Effect of Principal’s Vision on Recruiting and Hiring

Teachers for 21st Century Students

by

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Effect of Principal’s Vision on Recruiting and Hiring

Teachers for 21st Century Students

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DEDICATION

I dedicate this work to my husband, Tim. He has always believed in me and challenged me to believe in myself. His work ethic, his commitment to service, and his honesty have been my inspiration and my model.

To my children, Kevin, Bryan, and Meghan, I challenge each of you to believe in yourself and, like your father, commit yourselves to making this world a better place.
ABSTRACT

Teachers are the foundation for creating a dynamic and effective school environment. A potential teacher’s academic background, preparation for teaching, certification status, and previous experience are all important quality indicators. Beyond these indicators, successful teachers need to clearly understand and be willing to address the challenges of the 21st century learner.

This study examined the recruitment and hiring processes at a new elementary school. Using a single case study method, the researcher documented the actions of one school leader at a charter elementary school. First, the researcher examined how the school leader’s vision for student learning was mirrored in the methodology used to recruit, interview, select and hire teachers. Second, the researcher analyzed the perceptions and reflections of the teachers and the director about the recruitment and hiring process. The researcher gathered the data by conducting individual interviews with the school’s director and six newly hired teachers who participated in a highly interactive selection process. Four additional new teachers who were already known to the principal were interviewed in a focus group. The researcher also examined web based and archival materials.

The findings indicate that the director made specific decisions to create an interactive and information-rich experience designed to assess 21st century skills. The second finding exposed the reciprocal nature of the hiring process, and the third finding raised the question as to whether or not the recruitment and hiring process clearly communicated the director’s vision for the school.
There are three recommendations for district practices based on this case study. The first suggests that districts focus on professional development opportunities for school leaders to help them clearly define and articulate 21st century skills. The second is the need for a shift away from the current curricular focus on low-level standards and minimum competencies. The third is to maximize a teacher recruitment and hiring process to discern the skills and habits of teachers most likely to create robust 21st century learning environments.

Many areas for future research emerged from this case study. The most important would be a study to determine if the teachers hired did in fact positively impact the academic success of the students while implementing a program grounded in 21st century skills. Another important study would be to examine the effect of the hiring process on teacher retention rates. Finally, it would be important to conduct a study to find out if an alternative hiring process like the one used at HTE would be a feasible practice for regular public schools.
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Finally, I would like to acknowledge my husband, Tim, who has always supported and encouraged my endeavors. His unwavering belief in me has always pushed me to excel, and without his faith I may never have finished.
CHAPTER 1—INTRODUCTION

The most important decision of a district or school leader is the hiring of qualified teachers. Traditional hiring methods are often based on credential and resume reviews, and interviews typically involve only the principal. Few teachers interview with existing teachers at the school, and rarely do prospective teachers interview with parents or students (Liu & Johnson, 2003). Commercially developed teacher interview systems have been designed to determine whether prospective teacher candidates have high expectations and can establish a positive relationship with their students (Metzger & Wu, 2008). Both methods pay little or no attention to subject area content knowledge or pedagogical values. These methods may identify teachers who will come to work every day, be empathetic, caring, and relentless in their willingness to help students, but are they prepared with the requisite skills to impart the skills and knowledge our students will need to succeed in the future?

The challenge for school leaders is to recruit and hire teachers who are not only able to develop strong relationships with children but who also have the intellectual curiosity, content knowledge, and critical thinking skills to provide students with a robust learning environment. This vision for student learning must be the foundation for recruiting, identifying, and hiring teaching candidates who are best able to impart the skills and knowledge students will need to succeed in the 21st century workplace.

This study chronicled the actions of one school leader at a charter elementary school and examined how the school leader’s vision for student learning was mirrored in the methodology used to recruit, interview, and hire teachers. This particular school was chosen for study for several reasons. First, this school was new, and the newly hired
principal hired all new teachers. Second, because it is a charter school, the principal was not bound by district hiring practices or the teacher union contract. Next, because this school is part of the High Tech Charter School group, there was an expectation that curriculum will be student centered and project-based. Finally, unlike district schools, the curriculum is not closely linked to year-long standardized test preparation.

**Statement of the Problem**

Students graduating from high school today will experience a far different world than generations past (Autor, Levy, & Murnane, 2003; Christensen, 2008; Pink, 2005; Wagner, 2008). The professions to which our children have traditionally aspired may not continue to be viable options. The jobs they will hold have yet to be envisioned, and these jobs will most likely demand post secondary education (Autor et al., 2003). The United States now ranks tenth among industrialized nations in the rate of college completion for 25 to 44 year olds (Partnership for 21st Century Skills, 2009). Unless this trend improves, over the next 25 years tens of millions of our students and adults will be unqualified for higher-paying jobs (Wagner, 2008).

If we are to prepare children for the future, the curriculum must shift from a reliance on rote memorization of facts to a balance of content and critical thinking skills (Conley, 2007; Partnership for 21st Century Skills, 2009; Schoen & Fusarelli, 2008; Suarez-Orozco, 2005; Wallis, Steptoe, & Miranda, 2006). But, while the skills students need to succeed in the workplace have changed, schools have failed to adapt to the changing needs of students.

School leaders need a vision for student learning that addresses the opportunities and challenges facing 21st century learners. The leader must clearly articulate this vision
for the classroom environment and identify pedagogy that best develops and reinforces
the ever-changing skill sets students need to succeed in the 21st century (Bennis &
Nanus, 1985; Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Cotton, 2003;
Kurland, Peretz, & Hertz-Lazarowitz, 2010; Leithwood & Jantzi, 2006; Marzano, Waters,
& McNulty, 2005). Even if successful in articulating and communicating this vision, a
school leader cannot succeed without able and competent teachers (Darling-Hammond,
2010).

Teachers are the foundation for creating a dynamic and effective school
environment, and they are directly responsible for improving student achievement
(Darling-Hammond, 2010). A potential teacher’s academic background, preparation for
teaching, certification status, and previous experience are all important quality indicators.
Beyond these indicators, successful teachers need to clearly understand and be willing to
address the challenges of the 21st century learner. The problem presented was how to
incorporate a school leader’s vision for 21st century students into the recruitment process
and interview protocols that resulted in the selection and hiring of teachers who possessed
the skills and traits needed to inspire children to succeed in the 21st century.

**Purpose of the Study**

The purpose of this study was to describe how a school leader’s vision impacts the
strategies used to recruit, interview, and select teachers who have the pedagogical skills
and traits needed to effectively educate students in the 21st century. Further, the study
determined whether the teachers and principal perceived the strategies to be effective.

**Research Questions**

Three essential questions were addressed:
1. How did a leader with a vision of 21st century skills design and implement a recruitment and selection process that reflected that vision to prospective educators?

2. How did this leader assess a potential teacher’s 21st century skill base throughout the recruitment and selection process?

3. How did the teachers perceive the vision of the leader reflected in the recruitment and selection process?

Relevant Research

In the past 20 years, the skills students will need to be successful have changed, but our schools have not. Experts contend that if we are to prepare our children for the future, our curriculum must shift from a reliance of facts to a balance of content and critical thinking skills. A plethora of research suggests that the United States has failed to adapt its educational system to the changing world (Berliner, 2009; Center for Evaluation and Education Policy, 2006; Farkas & Duffett, 2008; Loveless, 2008; Neal & Schazenbach, 2007; Organization for Economic Cooperation and Development [OECD], 2007). This stagnation of educational progress in the United States has occurred despite a tremendous amount of time and effort spent to address the problems and the needed changes (Autor et al., 2003; Chambers, Foulon, Handfield-Jones, Hankin, & Michaels, 1998; National Commission on Excellence in Education [NCEE], 1983; U.S. Department of Education [USDOE], 2002). A large cadre of researchers agree that if we are to prepare our children for the future, our curriculum must shift from a reliance on rote memorization of facts to a balance of deep content knowledge, along with strong thinking and reasoning skills (Autor et al., 2003; Conley, 2007; Friedman, 2005; Jerald, 2009;
Murnane & Levy, 1996; Partnership for 21st Century Skills, 2009; Reimers, 2008; Schoen & Fusarelli, 2008; Suarez-Orozco, 2005; Wallis et al., 2006).

