secondly, a leader ought to be public about the change sought, which points to the *communicative* finding. Participants thought it critical to not only believe in the change, but also publically communicate that change in leadership action. This demonstration is intended to influence a faculty to more readily value and embrace the initiative, noted as a aspect of the actual definition of leadership, according to Northouse (2010). The idea of publically modeling the change a leader aspires to achieve is also substantiated in one of the most popular and contemporary leadership models to date: the transformational leadership model. The namesake premise—transformational—suggests that inspiring a group through modeling as opposed to mandating or taking punitive measures transforms the culture through inspiration, versus a more traditional top down approach that harkens to a day when it was common for adults to tell children, "Do as I say, not as I do."

Thirdly, if the leader is to model an *authentic* 21st century skillset, it directly speaks to another key finding overlapped by the participants: the importance of being genuine. The inclusion of this word–authentic–is an indirect nod to the barriers associated with some failing change initiatives. For instance, while there can be multiple reasons for a change initiative's failure, one principal reason is if the initiative is thwarted by weak leadership, or efforts that are insincere and permissive of obstacles. Instead, leading by *authentic* example inspires improvements to be made (Hert, 2010). Serving as a model is key to a leader's role and performance (Campbell, 2012), and is thus a critical step in the 21st century leadership framework.

***2. Communicate the purpose/vision and progress often.*** The key finding of being *communicative* is explicitly named as the first word of this step. As explained previously, this finding was widely held, and in this case speaks to communicating the purpose/vision and progress often.

First, emphasizing the *overarching goal* is another leadership performance task noted in the literature (Campbell, 2012). Moreover, communicating a shared vision is a discipline deemed significant by Senge (2006) in his learning organization concept. He states that "building a shared vision must be seen as a central element of the daily work of leaders" (Senge, 2006, p. 199). However, the aspect of the vision being shared was not unanimous among participants in this study, yet participants frequently spoke to idea of using a vision to guide work and the importance of communicating the goal. For example, participants discussed the school vision as key to pushing forward, despite initial or occasional challenges. One participant currently calls their school vision the *north star*, although they have referred to it by different metaphors over the years. As their guiding light, the vision is always mentioned in professional development trainings and was utilized specifically to help stakeholders remember why they were embarking on the their journey, helping them keep sight of the purpose of their work. Another participant suggested that their vision defines the very culture of the school.

Second to purpose/vision is *communicating progress*, otherwise said as a leader acknowledging effort toward the goal. This factor is noted as an important element of job satisfaction (Robbins & Judge, 2011). Participants reported acknowledging the small steps taken by faculty as important for continued effort and progress. Additionally, several participants utilized the language of Dweck (2006) seminal work, expressing appreciation for recognizing and purposely highlighting effort versus innate talent, which is characterized as a growth mindset

as opposed to a fixed mindset. The premise, as gathered from multiple studies in Dweck's work, indicates that perception of a fixed talent can actually thwart further effort, as opposed to a growth mindset invigorates effort, given that effort toward ability can improve no matter where one is on a spectrum of ability. This is shared in her book titled *Growth Mindset*, as noted in Chapter 2.

Lastly, this second step is critical to morale in an organization, or rather the enthusiasm to persist in the challenging yet rewarding work of education. Studies regarding theories of motivation are common in the OD field, indicating that morale is critical to the production of work (Robbins & Judge, 2011). As such, a leader communicating the vision and progress often is deemed essential. For example, several participants mentioned faculty buy-in, or rather the belief that school mission or vision is their own, so as to motivate the effort put forward to persevere in the challenging times of their work. Change-savvy leaders acknowledge the necessity of motivation.

***3. Be highly collaborative and seek two-way communication and feedback (not top down).*** In this step, the integrated competencies are for a leader to be collaborative and communicative. Being collaborative is not usually what one thinks of when contemplating leadership. In fact, by definition, a leader is "the person who leads or *commands* a group, organization or country" (New Oxford's Dictionary, 2013). Indeed, some may argue leadership embodies the opposite of collaboration. Yet, interestingly, the importance of being collaborative in school leadership was a unanimous concept that was either implied or explicitly stated by the change-savvy leaders.

This notion of collaborative leadership indicates a changing of the times, or at least a modification of a critical definition. The findings of this study would propose that a collaborative

model of leadership is *the* authentic 21st century leadership style that builds a growth culture necessary for the amplification of the 21t century instructional model. This redefinition is considerably well supported by the literature. For example, one archetype of organizational leadership structures this study supports, is called *distributed leadership*, or alternately *shared leadership*. As the name suggests, it more accurately depicts the method by which a school leader achieves greatness: by multiple leaders whose work is interdependent (Spillane, 2005). This collaborative, democratic educational environment is thought to be critical to the 21st century model (Park & Datnow, 2009; Trilling & Fadel, 2009).

Furthermore, to be collaborative, one needs to be highly communicative. Again, the operational definition in school leadership vernacular may differ than, as one would envision for example a great orator, when thinking of the concept of being communicative. Instead, several participants explicitly emphasized *two-way* communication: that is, *listening* and gaining *feedback* as a critical aspect of leadership communication. In fact the change-savvy leaders emphatically advocated avoiding top-down communication, indicating a purposeful movement away from a dictator style of leadership. This finding has both direct and indirect ties to the literature. For example, the direct association speaks to *Speed of Trust*, by Stephen Covey (2008), which explicitly states that one must *seek to understand, then be understood* to elicit the trust necessary for developing relationships that is key to trust, necessary for creating a growth culture. Said another way, *listening* is how a leader might understand one's staff *before* seeking to be understood (see Appendix N).

Moreover, to be highly collaborative and yield to collaboration, as indicated earlier as a sub-theme from the data, it is implied and indirectly tied to the literature that a leader must have a high quotient of emotional intelligence (Goleman, 2000). For example, it seems necessary for a

leader to be both self-aware and self-regulating to know when to step back (Goleman, 2000). This was recommended by change-savvy participants, as well as to have the discipline to choose as much, despite possessing the *legitimate power* that presents itself when one occupies the position of leader (Robbins & Judge, 2011). However, listening and seeking feedback provides a leader meaningful data by which to plan and advance the initiative (Bauer & Brazer, 2012). It also permits a leader to be attuned to the needs of his/her staff as a characteristic of the aforementioned transformational leadership style (Northouse, 2010).

***4. Facilitate processes that build trust and safe environments for authentic learning and growth.*** This step integrates three of the key findings of leadership competencies: facilitative, discerning, and authentic. The facilitative competency is mentioned clearly as one of the leadership performance tasks necessary to inspire empowerment (Campbell, 2012). Participants spoke at length about the importance of a leader not having all the answers in this era marked by a hurried pace of technological advances, but instead to build a teaching environment conducive to faculty growth and risk taking, such as providing both resources and supportive processes for faculty to thrive. To illustrate, sending staff to conferences, or financially securing a staffed support position for technological efforts are facilitative actions that provide resources for growth.

Moreover, in lieu of assumptions, a leader may create authentic supportive processes, by first discerning what type of support is needed to usher in a newer instructional model through *staying informed*, and again by knowing what the 21st century instructional model is and what is not. Then, with this information creating structures in the school environment whereby those needs are met. An example that relates to the literature is particular to andragogical professional development, as it relates to 21st century technological integration, whereby the results of

several studies indicate how teachers effort proliferates from multiple experiences of vicarious learning and time spent with peers to support technological self efficacy (Al-Ruz & Khasawneh, 2011; Denton et al., 2005; Koh, 2011; Mierzejewski, 2010; Wang, Ertmer, & Newby, 2004). This type of awareness and facilitation greatly affects a school environment, building upon the trust necessary for calculated risk-taking.

"To change someone's behavior, you've got to change that person's situation" (Heath & Heath, 2010, p. 4); if a leader provides training that is andragogical, or sensitive to the best ways adults learn (Knowles, Holton, & Swanson, 2011), then true or authentic learning and growth can be cultivated. The valuable effect of quality professional development has on teachers has been amply documented (Darling-Hammond, 1997, 2010). In fact, Senge (2006) related the very strength of an organization to the strength of the organization's ability to learn. In a school, faculty training or professional development, as it is often called, is the method to do just that– facilitate professional learning.

Consequently, the role leadership plays in forming andragogical PD is not confined to content, but rather it is in the very creation of facilitative processes, such as ensuring learning is shared and continually expanding for further capacity building (Senge, 2006). For instance, a leader who shares and integrates scholarly research results, like that of Knowles et al. (2011) research that finds that adult learners need to know why, what and how; or, the study of Mierzejewski (2010) asserting that PD be collaborative and occur at a rate of at least monthly, would be examples of facilitative processes that build trust and authentic learning and growth, that may accelerate a faculty to be more amenable to change.

***5. Assess, start small, meet staff where they are, support sharing and risk-taking in trying different practices.*** The final step also includes the discerning, facilitative, and

collaborative key competencies. Several participants mentioned the strategy of *starting small*, which incorporates discerning and facilitative findings. Changing over to the 21st century model on a wide scale involves a discerning leader. It is necessary in an often-overwhelming process of 21st century change, for a leader to use good judgment as to determine where to begin and to note what is achievable. To commence, it is recommended to *assess*. According to OD research, employees do not often state their needs candidly (Robbins & Judge, 2011). In fact, given the hierarchical chasm between administrators and teachers, common in many schools, it makes sense that a leader needs to explicitly ask for and, or gather data.

The information gained from assessment—whether face to face interviewing, surveys, polls, or multiple methods—will inform the decision-making necessary to *meet staff where they are*, as suggested by participants. In so doing, a leader who is attentive to faculty needs will be demonstrating a pillar of the transformational leadership style (Northouse, 2010). Additionally, knowing perceived needs of a faculty will aid in planning, and possibly bridge the gap from where teachers are to the ultimate goal (Bauer & Brazer, 2012).

One way to achieve this goal of meeting staff where they are, according to a significant number of participants, is to *start small,* providing some continuity in a time of constant flux. Changing too much or too rapidly is frightening, especially when the change threatens a person's method of providing for his/her family. It is necessary for a leader to understand that fear; changing a little at a time is more palatable. To do this, a leader should choose only one or two change initiatives per year. For example perhaps, moving away from paper based communication and starting with switching over to electronic communications; more aptly utilizing school and teacher webpages; using electronic grading system; or incorporating a minimal number of design or inquiry-based lessons per semester, etcetera. Additionally, participants noted that teacher-led,

or teacher-introduced initiatives are better received by staff. Phasing in a change is more consistent with purposeful and deliberate leadership, as opposed to "chasing relentless innovation" (Fullan, 2001, p. 122). Going slow to go fast sounds oxymoronic, but the data from change-savvy participants and the literature correspond with this notion. Starting small is likely to be met with less resistance or silent non-compliance (Kotter, 2012), and therefore has a greater chance for success.

Furthermore, participants widely advocated for a leader to help staff learn in context (Fullan, 2001) by facilitating processes for staff to share their work, breaking up notorious school-related silos of independent classrooms and content-specific turf, whether through a few demonstrations or teacher-led professional development trainings. Modeling provides teachers opportunities to partake in vicarious learning experiences, and was found critical to technology integration in Al-Ruz and Khasawneh (2011) study of pre-service teachers. This was also the case in Cohen's (2005) study on a school initiating a 1:1 tablet program. Leaders who can facilitate collaboration and learning as part of the culture empower teachers and support risk-taking necessary for expanding the 21st century instructional model.

The Quick Start five steps to 21st Century Leadership can build the trust necessary for accelerating staff risk taking. The second step, Process Development, further supports competency and site-based facilitation of the model.

**Step 2: Process development: Competencies and questioning for growth.**

Interchangeable with the *Quick Start* first step, the second module titled *Process Development* is composed of two sub-sections: leadership competencies and strategic competency questioning for growth processes. The first section provides the findings in answer to the research question, explicitly stating the five critical leadership competencies to help leaders accelerate change to a

21st century instructional model. Respective sub-themes detailed in Chapter 4 as part of the data analysis are included as a means to provide at-a-glance definition and context to the competencies for the reader. The second sub-section also lists the core findings of the five leadership competencies, but also provides competency-related examples in the form of open-ended questions to help mediate thinking on processes that are site-specific and authentic to the 21st century model. Processes developed and acted upon by leadership utilizing the authentic five competencies questions may build a growth culture that is necessary for the amplification of authentic 21st century transformation of practices.

The Process Development questions can build the growth culture necessary for Goal Attainment. The final step provides a preview of organizational characteristics to look for by leaders.

**Step 3: Goal attainment.** Lastly, the third module, *Growth Culture: Effort vs. Talent Transformation of Practices*, provides indicators for what a school leader may anecdotally or empirically observe as results, should the critical competencies be utilized maximally. Comprised of mostly verbs and adjectives, the bullet points suggest ideal perceptions and actions that define what is referred to as *Growth Culture.* This growth culture is produced from the change-savvy participants and notably is inclusive of Dweck's (2006) scholarly work, which applies her defined concept of a growth versus fixed mindset, especially the premise of the studies that suggest an emphasis on effort versus talent encourages motivation for continued effort. This module of the framework builds upon Dweck's concepts of mindset, as abstracted from the grounded data, and expands the concept to define a culture of growth. Subsequently, this goal attainment module helps define what a *Growth Culture*, once established, may look like.

**Conclusions**

The findings from this study suggest that when a leader utilizes this competency-integrated framework with fidelity, the acceleration of authentic 21st century teaching and learning will occur more readily. As noted previously in the framework, the quick steps include key takeaways a leader may utilize to begin. These steps were founded upon grounded data from this study and were supported by empirical research. In conducting this study and analyzing participant data, integrating and synthesizing the investigator-curated framework, five key conclusions were developed:

1. Five leadership competencies (discerning, authentic, facilitative, collaborative, and communicative) are critical to the acceleration of authentic 21st century teaching and learning.
2. The Authentic 21st Century Leadership Framework should be utilized to assist in school transformation from traditional to an authentic 21st century instructional model.
3. Authentic 21st century leadership is chiefly collaborative, inclusive of stakeholders, and foremost is *not* top-down.
4. A growth culture, created and sustained by school leadership, is critical to the acceleration of the authentic 21st century teaching and learning.
5. A leader's acceleration of an authentic 21st century teaching and learning model may serve to mitigate the achievement gap in significantly enhancing effectual student preparation for the current-century knowledge-based economy.

This study aimed to answer the question, In what areas should leaders be especially adept to more effectively take on the challenge of school transformation of practices for the specific

purpose of being in better alignment with the present economy? A qualitative research design was selected to obtain detail that may reach beyond numerical inferences. A single research question investigated perceived critical competencies. The interview guide explicitly provided context by requesting that the successful change-savvy participants focus their responses "in comparison of leaders who may struggle to get their faculty to embrace change" (see Appendix F). An operational definition was included in the guide to simplify and specify the meaning of the 21st century instructional model.

The conclusions relate directly to the problem statement (see Chapter 1). In the U.S., the majority of states—over 80%—have adopted the Common Core State Standards (CCSS). These national standards directly require technological integration as tools to achieve higher-order thinking skills as applied to problems. Additionally, businesses emphasize the need for better-prepared students emerging from schools (Wagner, 2008a). These facts indicate that school reform is necessary. Yet, juxtaposed to this articulated need, a stubborn norm exists in many schools where the estimated 150 years of traditional instruction (Darling-Hammond, 2010; Senge, 2012) conveys an opposite truth to many educators—traditional lecture-dominant approach to teaching seems to work just fine. This divergent perception is coupled with the challenge that change is notoriously difficult, and the actual roles and duties of leaders have increased. Therefore the following conclusions are thought to help remedy this complex dynamic in the public school system.

**Conclusion 1.** The first conclusion relates to the value of the investigative findings. This first conclusion answers the research question, and as such addresses the significance of study literature mentioned in Chapter 1. As result of this study, five discrete, yet harmonious leadership competencies (discerning, authentic, facilitative, collaborative, and communicative)

were discovered that are thought to be critical to the acceleration of authentic 21st century teaching and learning. It can be simply stated that as a leader develops these competencies personally and professionally, as integrated into the Authentic 21st Century Leadership Framework and detailed explicitly in Chapter 4, trust is built among staff. This authentic action and personification of the mission empowers staff to take risks necessary for a growth culture to proliferate. The resulting culture creates the events that enable transformation to occur.

This inference thus holds that these key competencies are essential to the leadership of successful change-savvy leaders. Changing entrenched behavioral norms of not one person, but a group of adult individuals endowed with human complexities, calls for spectacular leadership. As explicated in Chapter 2, leadership makes a difference, not just theoretically but empirically (Hallingera & Heck, 2010; King & Bouchard, 2011; Mulford et al., 2008; Robinson, 2008). In fact, it has been argued that assuring quality of teacher instruction is the primary job of an educational leader (Bauer & Brazer, 2012); in any case, the capability of leadership is of serious consequence. Thus, first and foremost, the results of this study suggest that through improving these competencies, a leader can better accelerate transformation of staff practices.

**Conclusion 2.** This second conclusion specifically addresses the challenge associated with the time a leader has available to initiate wide-scale change, which is scant given the rise in role-related tasks (Kochan et al., 2002). When a dynamic of little time for tremendous tasks occurs, frequent in schools, leaders have been noted to make quick fixes versus whole-system change (Fullan, 2013a). In consideration of this fact, and to purposely aid in the actionable process of commencing in a timely and complex, yet necessary change, the Authentic 21st Century Leadership Framework is suggested to be utilized.

It is well known that change can be difficult for organizations. Yet, because educational institutions have been observed as acutely averse to change (Senge, 2012), this framework is provided to support this reality. To be clear, school-wide transformation from traditional to an authentic 21st century instructional model is conspicuously challenging. Given this inevitability, it is notable that savvy leaders attempt *strategic change*: arguably the very basis of OD understood to evoke better organizational effectiveness. Utilization of the Authentic 21st Century Leadership Framework as a guide may be representative of a strategic-change practice and assist leaders in achieving strategic integrative transformation of practices for an authentic acceleration of a 21st century instructional model.

**Conclusion 3.** The third conclusion is a critical finding of this dissertation study; change-savvy leaders unanimously underscored the significance of stakeholder collaboration and participation. As detailed in Chapter 4, this thread was so apparent that it is postulated that a redefinition of leadership in general is relevant and is conveyed by the premise of the framework. That is, rather than a leader primarily dictating or directing activity, as traditional roles of leadership have been depicted, perhaps authentic 21st century leadership is collaborative leadership, because what it is certainly *not* is top-down. The participants echoed this notion unequivocally. This finding is especially curious given the standpoint from which each of the participants was sharing his/her perspective—in comparison to leaders who may struggle to motivate change. To reverse engineer the process, it may be said that if a leader is top-down, he/she may struggle to accelerate 21st instructional change effectively.

Interestingly, the concept of collaboration as pertinent to transformation was corroborated in the literature in several ways. For instance, the practitioners of change literature have emphasized how authoritarian leadership is ineffective for long-lasting change (Fullan, 2001). As

highlighted by Kotter (2012), disenchanted staff will inevitably find clandestine methods to reject it. Notably, among others, these particular practitioners included in their respective models tenets akin to collaboration, such as relationship-building (Fullan, 2001) or coalition/team building (Kotter, 2012; Senge, 2006).

Additionally, as said previously, the transformational leadership style created by Burns (1978), according to Northouse (2010), is still one of the most contemporary and popular approaches among leadership researchers. Transformational leadership is the opposite of top-down, power-oriented, or tyrannical leadership; rather it is inspirational, "The process whereby a person engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower" (Northouse, 2010, p. 172). From the change-savvy participants, to the practitioners and scholars, it is inferred that effective present-day leadership is collaborative, not top-down.

**Conclusion 4.** The fourth conclusion speaks to the importance of a leader-initiated and sustained growth culture. In other words, true acceleration of an authentic 21st century teaching and learning model proliferates when a culture has shifted from the notorious isolation of teacher individualized closed-door classrooms to a knowledge-sharing, uninhibited, effort-oriented culture, identified in this manuscript as a *growth culture*. As mentioned previously, the growth terminology was voiced often by the participants and corresponds to Dweck's (2006) *Mindset* text, distinguishing a growth versus fixed mindset; this individualized concept is expanded to a pluralized culture of growth. To provide a counter example for clarity, the opposite of a growth culture can be observed when learning and best practices are insular, not widely shared: a noted barrier of change to technological classroom integration in particular (Parr, 1999). For this reason, the antecedents to accelerated growth depend upon leadership. Improving upon the five

key leadership competencies, or utilizing the Authentic 21st Century Leadership Framework, or both, is key. As detailed in the framework, building trust, especially for an increased comfort in teacher risk-taking, is fundamental to creating a growth culture.

Intriguingly, this conclusion that states that a growth culture is critical to mass acceleration of the 21st century model correlates positively to each contemporary motivation theory reviewed in the literature. From the self-efficacy theory to social learning theory (see Chapter 2), increased motivation appears to be inextricably linked to respecting and building upon the passion of individuals. Thus, an implication for leaders, as accounted for in step 5 of the Authentic 21st Century Leadership Framework, is to first assess and learn what staff interests are and provide experiences to nurture that personal growth area. Furthermore, the conception of a growth culture is comparable to Senge's (2012) popular *learning organization*. This theory suggests that when there is a climate of a unified vision, modeling, and knowledge sharing, among other integrative practices, and incorporates a systems perspective versus fragmentation, an organization then truly excels. Likewise, critical to the authentic acceleration of a monumental shift in instructional practices are corresponding elements of a school organization that a leader facilitates to engender trust for the amplification of a growth culture. Lastly, this growth culture is also relevant to the popular transformational leadership style.