The role of the principal in establishing a set of values and beliefs about student learning is imperative to school success (Cotton, 2003; Leithwood & Jantzi, 2006; Marzano et al., 2005). Current research also suggests that teachers can be hired based on a set of beliefs, attitudes, and values (Liu & Johnson, 2003; Metzger & Wu, 2008; Young & Delli, 2002). The question remains whether recruitment and hiring protocols can be developed to discern the skills and habits of teachers most likely to create robust 21st century learning environment for modern students.

**Methodology**

This study used a historical, case study method to examine the launch of a single charter elementary school and its hiring process for new teachers. The sources of the data were program documents including the principal’s journal, the school’s internal and external websites, candidate applications, candidate interview protocols, and completed interview rubrics. The researcher conducted interviews with the director throughout the study and conducted posthiring interviews with 10 teachers, with a minimum of one from each grade level. The researcher audio recorded all interviews.

The researcher used the grounded theoretical approach during the interviews since the researcher sought to investigate the perceptions the teachers and principal had of the recruitment and hiring process. Grounded theory is a strategy of inquiry in which the researcher derives a general, abstract theory of process, action, or interaction grounded in the views of the participants (Creswell, 2009). Further, the researcher chose grounded theory because it lessens the pressure to build on previous evidence (Leithwood, 2005).
Additionally, this approach was selected because it allowed for a systematic examination of emerging theories and ideas. This was the most appropriate lens because the researcher of this study sought to understand emerging ideas of teacher and principal perceptions on the recruitment and hiring process. The case study was a bounded exploration at one elementary school.

Using the constant comparative method, the researcher analyzed the data independently and then compared all the categories, themes, and patterns. The constant comparative method involved the researcher moving in and out of the data collection and analysis process (Glaser & Strauss, 1967). The researcher transcribed the interviews and identified themes and patterns, and then constantly compared all data sources until no new themes and patterns emerged. Once the data were analyzed, the researcher documented the common themes and patterns that describe the document review and the interviews of the principal and teachers.

**Limitations**

Limitations recognized in this study were:

1. The unit of analysis was a single charter elementary school, and the sample only included one principal and 10 teachers, including one from each grade level.
2. The findings were limited to one elementary school and may not be generalized.
3. This was a unique opportunity to hire all new teachers. Teachers may have been attracted to a new school and a new school building for many different reasons.
4. The positive reputation of the selected school’s parent organization may have impacted the motivation of potential teacher candidates.

5. This study did not address or evaluate the actual effectiveness of the teachers hired for the school because the collection of data took place early in the first year of the teachers’ employment. This timing enhanced the potential accuracy of the participants’ memory of the hiring process, but it was too early in the teachers’ employment to address teacher effectiveness.

6. Interviews were conducted with only the successful teacher’s, those that were hired by the HTE director. The findings are therefore limited because the unsuccessful candidate’s perceptions of the recruitment and hiring process are unknown.

**Delimitations**

Delimitations recognized in this study were:

1. This study was delimited to a single charter elementary school operating under a parent charter organization focused on technology and project-based learning.

2. The elementary school consists of grades K-5.

3. The school was new and the founding principal hired all staff members.

4. The study relied on the perceptions of the principal and 10 teachers, including one from each grade level.

**Definition of Terms**

*High Tech High (HTH)*: The name for an organization of 11 charter K-12 schools, 2 elementary, 4 middle, and 5 high schools. For purposes of this study, HTH refers to the organization of schools, not a high school.

High Tech High Bonanza: The process for hiring teachers to work at HTH. Groups of screened applicants participate in a full day of activities on the HTH campus. Candidates typically meet teachers and directors, tour classes, and teach sample lessons. They also participate in a Socratic Seminar. High Tech High teachers and directors observe the activities and weigh in on hiring decisions.

High Tech Elementary Bonanza: The modified Bonanza process for hiring teachers to work at HTE. Groups of screened applicants participated in a full day of activities on the HTH campus. The HTE process included the traditional HTH Bonanza activities, as well as additional activities designed by the director of HTE to assess the 21st century skill base of the applicants. The candidates did not teach sample lessons; the director observed teachers in their own classrooms before they were invited to HTE Bonanza.

Abbreviated High Tech Elementary Bonanza: The process used by the director of HTE to select teachers after the HTE Bonanza was completed. In this process, candidates met individually with the director on the campus of HTH and toured the school. They interviewed with the director and were asked to submit a curricular plan. The director observed them teaching in their own classrooms or asked them to send a videotape of their teaching.

High Tech High Graduate School of Education (HTHGSE): The HTH organization operates its own Graduate School of Education. It is the nation’s first
graduate school offering Master’s in Teacher Leadership and School Leadership embedded within a K-12 learning community.

**Significance of the Research**

The most important decisions of a district or school leader concern the hiring of qualified teachers (Darling-Hammond, 2010). Commercially developed teacher interview systems are often looking for qualities that will insure that the teacher candidate can establish a positive relationship with their students. They are also hoping to attract teachers who will have high expectations for their students (Metzger & Wu, 2008; Young & Delli, 2002). Are these affective beliefs and attitudes enough? Or, do excellent teachers nurture strong relationships, have high expectations, and have the intellectual curiosity, content knowledge, and critical thinking skills to provide students with a robust learning environment. This research adds important information to the process of recruiting and hiring teachers capable of both building strong relationships and providing a robust learning environment.

**Summary**

Our world is constantly changing, yet many of our schools are slow or unwilling to adapt. This study chronicled the actions of one school leader at a charter elementary school and examined how the school leader’s vision for student learning is mirrored in the methodology used to recruit, interview, and hire teachers. This chapter serves as an introduction to the study and points out key features of the study design. Chapter 2 reviews and analyzes relevant literature related to the changing skill sets of students, teacher hiring practices, and the impact of a leader’s vision on an organization.
CHAPTER 2—LITERATURE REVIEW

In the past 20 years, the skills students will need to be successful have changed, but our schools have not. Experts contend that if we are to prepare our children for the future, our curriculum must shift from a reliance on rote memorization of facts to a balance of content and critical thinking skills. This review examines the current literature in five areas. The first section discusses the United States’ failure to adapt its educational system to the changing world (Berliner, 2009; Center for Evaluation and Education Policy, 2006; Farkas & Duffett, 2008; Loveless, 2008; Neal & Schazenbach, 2007; OECD, 2007). The second section reviews efforts to identify and address needed changes in education. The third section outlines our students’ changing skill sets (Autor et al., 2003; Christensen, 2008; Pink, 2005; Wagner, 2008) and provides an overview of the skills themselves (Conley, 2007; Partnership for 21st Century Skills, 2009; Schoen & Fusarelli, 2008; Suarez-Orozco, 2005; Wallis et al., 2006). The fourth section describes the role of the principal in establishing, communicating, and institutionalizing a set of values and beliefs about student learning (Bennis & Nanus, 1985; Bryk et al., 2010; Cotton, 2003; Kurland et al., 2010; Leithwood & Jantzi, 2006; Marzano et al., 2005). The fifth section examines current research on the hiring practices for teachers based on a set of beliefs, attitudes, and values, and whether those practices have been found to create a robust 21st century learning environment for modern students (Liu & Johnson, 2003; Metzger & Wu, 2008; Young & Delli, 2002).