**Conclusion 5.** The fifth and final conclusion is one that is all-encompassing; it integrates the extensive literature review and the data yielded from this study. It simply conveys a widely held truth: as education improves, opportunity improves. More specific to this investigation is the supposition that the expansion of authentic 21st century teaching and learning in public schools will more suitably prepare *all* students for the current knowledge-based economy.

Effective preparedness for the students' future is arguably the ultimate result sought by school stakeholders, even though it seems perennially elusive.

As presented by Silva (2008), students operating in the Knowledge Age economy must be able to do more than recite facts or solve arithmetic problems in a book. The modern instructional model more aptly takes the demands of the current economy into account. Lessons become relevant and provide opportunities for students to practice skills that they will more likely be hired to perform. A succinct subset of these types of lessons, called the *super skills* found in an iteration of the CCSS literature, are more commonly referred to as the 4Cs: *critical thinking, communication, collaboration*, and *creativity*. Students will need to master these skills and utilize technological tools to be able to design and possibly solve real-world problems in what is now a global economy (Morrison, 2014; Senge, 2012; Silva, 2008; Trilling & Fadel, 2009; Wagner, 2008a, 2008b).

The significance of accelerating the expansion of a more authentic 21st century instructional model is viewed as a possible solution to an age-old problem in this nation: the achievement gap (see Chapter 2). The achievement gap typically refers to the difference in academic performance in reading and math skills, historically between White and Black students (Raudenbush, 2009). To be clear, the investigator is not proposing that accelerating the modern model will end such a gap in and of itself, but evidence shows that as operational improvements are made in schools, especially in U.S. public schools that serve ethnically diverse student populations, *all* students can benefit from those improvements (Darling-Hammond, 1997, 2010). Thus, it is reasonable to conclude that enhanced leadership in schools that facilitate a proliferation of improved instructional practices may not only increase academic achievement, but also meaningfully improve options for children's lives.

Consequently, the findings of this grounded theory investigative study are proposed to the scientific community and school leader practitioners as significant and relevant. This determination is made due to the study having fulfilled its purpose: creating a framework that may help school leaders accelerate the transformation of practice required to enable leaders' respective schools to embrace a 21st century instructional model more readily. Additionally, the goal of the study, as stated in in Chapter 1—to determine the circumstances, characteristics and strategies engaged by effective school leaders—was met, as discussed subsequently. Lastly, this study was conducted using sound empirical methods and principles of science, and consequently is suggested to answer a call for further research made by previous studies. These indications suggest this is a study of significance with results that can contribute to the greater body of scholarly knowledge.

More specifically, the results of this study address particular suggestions for further research, mentioned in Chapter 1. For instance, one fellow dissertation researcher, Ziegenfuss (2010), noted a paucity of research specific to leadership change, in contrast to the many studies of changes required of 21st century teachers. He specifically called for further research to expand the epistemic frame of leadership as to better support staff "to create meaningful learning environments in a networked world" (p. iv). The recommendations posited in his study as an epistemic frame are as follows:

1. Setting direction.
2. Developing people.
3. Redesigning the organization.

As perhaps may be apparent, the results of his study coincide with the suggested framework presented here. Thus, it is held that this research may account for an expanded epistemic frame of 21st century leadership.

Likewise, Seong and Ho (2012) noted that there were relatively few studies on school leaders' role in information communication technology (ICT). This research can provide some insight on leaders' role in 21st century technology integration, which is a part of ICT. Finally, yet another fellow dissertation researcher recommended "a study of principals who are implementing 21st century skills" (Cheung, 2013, p. 84), and while the critical competencies to accelerate such a 21st century model were the focus of this study, the learnings provided by 21st century change-savvy leaders certainly are applicable to this call for further research.

**Final Thoughts**

This study, in part, began from the lens of what good may possibly become of an expanded authentic 21st century instructional model in public schools. The study was framed by learning about the historical trajectory of education in the U.S. and the continued challenge of inequality that affects many public schools to date, namely the achievement gap. As mentioned in Chapter 3, in grounded theory methodology the researcher's characteristics are not unobserved. Thus, it is fair to acknowledge that the topic of study was in alignment with the investigator's transformative/postmodern ontological perspective. This background declares that knowledge construction is not in vain but should improve society (Creswell, 2013). This research is hoped to do just that. The investigator subscribes to the following premise asserted by Raudenbush (2009), "Increasing the quantity and quality of schooling can play a powerful role in over-coming racial inequality" (p. 169). Given how much more affordable and accessible

throughout the world access is to the informational highway of information communication technology, it certainly, by resource standards, seems plausible.

Yet, there are other challenges inherent in the school environment that must be overcome: for example, entrenched traditions of many school organizations and the challenges faced by the leaders who seek to transform them. From the perspective of OD research and practitioners, change is hard (Cohen, 2005; Fullan, 2010, 2013a, 2013b, 2014; Kotter, 2012; Kotter & Cohen, 2005; Robbins & Judge, 2011), perhaps even more so for a tradition of an instructional model that is estimated to be in existence for 150 years (Darling-Hammond, 2010; Senge, 2012). That said, it was also noted by the literature that leaders are vital to a change imitative (Hallingera & Heck, 2010; King & Bouchard, 2011; Mulford et al., 2008; Robinson, 2008). Their strategic actions and behaviors toward school stakeholders are of critical value. This is why it would seem necessary to redefine a leader's role in the 21st century in tandem with teachers' role change. Like the teachers they lead and work beside, a leader's style must also transition to effect change that will prepare students best for contemporary knowledge age work. The critical competencies gleaned from change-savvy leaders in this research study are posited as a necessary means for goal attainment.

Consequently, this framework relies upon building trust for a growth culture to emerge as an outcome. If a leader first changes him/herself and utilizes the framework competencies with authenticity, he/she will garner trust from one's staff. This trust is critical for a staff to be more readily is willing to explore and to take greater risks to try newer instructional methodologies. As such, a connection to Goleman's (2000) emotional intelligence competencies, to be both personally and socially adroit seems to overlap with this research data. Similarly, a resulting growth culture can be viewed to correspond with Senge's (2006) depiction of a learning

organization. More specifically the *metanoia* concept, as stated in chapter 2, speaks to a fuller meaning of learning, not just taking in information, but rather the thinking that states "through learning we recreate ourselves" (p. 13) and experience a real shift of mind. From this lens, current-century leadership stimulates learning that is transformative. Accordingly, the critical competencies are the foundational pillars upon which a strong leader rests heavily as needed in the storm of change. Weak leadership was learned to be a barrier of change. Therefore, strong authentic 21st century leadership is suggested to be paramount to success in not only accelerating the 21st century instructional model, but also improving equity of education as a whole (see Figure 10).

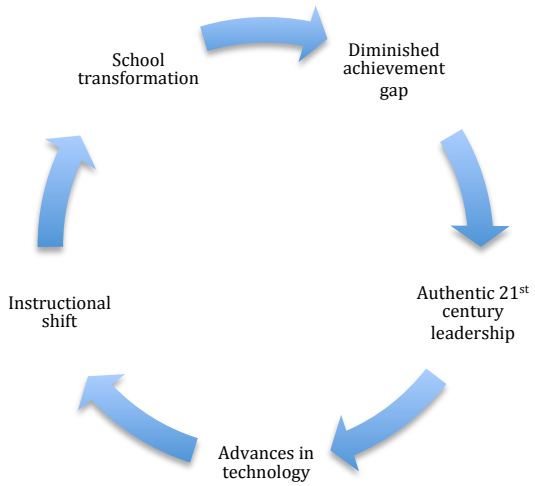



*Figure 10.* Authentic 21st century leadership improves equity.

**Limitations**

One possible proviso that occurred after the study commenced can pose either a limitation or a contribution of the study, depending on the perspective, is the make-up of the participant pool. Parallel to actual school leadership in school sites, this study utilized a broad definition of school leaders. Both ed-tech leaders as well as formal leaders such as principals participated. Additionally, some of the participants were from private schools, yet the primary

focus of this research was to support public schools. Precautions were taken to address the potential concerns to be sure the study provided value to both the body of scholarly knowledge and the schools for which this study was intended. For instance, the original criteria were met for all participants. Twenty-first century school leaders/principals/administrators were invited to participate in the study, and operationally defined as *savvy 21st century change leader* if they met both of the following criteria:

- He/she has been referred to as such, or similar, by a superior/director/professional peer
- He/she has successfully initiated, led and/or sustained, 21st century instructional model at either an existing or previous school site.

Additionally, when the principals referred non-principal roles, such as Director of Education-Technology role, the investigator's committee was notified and queried. Ultimately, given that existing change-agent participants were referred as a result of a snowballing sampling method, and the potential participants met the stated criteria, continued inclusive participation was approved. The investigator believes that the non-principals, or administrators, contributed greatly to the study and overlapped on critical areas of need as identified by the traditional role of principal. Additionally, this set of participants possibly contributed the most cutting-edge 21st century content expertise germane to leadership for the acceleration of the 21st century model to be achieved.

**Implications for Future Practice**

As suggested from the premise of Authentic 21st Century Leadership Framework, an implication of the findings leads the investigator to surmise that a leader necessitates courage to authentically enact a 21st century leadership style. Why is this the case? Inherent in the five

critical leadership competencies that emerged from the data, detailed in Chapter 4, is the understanding that a certain level of ambiguity is experienced when traversing a 21st century school transformation, especially given the fact that the 21st century instructional model is opposite of tradition and implicitly dependent upon transparency and collaboration. This 21st century model insists that a leader, in large part, draw upon his/her stakeholders' talent and investment in the school mission. As such, a leader gives up a certain comfort level of control, and in its place must acquiesce to a slower moving, yet theoretically more far-reaching expansion of a process that will ultimately help schools achieve their collective mission to best prepare students for knowledge age work.

**Implications for Future School Leader Practice**

1. Muster the courage to unlearn comfortable, yet limiting habits (such as top down decision making) and utilize the framework as a guide to transform culture.
2. Use the framework with fidelity.
3. Muster courage to change self first.

**Recommendations for Future Research**

The following four recommendations are made for future research. Each is based on the results of the study.

- Action research is suggested to be conducted using the Authentic 21st Century Leadership Framework.
- Researchers might consider an experimental pre-test/post-test methodology of the Authentic 21st Century Leadership Framework.
- Researchers might study educational technology leaders singularly to learn in-depth methodologies for expanding the 21st century instructional model.

- Researchers should conduct a case study of how leaders become collaborative versus traditional, or top-down, in their approach to leadership. Such a study would help reveal the antecedents and triggers for change.

**Concluding Remarks**

The investigator, an advocate of life-changing effectual education for all, feels a deep respect for school leaders and educators around the globe who courageously confront the discomfort of change in search of continually improving their craft. More specifically, she holds a sincere gratitude for the change-savvy participants who chose not to hoard their trade insights and experience, but rather, true to the knowledge-sharing indicative in current-century culture, were willing to contribute their wisdom to this study. The upcoming generation of society—today's students—have a brighter trajectory given their role in authentic 21st century school leadership.

This research revealed that it can be challenging to be authentically collaborative. Leaders must be publicly vulnerable in modeling how learning from mistakes is a part of being a lifelong learner. Leaders must step back from their legitimate power to support leadership in others. It must be challenging to quiet the inner leader voice inside, giving way to collaboration and teacher passion, and instead funnel one's leadership in facilitative and communicative ways. It is easier to succumb to one's own inclinations and preferences, but like a marriage, to set aside one's own preferences at times allows for greater community. The work of authentic 21st century leaders is not easy; this is acknowledged and very much respected. May change-leaders everywhere continue the good fight and authentically model the practices they want to see in the classroom, because ultimately, as Trilling and Fadel (2009) noted, "a 21st century education for

every child is the first challenge—the one that will enable all our other challenges to be met" (p. 41).

# REFERENCES


Al-Ruz, J. A., & Khasawneh, S. (2011). Jordanian pre-service teachers' and technology integration: A human resource development approach. *Journal of Educational Technology & Society, 14*(4), 77-87. Retrieved from http://www.ifets.info

Alvarez, C. C. (2010). *Principal leadership: Factors sustaining successful schools* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI No. 839311767)

Andersen, E. (2013, May 31). 21 Quotes from Henry Ford on business, leadership and life [Blog post]. Retrieved from http://www.forbes.com/sites/erikaandersen/2013/05/31/21-quotes-from-henry-ford-on-business-leadership-and-life/#4a27b5603700

Aud, S., Hussar, W., Kena, G., Bianco, K., Frohlich, L., Kemp, J., & Tahan, K. (2011). *The condition of education 2011*. Washington, DC: U.S. Department of Education, National Center for Educational Statistics.

Badke, W. (2009). Media, ICT, and information literacy. *Online, 33*(5), 47-49. Retrieved from http://www.onlinemag.net

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychology Review, 84*(2), 191-215. doi:10.1037/0033-295X.84.2.191

Barth, R. S. (2006). Improving relationships within the schoolhouse. *Educational Leadership, 63*(6), 8-13. Retrieved from http://www.ascd.org/publications/educational-leadership.aspx

Barth, R. S., & Guest, L. S. (1990). *Improving schools from within: Teachers, parents, and principals can make the difference.* San Francisco, CA: Jossey-Bass.

Barton, P. E., & Coley, R. J. (2010). *The Black-White achievement gap: When progress stopped.* Retrieved from https://www.ets.org/research/policy_research_reports/pic_reports

Bauer, S. C., & Brazer, S. D. (2012). *Using research to lead school improvement: Turning evidence into action*. Los Angeles, CA: Sage.

Beabout, B. R. (2012). Turbulence, perturbance, and educational change. *Complicity: An International Journal of Complexity and Education, 9*(2), 23–37. Retrieved from https://ejournals.library.ualberta.ca/index.php/complicity

Bennett, S., Maton, K., & Kervin, L. (2008). The "digital natives" debate: A critical review of the evidence. *British Journal of Educational Technology, 39*(5), 775-786. doi:10.1111/j.1467-8535.2007.00793.x

Biech, E. (Ed.). (2008). *ASTD handbook for workplace learning professionals*. Alexandria, VA: ASTD Press.

Campbell, J. P. (2012). Behavior, performance and effectiveness in the twenty-first century. In S. W. J. Kozlowski (Ed.), *The Oxford handbook of organizational psychology* (Vol. 1, pp. 159-194). New York, NY: Oxford University Press.

Charmaz, K. (2008). *What is grounded theory* [PowerPoint document]? Retrieved from SlideShare Online Website: http://www.slideshare.net/Deny135/what-is-groundedtheoryppt42408ss

Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Los Angeles, CA: Sage.

Chelliah, J., & Clarke, E. (2011). Collaborative teaching and learning: Overcoming the digital divide? *On the Horizon*, *19*(4), 276-285. doi:10.1108/10748121111179402

Cheung, G. T. (2013). *A study of California public school district superintendents and their implementation of 21st-century skills* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (UMI No. 3609855)

Cohen, D. S. (2005). *The heart of change field guide: Tools and tactics for leading change in your organization*. Boston, MA: Harvard Business School Press.

Common Core State Standards. (2010). *California Common Core State Standards: English language arts & literacy in history/social studies, science and technical subjects*. Sacramento, CA: National Governors Association Center for Best Practices.

Common Core State Standards Initiative. (2016). *About the standards*. from http://www.corestandards.org/about-the-standards/

Covey, S. M. R. (2008). *The speed of trust: The one thing that changes everything*. New York, NY: Free Press.

Creighton, P. M. (2012). *The secret reasons why teachers are not using web 2.0 tools and what school librarians can do about it*. Santa Barbara, CA: Linworth.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Los Angeles: Sage.

Cummings, T. G., & Worley, C. G. (2005). *Organization development and change*. Mason, OH: Thomson/South-Western.

Darling-Hammond, L. (1997). *The right to learn: A blueprint for creating schools that work*. San Francisco, CA: Jossey-Bass.

Darling-Hammond, L. (2010). *The flat world and education: How America's commitment to equity will determine our future*. New York, NY: Teachers College Press.

De Casas Szemcsak, D. (2011). *Middle school teachers' perceptions of professional development: A grounded theory study* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (UMI No. 3466747)

Deal, T. E., & Peterson, K. D. (1999). *Shaping school culture: The heart of leadership*. San Francisco, CA: Jossey-Bass.

Denton, J. J., Davis, T. J., Smith, B. L., Strader, R. A., Clark, F. E., & Wang, L. (2005). Technology mentor fellowship program: A technology integration professional development model for classroom teachers. *National Forum of Teacher Education Journal*, *16*(3). Retrieved from http://www.nationalforum.com

Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.

Duvall, S., Jaaskelainen, K., & Pasque, P. (2012). Essential Google: curriculum integration and e-portfolio in assessment. *Library Media Connection*, *30*(6), 52-54.

Elmore, R. F. (2000). *Building a new structure for school leadership*. Washington, DC: Albert Shanker Institute.

Ferguson, R. F., & Mehta, J. (2004). An unfinished journey: The legacy of Brown and the narrowing of the achievement gap. *Phi Delta Kappan, 85*(9), 656-669. doi:10.1177/003172170408500906

Friedman, T. L., & Wyman, O. (2007). *The world is flat 3.0: A brief history of the twenty-first century*. New York, NY: Picador.

Fullan, M. (2001). *Leading in a culture of change*. San Francisco, CA: Jossey-Bass.

Fullan, M. (2010). *Motion leadership: The skinny on becoming change savvy*. Thousand Oaks, CA: Corwin.

Fullan, M. (2013a). *Motion leadership in action: More skinny on becoming change savvy*. Thousand Oaks, CA: Corwin.

Fullan, M. (2013b). *Stratosphere: Integrating technology, pedagogy, and change knowledge*. Don Mills, Ontario, Canada: Pearson.

Fullan, M. (2014). *The principal: Three keys to maximizing impact*. San Francisco, CA: Wiley.

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education, 53*(2), 106-116. doi:10.1177/0022487102053002003

Giles, C. (2007). Building capacity in challenging U.S. schools: An exploration of successful leadership practice in relation to organizational learning. *International Studies in Educational Administration, 35*(3), 30-38. Retrieved from http://www.cceam.org/index.php?id=6

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education, 53*(2), 106-116. doi:10.1177/0022487102053002003

Goleman, D. (2013). *Focus: The hidden driver of excellence*. New York, NY: Bloomsbury.

Halle, T. G., & Kurtz-Costes, B. (1997). Family influences on school achievement in low-income, African American children. *Journal of Educational Psychology, 89*(3), 527-537. doi:10.1037/0022-0663.89.3.527

Hallingera, P., & Heck, R. H. (2010). Collaborative leadership and school improvement: Understanding the impact on school capacity and student learning. *School Leadership & Management, 30*(2), 95-110. doi:10.1080/13632431003663214

Heath, C. J., & Heath, D. (2010). *Switch: How to change things when change is hard*. New York, NY: Broadway Books.

Hert, C. J. (2010). *Liberation through preparation: Building capacity to lead America's urban schools* (Doctoral dissertation) Retrieved from ProQuest Dissertations and Theses. (UMI No. 3418256)

Holum, A., & Gahala, J. (2001). *Critical issue: Using technology to enhance literacy instruction.* Retrieved from ERIC database. (ED480229)

International Society for Technology in Education. (n.d.). *National Educational Technology Standards for administrators* Retrieved from http://www.iste.org/standards/standards/standards-for-administrators

Kezar, A. J. (2001). Understanding and facilitating organizational change in the 21st century: Recent research and conceptualizations. *ASHE-ERIC Higher Education Report, 28*(4), 1-11. Retrieved from http://www.ashe.ws/?page=176

King, M. B., & Bouchard, K. (2011). The capacity to build organizational capacity in schools. *Journal of Educational Administration, 49*(6), 653-669. doi:10.1108/09578231111174802

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2011). *The adult learner* (7th ed.). Oxford, UK: Elsevier.

Kochan, F. K., Bredenson, P., & Riehl, C. (2002). Rethinking the professional development of school leaders. In J. Murphy (Ed.), *The educational leadership challenge: Redefining leadership for the 21st century* (pp. 289-306). Chicago, IL: National Society for the Study of Education.

Koh, J. H. L. (2011). Computer skills instruction for pre-service teachers: A comparison of three instructional approaches. *Computers in Human Behavior, 27*(6), 2392-2400. doi:10.1016/j.chb.2011.08.002

Kotter, J. P. (2012). *Leading change*. Boston, MA: Harvard Business Review Press.

Kotter, J. P., & Cohen, D. S. (2005). *The heart of change: Real-life stories of how people change their organizations*. Boston, MA: Harvard Business School Press.

Kozol, J. (1991). *Savage inequalities: Children in America's schools*. New York, NY: Crown.

Krathwohl, D. R., & Anderson, L. W. (2010). Merlin C. Wittrock and the revision of Bloom's Taxonomy. *Educational Psychologist, 45*(1), 64-65. doi:10.1080/00461520903433562

Kuhn, M. S. (2008). Connecting depth and balance in class. *Learning and Leading with Technology, 36*(1), 18-21. Retrieved from http://www.learningandleading-digital.com/learningandleading

Kumar, R. (2010). *Research methodology: A step-by-step guide for beginners*. Thousand Oaks, CA: Sage.