Education in the United States

Despite demand for more skilled workers, the United States has fallen further behind other developed nations in producing high school students prepared to compete
for these positions. According to the 2006 Program in International Assessment (PISA), the United States ranked 21st of 30 in science and 25th of 30 in mathematics of countries that are included in the Organization for Economic Cooperation and Development (OECD, 2007). The OECD, formed in 1961, includes European countries, Australia, Canada, New Zealand, Japan, Korea, Mexico, and the United States. Beyond these dismal results, the disparity between students is dramatic. White and Asian students score above the OECD average while African American and Hispanic students score far below the OECD average. Because of this disparity, the national average test score for all students plummets to the bottom of the rankings (OECD, 2007). Additionally, in 2000, only 69% of the students in the United States graduated from high school, while most countries scoring high on the PISA graduate 90% of their students (OECD, 2008).

In addition, legislation adopted to raise student achievement may have the unintended consequence of accelerating the growing divide between the United States and other developed nations when comparing academic performance rates. In 2001, President George Bush signed into law No Child Left Behind (NCLB; U.S. Department of Education [USDOE], 2002). The intent of the legislation was to improve the performance of students in elementary and secondary schools. The bill mandated systems for increased accountability tied to state developed standards, as well as accountability reports that included disaggregated achievement data on all student populations. The focus of NCLB on high stakes accountability has caused a narrowing of curriculum, especially within schools serving large numbers of poor students (Center for Evaluation and Education Policy, 2006). In 2006, the Center for Evaluation and Education Policy surveyed 350 school districts and found that 62% of the districts increased the time spent
on English language arts and mathematics. Forty-four percent of these districts reduced the time spent on art, music, physical education, social studies, and science. Ninety-seven percent of the districts classified as high-poverty narrowed the curriculum to meet the demands of high stakes assessments (Center for Evaluation and Education Policy, 2006).

The narrowing of curriculum leaves less time for the subjects that may more naturally promote creativity and critical thinking skills (Berliner, 2009). Deke and Haimson (2006) examined the National Educational Longitudinal Study (NELS). The NELS followed 10,000 U.S. students from 1988 to 2000 to assess the competencies that were most likely to produce post-secondary success. Deke and Haimson used competency measures based on the 1988, 1990, and 1992 NELS high school tests, as well as surveys of students, parents, and teachers. The 2000 NELS data collected on these same 9,977 students provided the outcome measures to assess high school completion, post-secondary education, and earnings.

Deke and Haimson (2006) grouped the variables into the following six categories: academic achievement as measured by math test scores; work habits; sports-related competencies; leadership skills; prosocial behaviors; and attitudes toward determinants of success. In order to control for other factors, the researchers controlled for student and school variables including: student gender, race, socioeconomic backgrounds, history of grade retention, and disability; and school statistics on eligibility for free and reduced lunch; number of students enrolled in college prep courses, number of extracurricular offerings, and discipline procedures.

The researchers identified the competencies, when raised 10 percentile points, that created the greatest impact on high school completion, postsecondary education, and
earnings. The researchers found that while gains in mathematics had a large effect, gains in nonacademic courses played the most significant role in postsecondary attendance and future earnings. The study concluded that more students would have benefitted from improving a nonacademic competency (Deke & Haimson, 2006).

Deke and Haimson (2006), in their analysis of the NELS data, provided a compelling triangulation of the data. The nonacademic competencies were evaluated by a survey designed to evaluate the competencies of each student, and they were completed by students, parents, and teachers. The researchers were able to verify student responses with the corresponding parent and teacher responses. Additionally, the researcher used a large, single cohort of students over a 12-year study. In a review of the Deke and Haimson research and other studies on the impact of NCLB, Berliner (2009) concluded, “The narrower the curriculum provided to our students, the less well-prepared they are likely to be for intellectual competition in a rapidly changing, quite unpredictable international economy” (p. 288).

Since the enactment of the No Child Left Behind Act of 2001 (USDOE, 2002), the achievement gap between racial groups has slightly narrowed. The focus of the NCLB was to bring a greater number of students to a basic level of student achievement. The narrowing of the curriculum and the focus on low-achieving students may also be responsible for a gap growing between subgroups of students (Farkas & Duffett, 2008; Loveless, 2008; Neal & Schazenbach, 2007). Loveless (2008) found that after the enactment of NCLB, low achieving students in Chicago Public Schools had made steady progress, but high achieving students made only modest progress. Neal and Schazenbach (2007) used fifth grade test data from Chicago Public Schools after the implementation of
NCLB and a similar district-level accountability system. Their study compared fifth
grade students who took the same test before the high-stakes accountability system was
implemented with their sixth grade scores after the implementation of NCLB. The study
found that after the implementation of a test-based accountability system, students scoring
in the middle of the achievement distribution scored significantly higher, but that the
weakest students made little to no growth in mathematics or reading. The study found
that teachers focused more consistently on students performing just below standard, and
those needing the most help were often ignored.

No Child Left Behind (USDOE, 2002) requires schools to evaluate the success of
every student. Data must be disaggregated by race, socioeconomic status, English learner
status, and students with disabilities. This spotlight on subgroups is needed and
commendable, but NCLB’s inherent aspiration toward basic competency will not be
enough for our students to compete in the global economy. Instead, because the United
States can no longer compete in the quantity of human capital, education must provide
students with the “highest level of math, science, reading, and problem-solving skills in
the world” (Achieve, Inc., 2008, p. 11). Minimum competencies will not be enough for
our students.

**Efforts to Identify Needed Change**

In 1964, the Ad Hoc Committee on the Triple Revolution provided a memo to
President Lyndon Johnson stating that the rise in computers would create widespread
unemployment (Ad Hoc Committee, 1964). The memo provided advice on three major
categories, Cybernation Revolution, Weaponry Revolution, and Human Rights
Revolution. The committee cautioned that the Cybernation Revolution was the most
important of the three because of the economic impact on the United States. “As machines take over production from men, they absorb an increasing proportion of resources while the men who are displaced become dependent on minimal and unrelated government measures—unemployment insurance, social security, welfare payments” (Ad Hoc Committee, 1964, p. 87). The committee cautioned the president that cybernation would cause even greater numbers of people to subsist below the poverty line.

In 1983, Ronald Reagan’s Commission on Excellence in Education published the landmark study, *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence in Education [NCEE], 1983). The study cited concerns about the quality of education in the United States and called for major reforms. The report specifically highlighted the country’s lack of competitiveness with other nations and the changing skills needed by students. “Knowledge, learning, information, and skilled intelligence are the new raw materials of international commerce and are today spreading throughout the world as vigorously as miracle drugs, synthetic fertilizers, and blue jeans did earlier” (NCEE, 1983). In contrast, while educators in the United States were attempting to implement the findings set forth in *A Nation at Risk*, a Korean Commission for Educational Reform published, “Cultivating Koreans to Lead in the 21st Century” (Huh, as cited in Darling-Hammond, 2010).

In 1998, McKinsey & Company, America’s largest management consulting firm, produced a report detailing the changing market for highly skilled workers and coined the term, “war for talent” (Chambers et al., 1998). The year-long study included surveys of 6,000 managers and case studies of 20 companies with excellent financial performance and an industry reputation for attracting and retaining great talent. The study found that
the most important corporate resource was smart, adaptable, and globally astute businesspeople and concluded that, in the Information Age, companies would find intangible intellectual capital far more important than hard assets.

In 2001, President George Bush signed into law NCLB (USDOE, 2002). The intent of the legislation was to improve the performance of students in elementary and secondary schools. The bill also provided greater opportunities for choice in schools. School districts were mandated to offer students access to better performing public or charter schools if the schools where the students were enrolled were labeled as failing. Through this legislation, local education agencies making academic gains were provided more flexibility in the use of federal funds. Finally, NCLB focused on reading instruction for early elementary students with a goal of having all children reading at grade level by the end of third grade.