Leithwood, K., Harris, A., & Hopkins, D. (2008). Seven strong claims about successful school leadership. *School Leadership and Management, 28*(1), 27-42. doi:10.1080/13632430701800060

Leithwood, K., Mascall, B., Strauss, T., Sacks, R., Memon, N., & Yashkina, A. (2007). Distributing leadership to make schools smarter: Taking the ego out of the system. *Leadership & Policy in Schools, 6*(1), 37-67. doi:10.1080/15700760601091267

Los Angeles Unified School District. (n.d.). *Fingertip facts*. Retrieved from http://achieve.lausd.net/Page/362

McKinsey & Company. (2009). *The economic impact of the achievement gap in America's schools*. Retrieved from http://mckinseyonsociety.com/the-economic-impact-of-the-achievement-gap-in-americas-schools/

Merriam, S. B. (2001). Andragogy and self-directed learning: pillars of adult learning theory. *New Directions for Adult and Continuing Education, 2001*(89), 3-14. doi:10.1002/ace.3

Mierzejewski, C. S. (2010). *The impact of professional development on technology integration in high school classrooms* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (UMI No. 3393705)

Miranda, A., Webb, L., Brigman, G., & Peluso, P. (2007). Student Success Skills: A promising program to close the academic achievement gap for African American and Latino students. *Professional School Counseling, 10*(5), 490-497. Retrieved from https://www.schoolcounselor.org/school-counselors-members/publications/professional-school-counseling-journal

Model. (n.d.). In *Oxford dictionaries online*. Retrieved from http://www.oxforddictionaries.com/us/definition/american_english/model

Morrison, C. D. (2014). From “sage on the stage” to “guide on the side:” A good start. *International Journal for the Scholarship of Teaching and Learning*, *8*(1), 4. Retrieved from http://digitalcommons.georgiasouthern.edu/ij-sotl/vol8/iss1/4/

Mulford, B., Kendall, D., Ewington, J., Edmunds, B., Kendall, L., & Silins, H. (2008). Successful principalship of high-performance schools in high-poverty communities. *Journal of Educational Administration, 46*(4), 461-480. doi:10.1108/09578230810882009

Murphy, J. (2002). *The educational leadership challenge: Redefining leadership for the 21st century*. Chicago, IL: National Society for the Study of Education.

National Center for Education Statistics. (n.d.). *Fast facts: Dropout rates*. Retrieved from http://nces.ed.gov/fastfacts/display.asp?id=16

National Education Association. (n.d.). *Preparing 21st century students for a global society: An educator’s guide to the “four C’s.*” Retrieved from http://www.nea.org/assets/docs/A-Guide-to-Four-Cs.pdf

Neu, C. M., & Stewart, A. M. (2009). *Closing the achievement gap: What can school leaders learn from successful African-Americans* (Doctoral dissertation)? Retrieved from ProQuest Dissertations & Theses. (UMI No. 3383303)

Northouse, P. G. (2010). *Leadership theory and practice* (5th ed.). Los Angeles, CA: Sage.

Opportunity Nation. (n.d.). *The opportunity index*. Retrieved from https://opportunitynation.org/opportunity-index/

Organisation of Economic Co-operation and Development. (1996). *The knowledge-based economy.* Paris, France: Author.

Park, V., & Datnow, A. (2009). Co-constructing distributed leadership: District and school connections in data-driven decision-making. *School Leadership & Management, 29*(5), 477-494. doi:10.1080/13632430903162541

Parr, J. M. (1999). Extending educational computing: A case of extensive teacher development and support. *Journal of Research on Computing in Education, 31*(3), 280-291. doi:10.1080/08886504.1999.10782255

Partnership for 21st Century Learning. (n.d.). *Our history*. Retrieved from http://www.p21.org/about-us/our-history

Peak, D. J. (2010). *A correlational study of the advancement via individual determination (AVID) program with middle school student achievement in mathematics* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (UMI No. 3426057)

Peters, B. G. (2013). *American public policy: Promise and performance* (9th ed.). Los Angeles, CA: Sage.

Powell, W. W., & Snellman, K. (2004). The knowledge economy. *Annual Review of Sociology*, *30,* 199-220. doi:10.1146/annurev.soc.29.010202.100037

Prensky, M. (2001). Digital natives, digital immigrants, part 1. *On The Horizon, 9*(5), 1-6. doi:10.1108/10748120110424816

Raudenbush, S. W. (2009). The Brown legacy and the O'Connor challenge: Transforming schools in the images of children's potential. *Educational Researcher, 38*(3), 169-180. doi:10.3102/0013189X09334840

Richards, L., & Morse, J. M. (2013). *Readme first for a user's guide to qualitative methods* (3rd ed.). Thousand Oaks, CA: Sage.

Robbins, S. P., & Judge, R. J. (2011). *Organizational behavior* (14th ed.). Upper Saddle River, NJ: Prentice Hall.

Robinson, V. M. J. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly, 44*(5), 635-674. doi:10.1177/0013161X08321509

Rotherham, A. J., & Willingham, D. (2009). 21st century skills: The challenges ahead. *Educational Leadership, 67*(1), 16-21. Retrieved from http://www.ascd.org/publications/educational-leadership.aspx

Senge, P. M. (1990). *The fifth discipline: The art and science of the learning organization*. New York, NY: Currency Doubleday.

Senge, P. M. (2006). *The fifth discipline: The art and practice of the learning organization* (rev. ed.). New York, NY: Random House.

Senge, P. M. (2012). Creating schools for the future, not the past for all students. *Leader to Leader, 2012*(65), 44-49. doi:10.1002/ltl.20035

Seong, D. N. F., & Ho, J. M. (2012). How leadership for an ICT reform is distributed within a school. *International Journal of Educational Management, 26*(6), 529-549. doi:10.1108/09513541211251370

Silva, E. (2008). *Measuring skills for the 21st century*. Washington, DC: Education Sector.

Speight, N. P. (2009). *The relationship between self-efficacy, resilience and academic achievement among African-American urban adolescent students* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (UMI No. 3380333)

Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.

Swackhamer, L. E., Koellner, K., Basile, C., & Kimbrough, D. (2009). Increasing the self-efficacy of inservice teachers through content knowledge. *Teacher Education Quarterly, 36*(2), 63-78. Retrieved from http://www.teqjournal.org

Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. San Francisco, CA: Jossey-Bass.

U.S. Bureau of Labor Statistics. (2014). *For the college educated, increasing employment, lower unemployment and higher earnings*. Retrieved from http://www.bls.gov/emp/ep_chart_001.htm

U.S. Department of Education. (n.d.). *About ED: Overview and mission statement*. Retrieved from http://www2.ed.gov/about/landing.jhtml

U.S. Department of Education. (2013). *Race to the Top Fund*. Retrieved from http://www2.ed.gov/programs/racetothetop/index.html

U.S. Department of Education, Office of Educational Technology. (2010). *Transforming American education: Learning powered by technology.* Retrieved from http://www.ed.gov/sites/default/files/netp2010-execsumm.pdf

UCLA's Institute for Democracy, Education, and Access (2004). *Just schools: The crisis: Funding essentials: California school funding is not equal.* Retrieved from http://justschools.gseis.ucla.edu/crisis/funding/index.html

Wagner, T. (2008a). *The global achievement gap: Why even our best schools don't teach the new survival skills our children need-- and what we can do about it*. New York, NY: Basic Books.

Wagner, T. (2008b). Rigor redefined. *Educational Leadership, 66*(2), 20-25. Retrieved from http://www.ascd.org/publications/educational-leadership.aspx

Waks, L. J. (2005). Brown v. Board, common citizenship, and the limits of curriculum. *Journal of Curriculum & Supervision, 20*(2), 94-128. Retrieved from http://www.ascd.org/publications/jcs/archived-issues.aspx

Wang, L., Ertmer, P. A., & Newby, T. J. (2004). Increasing preservice teachers' self-efficacy beliefs for technology integration. *Journal of Research on Technology in Education, 36*(3), 231-250. doi:10.1080/15391523.2004.10782414

Willingham, D. (2009). *Flawed assumptions undergird the program at the partnership for 21st-century skills.* Retrieved from http://www.britannica.com/blogs/2009/03/flawed-assumptions-undergird-the-partnership-for-21st-century-skills-movement-in-education/

Wilson, W. J. (1987). *The truly disadvantaged: The inner city, the underclass, and public policy*. Chicago, IL: University of Chicago Press.

Word clouds. (n.d.). In *Oxford American Dictionary* online. Retrieved from http://www.google.com

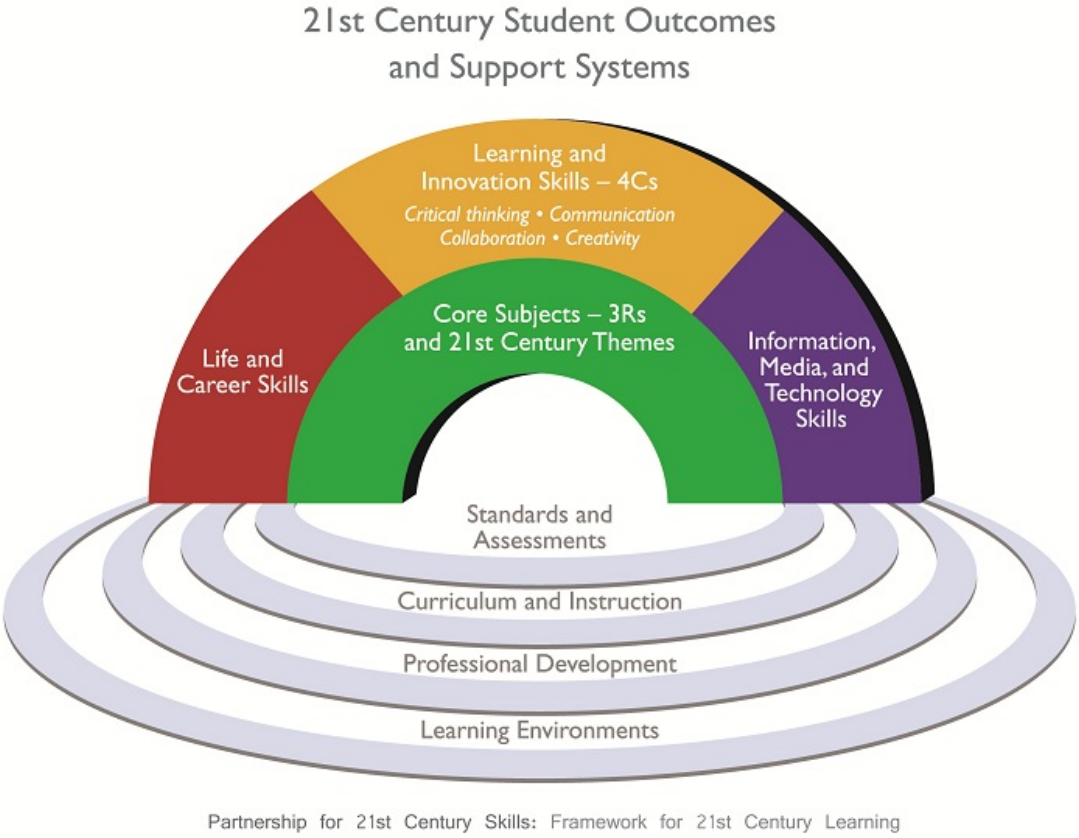
Wu, F., & Qi, S. (2006). Longitudinal effects of parenting on children's academic achievement in African American families. *Journal of Negro Education, 75*(3), 415-429.