Friedman’s 2005 publication of *The World is Flat: A Brief History of the Twenty-First Century* captured the attention of many Americans. In this book, Friedman analyzed globalization and asserted that due to a number of political, economic, and technological changes, the world had become an increasingly even playing field. According to Friedman (2005):

> It is now possible for more people than ever to collaborate and compete in real time with more people on more different kinds of work from more different corners of the planet and on a more equal footing than at any previous time in the history of the world—using computers, e-mail, fiber-optic networks, teleconferencing, and dynamic new software. (p. 8)
Friedman concluded that globalization results in a smaller and more interdependent world within which increasing competition requires new knowledge and skills.

As early as 1954, the impact of computers on the workforce was noted. In his seminal book, *The Practice of Management*, Drucker (1954) described computers as eventually subsuming routine work. He stressed that there would be a shortage of skilled workers needed to manage the growing computer technology: “Indeed, the major obstacle to the rapid spread of these changes will almost certainly be the lack, in every country, of enough trained men” (p. 22).

Drucker’s (1954) prediction has, in fact, come to fruition as evidenced by both quantitative and qualitative studies documenting the changing skills required of the workforce as a result of computer technology (Katz & Autor, 1999). Starting in the 1970s, manufacturing plants and firms adopted computer-based technologies, and computers were programmed to perform the routine tasks previously completed by workers. Subsequently, workforce expectations shifted from performance of routine tasks to an “increase[d] demand for nonroutine task input, which computer capital complements” (Autor et al., 2003, p. 1281). Autor et al. (2003) asserted that this phenomenon resulted from the rise in computer use and the decline in the cost of computer technology.

Autor et al. (2003) posited that the economy-wide decline in the price of computer capital beginning in the 1960s reshaped “the task composition of work, and hence the structure of labor demand” (p. 1280). Autor et al. theorized that with the decline in the price of computer capital, industries and occupations that were reliant upon intensive routine labor tasks moved to adopt computer technology more rapidly than industries reliant upon nonroutine tasks. In addition, Autor et al. argued that with the decline in the
demand for labor performing routine tasks, the demand for highly educated workers able
to perform nonroutine cognitive tasks increased.

Autor et al. (2003) first analyzed whether there was a discernable economic shift
from routine labor tasks to nonroutine labor tasks over four decades beginning in 1960.
Relying upon information from the U.S. Department of Labor’s *Dictionary of
Occupational Titles* (DOT), Autor et al. selected two variables to measure nonroutine
cognitive tasks, one to capture interactive, communication, and managerial skills and the
other to capture analytic reasoning skills. In addition, Autor et al. selected two variables
to measure routine cognitive and routine manual activity. Using these variables, and
other empirical data, Autor et al. found that during the period there was a significant
decline in the “aggregate demand for labor input of routine tasks” (p. 1295), while
“occupations that made intensive use of nonroutine analytic and nonroutine interactive
tasks increased substantially” (p. 1295).

Next, Autor et al. (2003) tested their theory that, as industries adopt computer
technology, there would be simultaneous reduction in labor input of routine cognitive and
manual tasks and an increase in labor input of nonroutine cognitive tasks. Again, based
on modeling and empirical data compiled over four decades, Autor et al. concluded that
“almost the entirety of the observed within-industry change in nonroutine analytic input is
‘explained’ by the computerization measure” (p. 1303) and that the relationship
“become[s] larger in absolute magnitude with each passing decade” (p. 1305). In
addition, Autor et al. found that “industries making relatively greater investments in
computer capital are responsible for the bulk of the observed substitution away from
routine cognitive and manual tasks and toward nonroutine analytic and interactive tasks” (p. 1307).

Finally, Autor et al. (2003) found that “changes in the demand for workplace tasks, stemming from technological change, are an underlying cause—not merely a reflection—of relative demand shifts favoring educated labor” (p. 1309). Specifically, Autor et al. found that occupations that materially increased the use of computer capital “saw relatively greater increases in labor input of nonroutine cognitive analytic and interactive tasks and larger declines in labor input of routine cognitive tasks (p. 1315). In conclusion, Autor et al. found that “changes in task demands accompanying workplace computerization are economically large and—with caveats noted—could have contributed significantly to relative demand shifts favoring educated labor in the United States since 1970” (p. 1321).

The findings of the empirical study conducted by Autor et al. (2003) are rarely disputed, but there is some question about the studies reliance on out-dated data. Handel (2003) found that the use of U.S. Department of Labor’s DOT may be flawed. The DOT data were collected in the 1960s and 1970s. Handel found the use of these data problematic because “in the absence of more recent ratings, there is no way to trace trends in the skill content of the occupations over time or correlate them with trends in computer use” (pp. 11-12).

**Changing Student Skill Sets**

Researchers and scholars agree that if we are to prepare our children for the future, our curriculum must shift from a reliance on rote memorization of facts to a balance of deep content knowledge along with strong thinking and reasoning skills
Twenty-first century skills are described using a variety of definitions and terms, but for greater clarity and purpose of discussion, this researcher organized the skills into six categories (see Table 1). These six categories appear as column headings in Table 1 and include: critical thinking and problem solving; creativity and innovation; collaboration; multiculturalism and global awareness; strong oral and written communication skills; and deep content knowledge.

**Critical Thinking**

Critics of the 21st century skills movement protest that an emphasis on critical thinking and problem solving skills is not new and has been valued in education since the time of Socrates. While this may be true, our educational system is still failing to provide sufficient numbers of highly educated workers capable of performing nonroutine analytical tasks (OECD, 2007). In addition, today’s economy requires critical thinking skills not only for high performing, highly paid positions, but also for jobs that merely pay a middle-class wage. The “minimum skills people now need to get a middle class job,” defined by Murnane and Levy (1996) as the “new basic skills,” include, among other things, “the ability to solve semistructured problems where hypothesis must be formed and tested” (p. 32).

The Partnership for 21st Century Skills (2009) is a collaborative effort between educators, businesses, and governments to prepare U.S. students to compete in the global economy. Like Murnane and Levy (1996), the consortium also highlights the importance
### Table 1

**Definitions of 21st Century Skills**

<table>
<thead>
<tr>
<th>Skill</th>
<th>Critical thinking/ problem solving</th>
<th>Creativity/ innovation/ adaptability</th>
<th>Collaboration</th>
<th>Multiculturalism/ global awareness</th>
<th>Oral and written communication skills</th>
<th>Content knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard skills (basic mathematics, problem solving, and reading abilities), soft skills (work in groups, make effective written and oral presentations), ability to use personal computers (Murnane &amp; Levy, 1996)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Flexibility, creativity, generalized problem-solving capabilities, complex communications (Autor et al., 2003)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Learn to learn, navigation, passion and curiosity, liberal arts education, creativity, collaboration, synthesis, explainers (Friedman, 2005)</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Intellectually curious, cognitively flexible, tolerant of ambiguity, able to synthesize knowledge within and across disciplines, culturally sophisticated, able to work collaboratively with people from diverse backgrounds (Suarez-Orozco, 2005)</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Know more about the world, think outside the box, become smarter about new sources of information, develop good people skills (Wallis et al., 2006)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Table 1 (continued)

<table>
<thead>
<tr>
<th>Skill</th>
<th>Critical thinking/problem solving</th>
<th>Creativity/innovation/adaptability</th>
<th>Collaboration</th>
<th>Multiculturalism/global awareness</th>
<th>Oral and written communication skills</th>
<th>Content knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Open to and interested in the variation of human cultural expression reflected internationally, able to integrate knowledge across disciplines covering disciplinary knowledge in comparative fields, able to communicate in more than one language (Reimers, 2008)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>■ Understands systems thinking, can work collaboratively, is flexible, innovative, resourceful, and able to access and apply new information to solve complex problems (Schoen &amp; Fusarelli, 2008)</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>■ Critical thinking and problem solving, collaboration across networks and leading by influence, agility and adaptability, initiative and entrepreneurialism, accessing and analyzing information, curiosity and imagination (Wagner, 2008)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>■ Deep content knowledge (math, language arts, science), knowledge application, ability to think critically, solve novel problems, communicate and collaborate, create new products and processes, and adapt to change (Jerald, 2009)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>■ Critical thinking skills, creativity and innovation skills, collaboration skills, information and media literacy skills, contextual learning skills (Partnership for 21st Century Skills, 2009)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
of developing critical thinking and problem solving skills and describes the need for students to reason effectively, use systems thinking, make judgments and decisions, and solve problems. Similarly, the Partnership for 21st Century Skills describes critical thinking and problem solving as the ability to use inductive and deductive reasoning to tackle difficult problems. According to the Partnership, students must learn to analyze how the parts of a whole interact in complex systems.

Highly educated workers, equipped with critical thinking and problem solving skills, take on new importance within the 21st century workplace where such skills support the necessary development of digital literacy (Friedman, 2007). Friedman (2007) described digital literacy as “navigation skills” (p. 310). He asserts that with the internet, and the corresponding instant access to information, people need to evaluate sources to “separate the noise, the filth, and the lies from the facts, the wisdom, and the real sources of knowledge” (p. 310).

The Partnership for 21st Century Skills (2009) defined digital literacy using three categories: informational literacy; media literacy; and information and communication technology literacy. Information literacy is described as the ability to access, evaluate, and manage information. Media literacy is the ability to analyze media and create media tools to effectively communicate an idea or position. Information and communication technology literacy is the application of technology. Students must also be able to ethically use a variety of technology tools (Partnership for 21st Century Skills, 2009).

**Creativity and Innovation**

Creativity and innovation is part of the fabric of American culture and most proponents of the 21st century skills movement cite creativity and innovation as a key
component to global competitiveness (see Table 1). Pink (2005) asserts that we are moving from an Information Age to a Conceptual Age and that we must have the “capacity to detect patterns, and opportunities, to create artistic and emotional beauty, to craft a satisfying narrative, and to combine seemingly unrelated ideas into something new” (pp. 2-3). Jerald (2009) argues that creativity and innovation are even more important in today’s workplace because if a task “is well defined and has one or more ‘correct’ or preferred solutions” it will be performed by computers (p. 63).

While there appears to be strong consensus regarding the importance of creativity, these capacities and habits of mind are complex and difficult to quantify. Amabile (1998) defined creativity as the confluence of expertise, creative thinking, and motivation. “Expertise encompasses everything a person knows and can do in the broad domain of his or her own work” (p. 78). Creative thinking may be defined as the imagination and flexibility with which people approach problems and includes an individual’s ability to challenge the status quo; distill disparate information; persevere through seemingly unsolvable problems; and view these problems from a fresh perspective. Motivation is described as an inner passion to solve a problem. Amabile posits that creativity emerges through the confluence of all three components.

Pink (2005) describes creativity and innovation as design: “Design is a high-concept aptitude that is difficult to outsource or automate—and that increasingly confers a competitive advantage in business” (p. 86). Pink asserts that creativity and innovation are critical because of the availability and accessibility of technology, and the abundance of materials. Together these factors create more designers “able to deploy design for its ultimate purpose: changing the world” (Pink, 2005, p. 70).
Zhao (2007) emphasizes the importance of creativity and innovation in meeting the challenges of globalization. Like Pink, Zhao believes “we must develop niche talents that will fit in the large, integrated, global supply chain of talents” (p. 17). He asserts that if U.S. students are to compete globally, educators must define student success more broadly and celebrate success in diverse talents including the arts, music, sports, and digital citizenship. As stated by Zhao, “You cannot teach creativity. But you can kill it through standardization, conformity, and a monolithic view of intelligence” (p. 17).

Collaboration

As the need for greater creativity and innovative thinking grows, so does the need for greater collaboration. The OECD (2005) Project defined collaboration as the ability to relate well to others, to cooperate, and to manage and resolve conflicts. Relating to others included empathy and effective management of one’s own emotions. The ability to cooperate included a focus on negotiation and a willingness to listen to other’s ideas. Solving and managing conflict included the ability to analyze and assess a problem, as well as the ability to prioritize and compromise.

Cooperation and teamwork become even more necessary as teams work virtually. Project teams may be working on a particular task with people from around the world. According to Seiman’s CEO, Christy Pedra, teams “do not work in the same room, they don’t come to the same office, but every week they are on a variety of conference calls; they’re doing webcasts; they’re doing net meetings” (Wagner, 2008, p. 22).

Most importantly, collaboration has become more important than ever because tasks that people are called upon to perform are not routine. Levy and Murnane (2004) found that workers need not only critical thinking skills, but the ability to work with a
team to negotiate meaning, compromise, and solve problems. “The growing complexity of work has made uncertainty and disagreement prevalent in the workplace. As a result, negotiation is a far more valuable skill” (Levy & Murnane, 2004, p. 93).

**Multiculturalism/Global Awareness**

Demographers predict that current minorities will constitute the majority in our nation’s classrooms by the year 2023 (Jerald, 2009). This fact, along with Friedman’s (2007) prediction of continued globalization, contributes to the need for workers to be able to function with a diverse group of people. In 2006, The Conference Board, a global research and business membership organization, reported the ability of workers to collaborate with diverse individuals as one of the top five work related skills. According to Suarez-Orozco (2005), “Children growing up today are more likely than in any previous generation to face a life of working, networking, loving, and living with others from different national, linguistic, religious, and racial backgrounds” (p. 211).

The ability of students to speak a second language is universally recognized as an important skill, yet only about 50% of U.S. high school students study a foreign language, and the greatest percentage of those study Spanish. The majority of the students studying Spanish do not attain language proficiency (Draper & Hicks, 2002). In addition to the need for students to study a second and third language, students need world knowledge. According to a survey conducted by the National Geographic-Roper (2002), students in the United States lack skills in current events, history, and world geography.

**Communication Skills**

The ability to communicate orally and in writing is another key to global competitiveness (see Table 1). Murnane and Levy (1996) identify a new set of basic
skills now needed to secure a middle-class job. The fifth of six skills is defined as “the ability to make effective oral and written presentations” (p. 32). The Conference Board (2006) reported that employers ranked written and oral communication as the highest priority for new entrants to the work force. The results of the survey also ranked both high school and college graduates deficient in written and oral communications (pp. 32-34).

The need for stronger written and oral communication skills is crucial especially given the rise in the use of technology for routine tasks. Levy and Murnane (2004) assert that “complex communication” can be defined as “communication [which] requires the custom fitting of explaining, listening, persuading, and negotiating. Each of these involves a two-way information exchange” (p. 77). Employees with strong communication skills have the ability to translate and utilize the enormous amount of information generated by computers. For now, computers do not have the ability to interpret information in a multitude of possible contexts.

**Content Knowledge**

Like written and oral communication, the need for stronger content knowledge is also created in part by the use of technology to perform routine tasks. Levy and Murnane (2004) describe “expert thinking” as “effective pattern matching based on detailed knowledge; and metacognition, the set of skills used by the stumped expert to decide when to give up on one strategy and what to try next” (p. 75). The ability of a student or a worker to solve problems and create solutions depends heavily of their ability to use deep content knowledge to analyze the relevant information.
The debate about the need for 21st century skills often centers on the belief that proponents of 21st century skills believe that content skills are less important than the “soft skills” like collaboration, problem solving, and creativity. Levy and Murnane (2006) assert that deep content knowledge is crucial for “expert thinking” and should be taught within the context of rich “complex communication” skills. Research indicated that content knowledge was the least mentioned skill when experts defined 21st century skills (see Table 1). This is most likely the cause for debate about the need for a change in curriculum. The absence of content knowledge in the definitions may be attributed to a widely held belief that strong analytic skills necessitate a strong foundation in traditional content areas. Critical thinking skills were specifically called out in all of the research describing 21st century skills (see Table 1). Deep content knowledge will remain vitally important as students learn to think, read and write critically.