Yoshikawa, H., Aber, J. L., & Beardslee, W. R. (2012). The effects of poverty on the mental, emotional, and behavioral health of children and youth: Implications for prevention. *American Psychologist, 67*(4), 272-284. doi:10.1037/a0028015

Ziegenfuss, R. M. (2010). *Education in the 21st century: Toward an expanded epistemic frame of leadership* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI No. 3410471)

# APPENDIX A

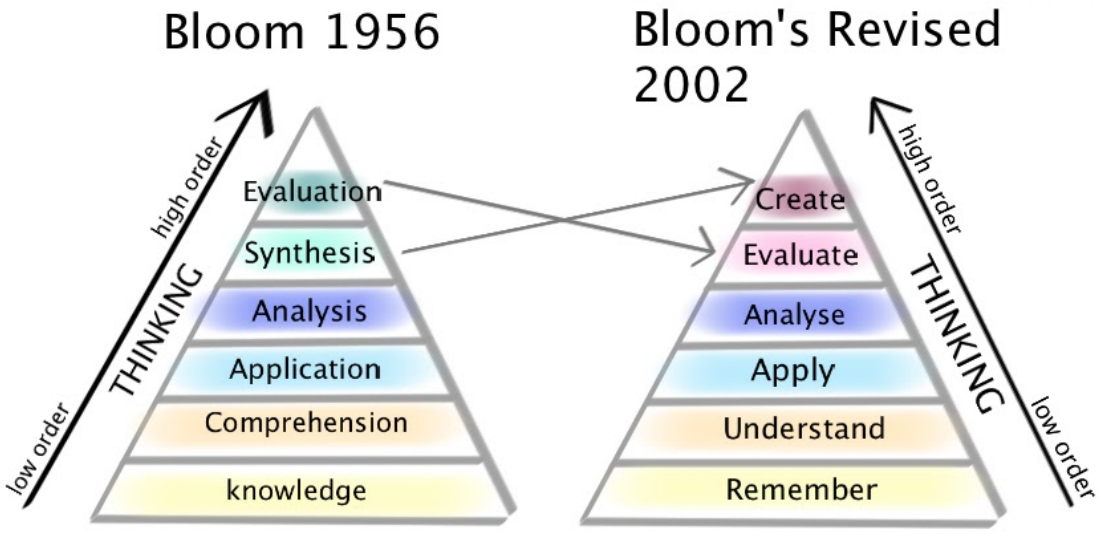
## 21st Century Learning Framework




Partnership for 21st Century Skills: Framework for 21st Century Learning

APPENDIX B

Revised Bloom's Taxonomy by Krathwohl and Anderson



# APPENDIX C

## National Educational Technology Standards (NETS) for Administrators

| International Society for Technology in Education (ISTE) Standards for Administrators | Brief Description |
|---|---|
| 1. Visionary leadership | Build shared vision for comprehensive integration of technology |
| 2. Digital age learning culture | Create digital age culture that integrates technology for rigorous, relevant and engaging education |
| 3. Excellence in Professional Practice | Promote an environment of professional learning and innovation with infusion of contemporary technologies and digital resources. |
| 4. Systematic improvement | Provide digital age leadership and management to continuously improve the organization through the effective use of information and technology resources. |
| 5. Digital citizenship | Model and facilitate understanding of social, ethical and legal issues and responsibilities related to an evolving digital culture. |

*Note.* Adapted from *National Educational Technology Standards for administrators*, n.d., by the International Society for Technology in Education, retrieved from http://www.iste.org/docs/pdfs/20-14_ISTE_Standards-A_PDF.pdf. 

APPENDIX D

Andragogy in Practice

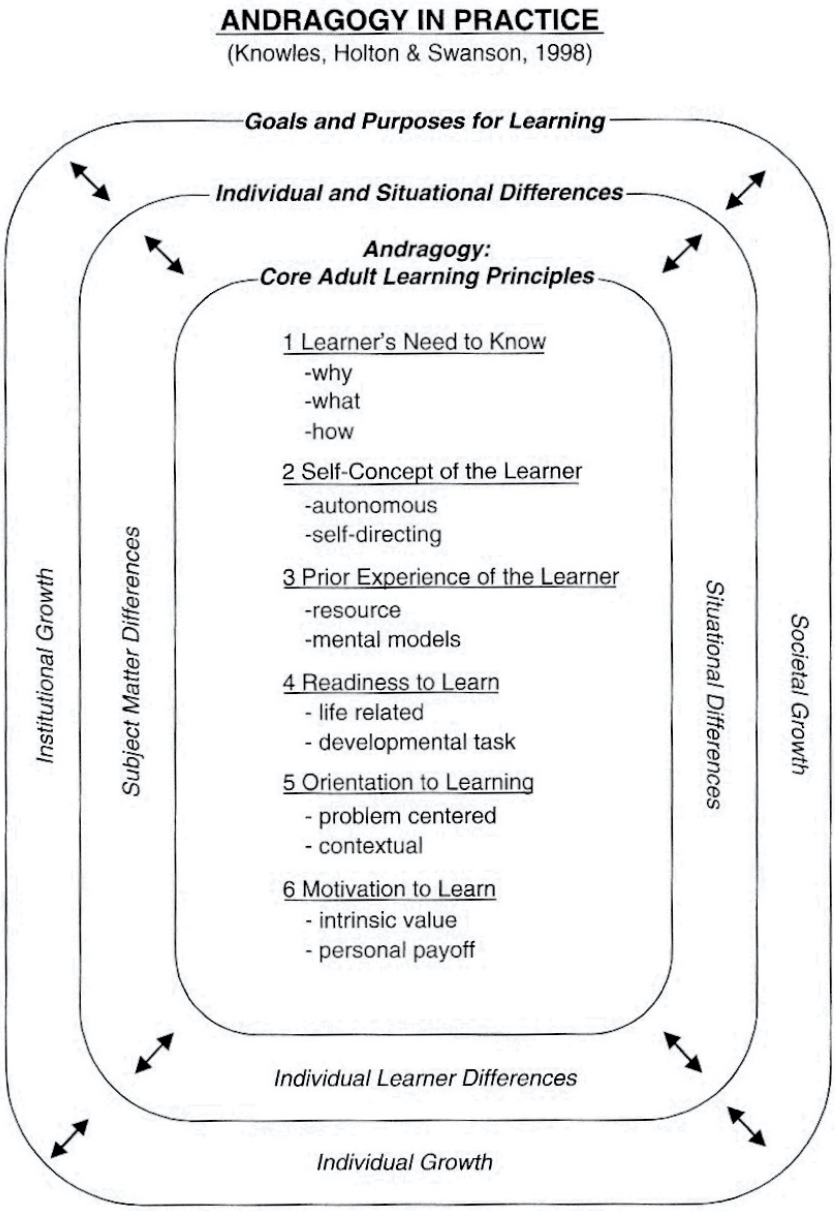



**Figure 1-1.** *Andragogy in practice (Knowles, Holton, and Swanson, 1998).*

# APPENDIX E

## Interview Questions

As a leader experienced in integrating 21st century teaching and learning model* at your current, or previous school site please consider the following:

1. In comparison of leaders that struggle to get their faculty to embrace change from a traditional model to a 21st century instructional model, what leadership qualities do you view as effective in accelerating your staffs' transition to a 21st century teaching and learning model?

2. What three to five skills/competencies would a leader need to cultivate in his/her own leadership development to accelerate faculty transition to a 21st century teaching and learning model?

3. What three to five skills/competencies would a leader need to cultivate in their staffs' professional development to accelerate faculty transition to a 21st century teaching and learning model?

4. What three to five skills/competencies would a leader need to cultivate specific to 21st century skills to accelerate faculty transition to a 21st century teaching and learning model?

5. What three to five skills/competencies would a leader need to cultivate specific to change management to accelerate a teaching staff transition to a 21st century teaching and learning model?

* Operational Definition of 21st Century Teaching and Learning Model

Teacher facilitation of student learning via student use of electronic learning tools (i.e. computers, tablets, the Internet, computer programs, apps, etc.) for the purpose of one or more of the following:

- Acquiring, evaluating and applying knowledge gained in to existing problems
- 4C's of 21st Century Learning: critical thinking, collaboration, communication, and creativity
- Global and environmental awareness

# APPENDIX F

## Interview Guide Modification

### Interview Questions

As a leader experienced in integrating 21st century teaching and learning model* at your current, or previous school site please consider the following:

1. In comparison of leaders that struggle to get their faculty to embrace change from a traditional model to a 21st century instructional model, what leadership qualities do you view as effective in accelerating your staffs' transition to a 21st century teaching and learning model?

2. What three to five competencies would a leader need to cultivate in his/her own leadership development to accelerate faculty transition to a 21st century teaching and learning model?

3. What three to five competencies would a leader need to cultivate in their staffs' professional development to accelerate faculty transition to a 21st century teaching and learning model?

4. What three to five competencies would a leader need to cultivate specific to 21st century skills to accelerate faculty transition to a 21st century teaching and learning model?

5. What three to five competencies would a leader need to cultivate specific to change management to accelerate a teaching staff transition to a 21st century teaching and learning model?

### Interview Questions

As a leader experienced in integrating a 21st century teaching and learning instructional model* (at your current, or previous school site), please consider the following questions in comparison to leaders who may struggle to get their faculty to embrace change from a traditional model to a 21st century instructional model:

1. What key leadership qualities do you view as effective in accelerating **your staffs' transition** to a 21st century teaching and learning model?

2. What key competencies of staff professional development would a leader need to cultivate to accelerate faculty transition to a 21st century teaching and learning model?

3. What key competencies of a leader's own 21st century skills would one need to cultivate to accelerate faculty transition to a 21st century teaching and learning model?

4. What key competencies in change management would a leader need to cultivate to accelerate a teaching staff transition to a 21st century teaching and learning model?

5. What key competencies in a leaders own leadership skills/development would need to be cultivated to accelerate faculty transition to a 21st century teaching and learning model?