**Principal Leadership**

Research clearly suggests that effective school leaders have a defined and well-articulated vision (Bennis & Nanus, 1985; Bryk et al., 2010; Cotton, 2003; Kurland et al., 2010; Leithwood & Jantzi, 2006; Marzano et al., 2005).

Cotton (2003) identified 25 categories of principal traits and actions. Marzano et al. (2005) found 21 similar responsibilities of school leaders that contribute to student achievement. A common finding in both studies was the ability of a principal to clearly and consistently articulate a vision for the school.

Cotton (2003) published a narrative review synthesizing 81 studies on principal leadership from as early as the 1970s, but focused primarily on studies published after 1985. The bulk of the studies surveyed teachers in high achieving schools about their
principal’s behavior and surveyed principals in high achieving schools about their own behavior. The studies used student achievement, student attitudes and behavior, teacher attitudes and behavior, and the dropout rate to measure effectiveness.

Cotton (2003) found “vision and goals focused on high levels of student learning” (p. 24) as one of the 25 categories positively impacting student achievement, attitudes, and behavior. “Effective principals work with others to establish a vision of the ideal school and clear goals related to the vision. They continually emphasize the academic goals of the school and the importance of learning” (Cotton, 2003, p. 68). Cotton also noted that the vision of successful leaders is not general, it is detailed and specific to the needs of the students they serve.

Using a meta-analysis, Marzano et al. (2005) synthesized research on leadership behavior from 69 studies involving 2,802 schools. The studies used in the analysis were all published between 1978 and 2001 and involved elementary, middle, and high school settings. Student achievement was measured using standardized test measures, and principal leadership qualities were assessed using teacher questionnaires. Each study was evaluated for a correlation between academic achievement and principal leadership. The researchers computed a correlation of .25 between the perceived leadership behaviors of the principal and the academic achievement of the students.

Marzano et al. (2005) found that “a highly effective school leader can have a dramatic influence on the overall academic achievement of students” (p. 10). Further, Marzano et al. found Ideals/Beliefs as one of the 21 core responsibilities of effective school leaders. Ideals/Beliefs is specifically described as the ability of a school leader to
establish a strong set of values, be able to clearly articulate those values, and to operate and make decisions based on those values.

The work of Cotton (2003) is included as one of the 69 studies in the meta-analysis by Marzano et al. (2005). In the book, *School Leadership That Works*, Marzano et al. fully describe the use of a meta-analysis for “synthesizing a vast amount of research quantitatively” (p. 7). The authors also describe why the qualitative as opposed to the narrative meta-analysis was the most objective means to study school leadership. This is a strong review of the literature, but the broad categories identified in the study do not fully describe the actions or the evidence one would observe in a school if the behaviors were present. The study does not give specific examples of how a principal establishes and maintains a vision for a school. Without further clarification, the behaviors could be broadly defined depending on the experience of the reader.

Leithwood and Jantzi (2006) conducted a study using data from a 4-year evaluation of England’s National Literacy and Numeracy Strategies. The researchers of this study analyzed surveys from 2,290 primary teachers to determine the effects of transformational leadership on teachers’ motivation, capacity, and work settings, their classroom practices, and gains in student achievement. Student achievement was measured using the results from the Key Stage 2 tests.

The teacher survey data were organized around three broad transformational leadership qualities: setting direction; developing people; and redesigning the organization. Setting direction included building a school vision, developing specific goals and priorities, and setting high expectations. Developing people included supporting teachers with professional development and ongoing adult intellectual
stimulation. Redesigning the organization included developing a collaborative culture for inclusive decision-making and productive stakeholder relationships (Leithwood & Jantzi, 2006).

Leithwood and Jantzi (2006) used structural equation modeling to test the direct and indirect effects of transformational leadership on teacher motivation, capacity, and work, classroom practices, and students achievement (see Figure 1). They did not find a direct impact on transformational leadership and student achievement, but they found significant results that leadership influences the likelihood that teachers will change their classroom practices. Teachers identified transformational leaders most helpful in clarifying reasons for program implementation, holding high expectations for their work with students, and the modeling of high levels of professionalism (Leithwood & Jantzi, 2006).

Figure 1. Explaining leaders’ effects on teachers and their practices (Leithwood & Jantzi, 2006, p. 204).

One of the self-reported limitations of this study was the use of student achievement scores spanning only 1 year for numeracy and 2 years for literacy. Researchers acknowledge that a minimum of 3 years of testing data were recommended
Another potential problem with the data were that teachers were asked to respond to the survey questions in relation to someone in a position of responsibility in their school. Teachers may have not been responding to the questions in relation to a principal or head of school. Responses to the survey may be skewed, as teachers may have relied on the leadership of grade level, team, or content area specialists. These colleagues may not have had the opportunity or power to set a clear vision for the implementation of the strategy.

Bennis and Nanus (1985) conducted a series of interviews with 90 leaders, 60 of them successful corporate leaders and 30 public sector employees. Of the corporate leaders, half were from Fortune’s Top 200 list, and the others were from successful smaller companies. The public sector leaders included university presidents, orchestra conductors, the head of the Urban League, and a famous astronaut.

The 90 interviews were unstructured and “proceeded in an informal and rambling manner and were led only vaguely and intermittently by us” (Bennis & Nanus, 1985, p. 22). There were three questions asked of each leader:

1. What are your strengths and weaknesses?

2. Was there any particular experience or event in your life that influenced your management philosophy or style? and

3. What were the major decision points in your career and how do you feel about your choices now? (Bennis & Nanus, 1985, p. 22)

These interviews often elicited lengthy responses and were described by the researchers as “exploratory dialogues” (Bennis & Nanus, 1985, p. 22). Interviews lasted
approximately 3 to 5 hours, but 10 of the interviews lasted for a period of 5 days (Bennis & Nanus, 1985).

Bennis and Nanus (1985) spent 2 years looking for patterns in the data and four major themes emerged. The researchers indicated that each of the 90 leaders utilized the following four strategies:

Strategy I: attention through vision.

Strategy II: meaning through communication.

Strategy III: trust through positioning.

Strategy IV: the deployment of self through (1) positive self regard and (2) the Wallenda factor. (p. 25)

Bennis and Nanus (1985) described vision as an agenda. A leader’s vision pulls people toward an ideal and instills in them a confidence that the established vision can be achieved. The leaders were able to do this in a charismatic manner; they did not need to demand conformity or allegiance. Leaders with a strong vision “grab” people and compel them to act (Bennis & Nanus, 1985, p. 25). Further, these leaders were collaborative and clearly understood the need for a transaction between leaders and followers.

Each of the other four strategies described by Bennis and Nanus (1985) are crucial, but they are dictated and guided by the vision of the leader. Communication is essential, a great leader “defines what has previously remained implicit or unsaid: then they invent images, metaphors, and models that provide a focus for new attention” (Bennis & Nanus, 1985, p. 37). Trust through positioning is defined as “the lubrication that makes it possible for organizations to work” (Bennis & Nanus, 1985, p. 41). Trust is accomplished through a clear understanding of the vision of the endeavor. The
management of self through personal regard is defined as the ability of a leader to trust himself/herself. Again, the trust and the self-confidence came from a clear understanding and vision for and organization or company. The Wallenda factor is again dictated by a clear vision and an unwillingness to let the prospect of failure derail that vision. Each of the three subsequent strategies outlined by Bennis and Nanus depend on the first, a clear and unavering vision.

Bennis and Nanus (1985) found that “all organizations depend on the existence of shared meanings and interpretations of reality, which facilitate coordinated action” (p. 37). The experiences and wisdom of the 90 leaders interviewed in this study revealed that successful leaders communicate a vision to organize and influence members of an organization. Through clear communication and an unavering focus, a leader creates a “commonwealth of learning” and this learning environment allows creative minds to flourish (Bennis & Nanus, 1985, p. 40).

Bennis and Nanus (1985) disclosed little information about the data collection and analysis. They recognized that the study included almost all “white males, reflecting the legacy of sexism and racism of the corporate world” (p. 24). The median age of the corporate interviewees was 56, the average income was $400,000, the average years with the organization was 22.5, and the average years as CEO was 8.5. Clearly, this research may not be entirely transferable to K-12 educators.

Bryk et al. (2010) did look specifically at educators and found that vision is a key component in successful leadership. In this study, researchers utilized statistical data compiled by the Consortium on Chicago School Research (as cited in Bryk et al., 2010). This 10-year field study began in 1988 and included more than 400 Chicago elementary
schools. The outcome measures included daily attendance rates and individual student achievement in reading and mathematics scores based on the Iowa Test of Basic Skills.

The study included survey data from teachers designed to gather information about educational reform, teachers’ professional work, professional collaboration, participation in school governance, and collaboration with the school community. Student surveys sought information about school reform, student engagement, career aspirations, perceptions about the school environment, and relationships with the teachers in the school (Bryk et al., 2010).

Bryk et al. (2010) collected data on a framework of five identified essential supports: leadership as the driver of change; parent-community ties; professional capacity; a student-centered learning climate; and instructional guidance. Researchers gathered school performance data and analyzed the associations between the essential supports and the performance outcomes. Researchers used 36 measures and 14 indicators on the essential supports in each school.

The evaluation of data included a value-added analysis based on the Iowa Test of Basic Skills. In 1991, Bryk et al. (2010) calculated the average academic performance for a student entering a specific grade at a specific school. Then they calculated the amount a student learned in a year. Finally, they calculated the changes based on the grade and the school of attendance. These data were specific to the assessment measure, the student, and the school of attendance, and the researchers looked exclusively at the schools in the top and bottom quartiles based on 7 years of testing data.

The researchers found a strong correlation between the five essential supports, reading achievement, math achievement, and attendance (Bryk et al., 2010). Researchers
found that schools “having a strong report on any of one of the five core indicators is typically four to five times more likely to demonstrate substantial improvement in reading and mathematics than a school whose survey report locates it among the bottom quartile of a school on the same indicator” (p. 85). Schools strong in most supports were 10 times more likely to make gains in reading and mathematics. Much like the work of Bennis and Nanus (1985), Bryk et al. (2010) found that the ability of a leader to establish and articulate a clear and unwavering vision positively impacted an organization.

Bryk et al. (2010) conducted an exhaustive study using data from a 10-year field study that included more than 400 Chicago elementary schools. Researchers calculated school mean achievement instead of simply using the percentage of students at or above the national norms because the large number of students whose scores are clustered around fixed cut points skew the percentage of students at or above national norms, while not truly reflecting overall improvement in test scores. Bryk et al. posit that reform efforts or strategies focused on a narrow band of students performing below established thresholds can skew statistical results, while the majority of the students are left unaffected by the reform effort. Researchers also constructed an “academic productivity profile” to minimize the inconsistencies inherent in the reporting of norm-referenced tests (Bryk et al., 2010, p. 33). This profile examined and referenced test items so that the tests could be accurately compared across levels and test forms. Bryk et al. acknowledged that the survey data were collected at a single time within a lengthy reform movement. Variations in perceptions could certainly change depending on the stage of implementation of the reform effort.
In a recent study, Kurland et al. (2010) collected data from 1,474 teachers at 104 elementary schools in northern Israel seeking to explore the influence of principals’ leadership on school organizational learning using school vision as a mediator. Specifically, the study examined the relationship between transformational, transactional and laissez-faire leadership styles and school organizational learning. The study found that transformational leadership was positively related to school organizational learning and school vision, while the other two types of leadership styles considered in the study were not.

The study presumed, based on evidence accumulated in prior studies, that schools functioning as “learning organizations,” as defined below, improve effectiveness and perform at a higher level. Citing Voulalas and Sharpe (2005), a learning organization was defined as

one which, as a corporate entity, constantly learns from its past and present experiences and its contemplation of the future, and consciously uses these learnings to continuously change and adapt in such a way as to maximize its outcomes in terms of its purpose in its constantly changing environment. (p. 196)

The authors then identified four organizational learning mechanisms important in creating a school that is a learning organization. These mechanisms were: staff involvement; evaluation; in-school professional development; and information management.

The three principal leadership styles studied were identified as transformational, transactional, and laissez-faire. The authors relied on Bass’ (1999) definition of transformational leadership focusing on the recognition the positive abilities of the people
in the organization and transactional leadership style as clarifying the roles and obligations of the members of the organization. Laissez-faire leadership was defined as an absence of leadership.

Finally, Kurland et al. (2010) discussed vision, which they identified as “the essence of leadership” (p. 13) and posited that “a shared and clear vision is a key element in the forging of a learning organization” (p. 14). According to Senge (as cited in Kurland et al., 2010), a shared and clear vision for the future and the current reality generates a “creative tension” that drives the organization towards its goals.

The sample consisted of 1,474 teachers at 104 primary schools in northern Israel. Principals and teachers had to be at the particular school for at least 3 years to ensure that they were sufficiently well acquainted, and at least 60% of the classroom teachers at the schools met this criterion. Teachers were asked to complete a 77-item questionnaire on principals’ leadership style, school vision, and school organizational learning using a 5-point Likert scale.

In analyzing the results, the authors utilized the mediation model described by Kenny, Kashy, and Bolger (1998) who identified four criteria that must be met to support mediated relationships. As applied by the authors, the four criteria were:

1. Leadership style must be related to vision.
2. Leadership style must be related to organizational learning.
3. Vision must be related to organizational learning, with leadership style included in the model.
4. The relationship between leadership style and organizational learning must disappear when controlling for vision.
According to Kurland et al. (2010), the statistical analysis supported the following conclusions:

1. Transformational leadership style related positively to vision, while the transactional and laissez-faire styles did not.

2. Transformational leadership style positively affected organizational learning, while the transactional and laissez-faire styles did not.

3. Transformational and transactional leadership correlated positively with each other and both correlated negatively with the laissez-faire leadership style. Vision and organizational learning also correlated positively.

4. The relationship between the transformational leadership style and organizational learning diminished in the presence of vision, but did not disappear, meaning that vision partially mediated the relationship between transformational leadership style and organizational learning.

This study was conducted in northern Israel and limited to elementary school teachers, and the results may not necessarily be generalized to other regions and teacher populations. Nonetheless, its findings do support the importance of the role of the leader in forming and communicating a vision around which members of the organization can rally. For the purposes of this study, the question remains of how a leader with a vision for 21st century skills articulates that vision through the recruitment and hiring process.

**Teacher Hiring Practices**

Researchers have concluded that hiring the most qualified teachers is the most important job of school leaders (Bolz, 2009; Natter & Kuder, 1983). Traditional methods, while often decentralized, rely heavily on paper credentials and interviews
with school administrators (Liu & Johnson, 2003). In addition to academic degrees, credentialing, and previous experience, teachers are often hired based on the hypothesis that successful teachers have certain attitudes or beliefs about students and student learning (Metzger & Wu, 2008). Kersten (2008) conducted a study of principals’ perceptions of current practices in teacher selection.

Kersten’s (2008) study was conducted in Illinois and included a random sampling of 398 principals from public schools across the state. Of the 398 selected, 142 principals participated in the survey, 86 elementary, 30 middle, and 23 secondary. The principal survey included questions about demographics, a Likert scale to rank the effectiveness of their current teachers, as well as information regarding their recruitment strategies including application requirements and selection process components. Finally, principals were asked to answer the six following questions:

Who makes the actual hiring decision; what qualities they look for in successful candidates; what candidates do to hinder their selection; what advice would they offer candidates to enhance their chances for success; what one interview question are they sure to ask; and what improvements would they suggest for teacher preparation programs. (Kersten, 2008, p. 357)

Kersten (2008) found that most principals relied on district websites and job fairs to recruit new teachers. Application materials included resumes, transcripts, and letters of reference. Few principals asked candidates for paper or digital portfolios. Most principals, 79.5%, employed traditional selection methods including interviews with multiple stakeholders. Over 79% of the principals reported that existing teachers from
their schools were involved in the interviewing process. Only about 7% of the principals surveyed reported asking teacher to perform live teaching demonstrations.