# APPENDIX G

## Email Request for Participation

Greetings _____, Esteemed School Leader!

You have been carefully selected to participate in this dissertation study as a leader who either has current or previous successful experience integrating 21st century instruction.

My name is Alessaundra (Sandi) Mills. I am a former employee of the Los Angeles Unified School District (LAUSD) and a current doctoral candidate of Organizational Leadership at Pepperdine University's Graduate School of Education and Psychology.

Possessing a long held passion for education, I am conducting **a study exploring the topic of school leader acceleration of 21st century teaching and learning**.

**[I was referred to you by _____ as a potential participant for this research.]**

As such, I invite you to participate in this avant-garde opportunity to use your voice and share your esteemed perspective!

It is a 5-question interview, and you will be provided the questions in advance for your thoughtful consideration.

Additionally, your identity will be confidential. Only your answers will be reported. More information pertaining to your rights as a participant will be provided in the Informed Consent form. For example, **participation in the study is voluntary and entails an audiotaped interview that is estimated to take 30 to 60 minutes**. Moreover, as a participant you will have the right to skip any question, or stop the recording or interview at any time.

If interested simply reply to this email, or call, to provide a window of availability and your preferred interview location, physical or virtual. I will send you the Interview Questions and Informed Consent form for your review prior to the interview.

Your participation in this study may prove to be extremely valuable to new and existing school leaders, especially, those charged with transitioning their school model from traditional to 21st century teaching and learning. Moreover your participation may be informative to other scholars and practitioners in the field.

I am kindly requesting your participation in this study.

Sincerely,

Alessaundra (Sandi) Mills
Researcher, Pepperdine University
[redacted]

# APPENDIX H

## Acceptance Email

Re: Participation Request for Pepperdine U.

Hi Mr./Ms. _____!

Thank you for agreeing to participate in this important study. I will pencil it in for this [Day], [Month] [Date] at [time am/pm]. If you prefer a different time, I can work around your schedule.

Attached, please find the Interview Questions to reflect upon, and an Informed Consent form to learn more about your rights as a participant.

Upon review of the materials, simply reply to this email, or call, to let me know your preferred interview style - at a physical location (face to face), or virtual (by phone/Skype).

Your participation in this study may prove to be extremely valuable! Thank you again!

# APPENDIX I

## Second/Third Email Notice

Su: (2nd) Participation Request for Pepperdine U.

Hi!

Just want to be sure you received my dissertation study invite for participation message. Are you interested?

Do you have time to phone/Skype this week... say, tomorrow or Wednesday? :) It's not compensated, but I do provide a thank you Starbucks gift card.

Enthusiastically awaiting your answer. No pressure and no hard feelings either way. Yes or no will suffice.

Just interested in your informed perspective. Thanks!

APPENDIX J

Informed Consent Provided to Participant

**PEPPERDINE UNIVERSITY**

Graduate School of Education and Psychology

**INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES**

STRATEGIC SCHOOL SOLUTIONS: A CAPACITY BUILDING FRAMEWORK FOR LEADERS ACCELERATING 21ST CENTURY TEACHING AND LEARNING

You are invited to participate in a research study conducted by Alessaundra D. Mills, M.A. as principal investigator, and Robert Barner, Ph.D. faculty advisor at Pepperdine University, because you have been identified as having lived experience in transitioning a school site to a 21st century instructional model.

Your participation is voluntary. You should read the information below, and ask questions about anything that you do not understand, before deciding whether to participate. Please take as much time as you need to read the consent form. You may also decide to discuss participation with your family or friends. If you decide to participate, you will be asked to sign this form. You will also be given a copy of this form for you records.

**PURPOSE OF THE STUDY**

The purpose of this Strategic School Solutions study is to establish a framework that may help current school leaders to expedite the transition of their respective traditional school program to a 21st century instructional model.

**STUDY PROCEDURES**

If you volunteer to participate in this study, you will receive the interview questions *before* the interview. Once you feel you have had sufficient time to thoughtfully consider your answers, your interview will be scheduled. You will have maximum one week and minimally one hour to consider the questions. During the actual interview, you will be asked the previewed questions. Follow-up questions for clarification may be asked.

Please note the interview will be audio-recorded for accuracy. Confidentiality will be maintained during recording by using a pseudonym or code as identification information. However, if you do not want the interview to be audio-recorded you may still participate.

If you volunteer to participate in this study, you will be asked to recommend a preferred location with the least distraction possible, such as your office or other on or near campus location. The length of the interview is estimated to take 30 to 60 minutes of time for participation. At the conclusion of the interview you will be thanked and offered a small token of appreciation for your participation.

**POTENTIAL RISKS AND DISCOMFORTS**

This study is deemed as posing little risk to the participant. However, the potential and foreseeable risks associated with participation in this study include possible discomfort in expressing recorded personal opinion. A possible inconvenience of time it takes to participate in the study. A discomfort experienced by the personal risk of a potential for confidentiality breach. A social and, or financial risk experienced should identifying information be linked to opinions expressed about your experience working in schools. However, given the potential risks involved, the researcher has taken several measures to ensure confidentiality, including ensuring that minimal risk and or, discomfort is experienced by the participant.

**POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY**

While there are no direct benefits to the study participants, there are several anticipated benefits to society which include:

Being of supreme value to new and existing school leaders, especially, those challenged with transitioning their school model from traditional to 21st century teaching and learning, with resistant staff. Moreover your participation may be informative to other scholars and practitioners in the field, providing practical "lived experience" and insight. Perhaps of most importance, is the anticipated benefits to society when children and adolescents may receive improved preparation for their future.

**PAYMENT/COMPENSATION FOR PARTICIPATION**

You will not be paid for participating in this research study. However upon completion, whether all questions are answered or not, as participant you will receive a $5 gift card to Starbucks. This is a small token of gratitude for your participation.

**CONFIDENTIALITY**

I will keep your records confidential for this study as far as permitted by law. However, if I am required to do so by law, I may be required to disclose information collected about you. Examples of the types of issues that would require me to break confidentiality are if you tell me about instances of child abuse and elder abuse. Pepperdine's University's Human Subjects

Protection Program (HSPP) may also access the data collected. The HSPP occasionally reviews and monitors research studies to protect the rights and welfare of research subjects.

The data will be stored on a password-protected computer in the principal investigator's place of residence. The data will be stored for a minimum of three years. The data collected will be de-identified using a pseudonym in lieu of formal identification. The audio-recorded data will be transcribed into a software program to facilitate the researcher's analysis of the data. The pseudonym/code list responding to actual identification of participants will be stored separate from the transcribed data in a locked file cabinet in the primary researcher's home.

Only the investigators will have access to this data. Only the results of the framework will be shared at the completion of the study. If you would like the results of the completed framework, please contact me at [redacted].

## PARTICIPATION AND WITHDRAWAL

Your participation is voluntary. Your refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

## ALTERNATIVES TO FULL PARTICIPATION

The alternative to participation in the study is not participating or completing only the items in which you feel comfortable.

## INVESTIGATOR'S CONTACT INFORMATION

I understand that the investigator is willing to answer any inquiries I may have concerning the research herein described. I understand that I may contact Alessaundra Mills ([redacted]) or Dr. Barner ([redacted]) if I have any other questions or concerns about this research. If you have questions about your rights as a research participant, contact Dr. Thema Bryant-Davis, Chairperson of the Graduate & Professional School Institutional Review Board (GPS IRB) at Pepperdine University, via email at gpsirb@pepperdine.edu or at 310-568-5753.

## RIGHTS OF RESEARCH PARTICIPANT – IRB CONTACT INFORMATION

If you have questions, concerns or complaints about your rights as a research participant or research in general please contact Dr. Thema Bryant-Davis, Chairperson of the Graduate & Professional School Institutional Review Board at Pepperdine University 6100 Center Drive Suite 500 Los Angeles, CA 90045, 310-568-5753 or gpsirb@pepperdine.edu.

**SIGNATURE OF RESEARCH PARTICIPANT**

I have read the information provided above. I have been given a chance to ask questions. My questions have been answered to my satisfaction and I agree to participate in this study. I have been given a copy of this form.

**AUDIO**

☐ *I agree to be audio-recorded*

☐ *I do not want to be audio-recorded*

_____
Name of Participant

_____ _____
Signature of Participant Date

SIGNATURE OF INVESTIGATOR

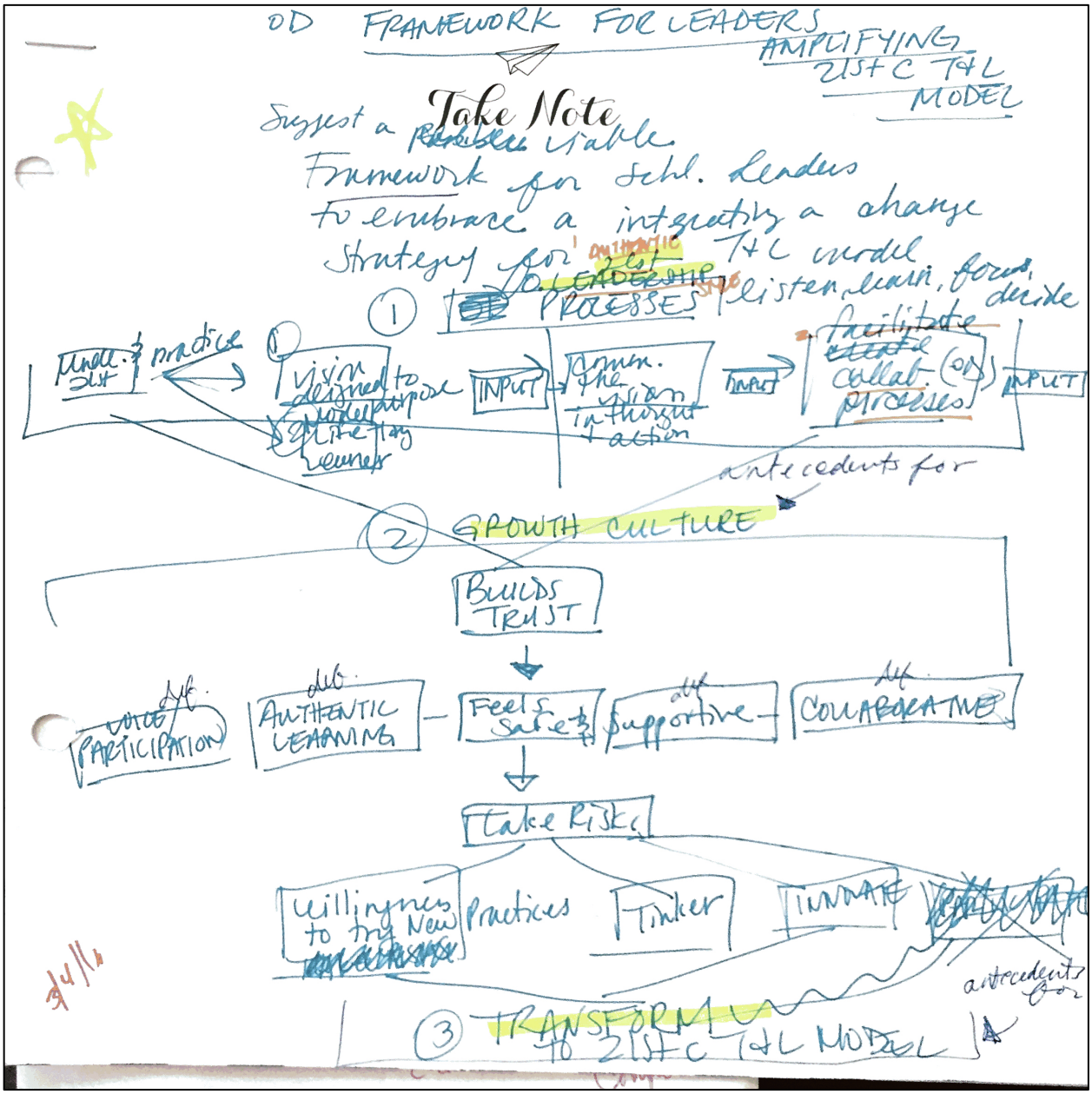
I have explained the research to the participants and answered all of his/her questions. In my judgment the participants are knowingly, willingly and intelligently agreeing to participate in this study. They have the legal capacity to give informed consent to participate in this research study and all of the various components. They also have been informed participation is voluntarily and that they may discontinue their participation in the study at any time, for any reason.

_____
Name of Person Obtaining Consent

_____ _____
Signature of Person Obtaining Consent Date

APPENDIX K

Diagramming Example



# APPENDIX L

## Demographic Data of Participants

| Participant # | Title Role | Years of Experience | State | Gender | Age Range | Ethnicity |
|---|---|---|---|---|---|---|
| 201 | Dir./Administrator of Ed Tech | 17 | CA | Male | 30-39 | Caucasian/white |
| 202 | Principal | 17 | CA | Male | 30-39 | Caucasian/white |
| 203 | Dir./Administrator of Ed Tech | 20 | CA | Male | 50-59 | Caucasian/white |
| 204 | Principal | 20 | CA | Female | 40-49 | Caucasian/white |
| 205 | Principal | 19 | CA | Female | 40-49 | Caucasian/white |
| 206 | Retired Principal | 32 | CA | Female | 60+ | Hispanic |
| 207 | Other-Ed related | 14 | CA | Male | 30-39 | Caucasian/white |
| 208 | Retired Principal | 42 | CA | Female | 60+ | Hispanic |
| 209 | Dir./Administrator of Ed Tech | 23 | CA | Female | 40-49 | Biracial/Multiracial |
| 210 | Principal | 12 | CA | Male | 50-59 | Caucasian/white |
| 211 | Dir./Administrator of Ed Tech | 30 | CA | Male | 50-59 | Caucasian/white |
| 212 | Dir./Administrator of Ed Tech | 29 | TX | Male | 50-59 | Caucasian/white |
| 213 | Principal | 18 | CA | Female | 40-49 | African American/black |
| 214 | Dir./Administrator of Ed Tech | 28 | NM | Female | 40-49 | Caucasian/white |
| 215 | Dir./Administrator of Ed Tech | 16 | CA | Female | 40-49 | Biracial/Multiracial |
| 216 | Dir./Administrator of Ed Tech | 32 | TX | Male | 50-59 | Caucasian/white |
| 217 | Principal | 16 | OH | Male | 40-49 | Caucasian/white |
| 218 | Principal | 38 | CA | Female | 50-59 | Caucasian/white |
| 219 | Principal | 27 | CA | Female | 50-59 | Caucasian/white |
| 220 | Principal | 18 | CA | Female | 40-49 | Hispanic |
| 221 | Dir./Administrator of Ed Tech | 22 | TX | Male | 40-49 | Caucasian/white |
| 222 | Other-Ed related | 15 | CA | Male | 40-49 | Caucasian/white |
| | **Average of Years** | **23** | | | | |

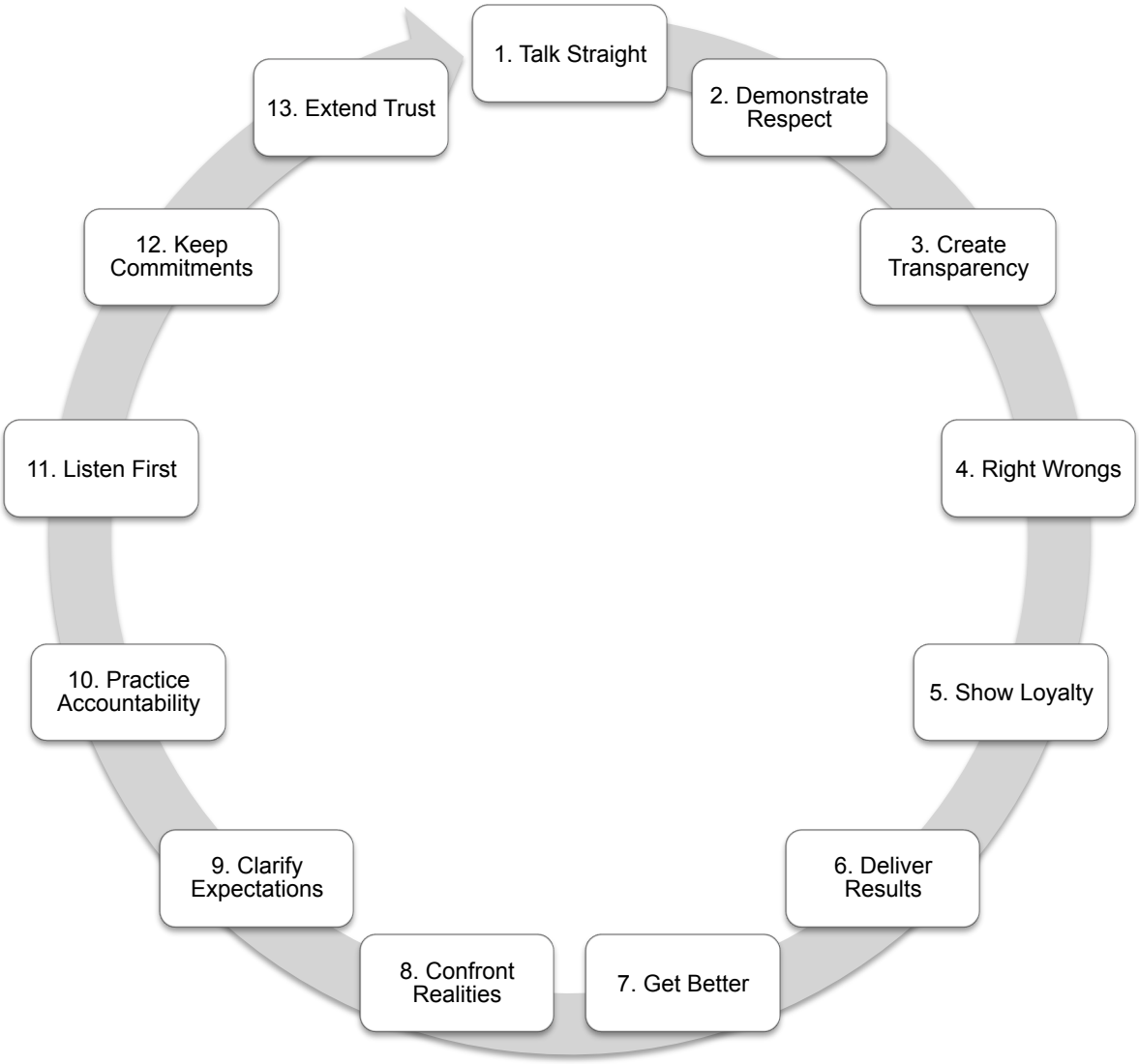
# APPENDIX M

## Pitfalls to Avoid

| Pitfalls to Avoid- What doesn't work<br>according to 22 change-savvy school leaders. | |
|---|---|
| 20th century meetings don't model<br>Addiction to positive feedback vs learning frm failings<br>Avoid overuse of district support<br>Being new is challenging<br>Can't do everything at once<br>Challenge to balance compliance and time to learn<br>Change is difficult<br>Designing PD for lvls tricky<br>Despite PD success implementation slow<br>Discern when not mandatory by all<br>Distress if basic needs not met<br>Don't assume same response<br>Don't fixate on one thing<br>Don't get too far ahead of your staff<br>Don't ignore affect in change<br>Don't let past bias/performance limit perspective<br>Don't make change w/o proper research<br>Don't obstruct teacher passion<br>Don't waste peoples time erodes trust<br>Embrace effort or perish<br>Erase 'easy/intuitive' from vocab<br>Find expertise<br>Giving up control is hard<br>Hard to succeed if too many priorities<br>Leaders can fall into old mindset<br>Leadership is not simple<br>Mandate equals pushback<br>Mediocrity if not focused | No hidden agenda<br>No new flavors of the month and leave<br>No trust no change<br>Not accepting the way things are<br>Not focus on the change averse<br>Not large scale large group PD<br>Not listening<br>Not often said we will help you get there<br>Not thinking tech need in every lesson<br>Often not clear data method will be successful<br>Outmoded techniques not optimal<br>Overcome generational gap<br>Really easy to fall in old mindset<br>Some will leave instead of change<br>Stagnant if tchrs don't practice<br>Stress indicator of change needed<br>Teachers not in meeting so don't see it<br>Tchrs in one room for PD doesn't work<br>Teacher efficacy impacts implementation<br>Teacher need to change practice<br>Teaching credibility perspective lost<br>Thinking as principal have to be protective<br>Time invested then abandoned affects effort<br>Trainings out of sync w/ learning theory<br>Trying to do everything yourself have hard time<br>Veteran fear of tech |

# APPENDIX N

## Thirteen Behaviors of Trust



# APPENDIX O

# IRB Approval

**Pepperdine University**
**24255 Pacific Coast Highway**
**Malibu, CA 90263**
**TEL: 310-506-4000**

**NOTICE OF APPROVAL FOR HUMAN RESEARCH**

Date: September 29, 2015

Protocol Investigator Name: Alessaundra Mills

Protocol #: 15-08-036

Project Title: Strategic School Solutions: A Capacity Building Framework for Leaders Accelerating 21st Century Teaching and Learning

School: Graduate School of Education and Psychology

Dear Alessaundra Mills:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at community.pepperdine.edu/irb.

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chairperson

cc: Dr. Lee Kats, Vice Provost for Research and Strategic Initiatives