The survey data found that principals were looking for candidates who were knowledgeable and up-to-date on the latest educational trends (22.3%), hard working (13.7%), friendly and caring (10.5%), student focused (9.4%), team players (7.2%), and strong oral communicators (7%). Principals also looked for candidates who were committed to children and were perceived to be self-learners. The two qualities that principals found to hinder possible selection were physical appearance and lack of preparation for the interview (Kersten, 2008).

Kersten’s (2008) study was intended to expose current practice in teacher selection. The limitations of this study include the relatively small sample size of 142, representing only 35.7% of the randomly sampled population. It is also noteworthy that the sample was limited to one middle-western state. Illinois is not a state with an increasing population, and Kersten noted, “In other parts of the country, including the northeast and Midwest, population growth is slow or even declining as more people move south and west. As a result, fewer teaching opportunities are available” (p. 356). The results of this study may not be applicable to states or districts with growing populations and looming teacher shortages. Additionally, the study did not look at the specifics of the school or the students to determine if the characteristics identified by principals were simply generic attributes or characteristics matched to the needs of the student population.

In an effort to examine teacher hiring practices and whether these practices lead to good matches for teachers and schools, Liu and Johnson (2003) conducted a study of 486 first and second year teachers from four states: California, Florida, Massachusetts, and
Michigan. The four states were chosen because all were experiencing teacher shortages, all have charter school legislation, all are unionized, all participate in high-stakes testing, and all have adopted state level content standards. To insure a balanced representation, the schools were stratified by school level and charter or noncharter status. A total of 258 schools participated, 59 in California, 58 in Florida, 62 in Massachusetts, and 79 in Michigan. New teachers were randomly selected from a pool of 751 first and second year teachers.

The selected teachers received an 85-item survey asking for demographic information, preservice experiences, interactions during the interview process, information about the type of hiring (centralized or decentralized), perceptions about the ultimate fit between their skills and the school, and whether or not the hiring process helped them develop an understanding of the position and the culture of the school (Liu & Johnson, 2003). A Likert scale was used to measure whether the hiring process helped the teachers gain a better understanding of the school and the teaching position.

Liu and Johnson (2003) found that many of the teachers (49.9%) experience a highly decentralized hiring process. Another large group of teachers (30.9%) experienced a moderately decentralized experience. This process was described as a district screening, followed by interviews at specific schools. The remaining teachers (23.2%) were hired at district offices and sent to school for predetermined positions.

The majority of teachers (91%) participated in an interview as a part of the hiring process. With some fluctuation between the states, between 74.9% to 96.2% of the teachers interviewed with the principal of the school. Fewer than 50% of the teachers interviewed with existing teachers at the school, and fewer than 1 in 10 interviewed with
a parent or student. New teachers in Michigan were most likely to be interviewed by other school stakeholders (Liu & Johnson, 2003).

Liu and Johnson (2003) found that most of the teachers were asked to submit papers including resumes, cover letters, and references. In addition, 40.5% submitted portfolios. Only 25% submitted undergraduate transcripts, and few teachers provided writing samples, lesson plans, or videotapes of demonstration lessons. Again, Michigan teachers were more likely to submit videotapes of sample lessons and 19.6% of the Michigan teachers were observed teaching a sample lesson as part of the hiring process. Of the four-state pool, only 7.5% of the teachers were observed teaching as part of the hiring process. Between 8.7% and 37.1% of the teachers observe classes or faculty meetings as part of the hiring process.

In response to the question about the hiring process as a means for teachers to gain an understanding of the school, Liu and Johnson (2003) found that the majority of teachers gained a moderately accurate picture of their school and felt that they were a moderately to good fit with their school. Michigan teachers reported a “significantly higher level of fit with their schools than new teachers in the other three states” (Liu & Johnson, 2003, p. 26).

Liu and Johnson (2003) concluded that although the majority of teachers in the four states participated in a decentralized process, the process still relied heavily on the initial paper screening and an interview with the principal of the school. There were few opportunities for interactions between other school stakeholders or opportunities to see the candidates teach. The researchers described the existing hiring processes as school based, but “still not information-rich” (Liu & Johnson, 2003, p. 29). Liu and Johnson
described the need for a “two-way process” to successfully determine fit between the teacher and the school.

The study conducted by Liu and Johnson (2003) described the need for alternative strategies for hiring teachers. Decentralization does not guarantee a fit between applicants and positions. This study revealed existing hiring practices and made suggestions for more expansive strategies including “involving a wide cross-section on the community in interviewing candidates” (p. 30) and observing classroom instruction. The researchers concluded that these were strong hiring strategies, but the study does not explain the purpose of the expanded interviews or the “look fors” in a demonstration lesson. The question remains: how does a school community tailor an interview process to look both for specific skills and teacher beliefs while determining organizational fit?

In order to quantify and measure a candidate’s beliefs and attitudes, districts across the country have looked to commercial teacher hiring instruments. Delli (2001) estimated that over 2,000 school districts use a commercially designed interview when making employment decisions. One of the most widely used commercial instruments is the Teacher Perceiver Interview (TPI). Selection Research Inc. first developed TPI in the early 1970s. This company was purchased by the Gallup Organization (1977), and in 1988 the instrument was revised. The TPI contains 60 opened-ended prompts, which relate to 12 themes. The themes include: mission, empathy, rapport, drive, individualized perception, listening, investment, input drive, activation, gestalt, objectivity, and focus. All of the TPI administrators are trained to listen for certain specific words or phrases (Metzger & Wu, 2008).
In 1990, the Gallup Organization developed an Urban TPI (Metzger & Wu, 2008). The urban edition has 11 themes using only 3 from the original tool: empathy, individualized perception, and input drive. Two new themes are involver and positivity. Gallup also created an on-line system that asks prospective teachers to use a Likert scale to respond to a series of multiple choice and short answer questions aimed at revealing their attitude and beliefs. The applicants are ranked and the scores are immediately sent to the district (Metzger & Wu, 2008).

Another widely used commercial interview tool is The Urban Teacher Selection Interview, also called the STAR Teacher Interview (Metzger & Wu, 2008). Martin Haberman from the University of Wisconsin-Milwaukee created this tool in 1960 (Metzger & Wu, 2008). Like the TPI, the STAR Teacher interview asks a number of open-ended questions, and interviewers are trained to listen for specific words or phrases that would indicate certain beliefs or attitudes about students and learning. The STAR Teacher Interview was created specifically for large urban districts with a high percentage of teacher turn over. Like the TPI, the STAR Teacher Interview has an online component that many districts use as a screening process (Metzger & Wu, 2008).

Metzger and Wu (2008) looked exclusively at the use of TPI and found a weak to modest relationship between TPI and teacher quality. The meta-analysis included 16 dissertations, one empirical study published in 2002 in Education Administration Quarterly, and seven TPI validity reports. Pairs of coders independently coded the characteristics of the studies, including where the study was conducted, the grade levels of the teachers, the number of participants, the criterion of teacher quality whether or not TPI was used for hiring, and number of effect sizes. The criterion of teacher quality was
coded in the following ways: student rating, administrator rating, classroom observation, student gain in scores, and teacher attendance. The overall mean correlation and its standard error was computed for 45 correlations and categorized into subgroups based on moderator variables that could influence the results. Additionally, weighted mean correlations were computed for the pairs of coders.

Metzger and Wu (2008) excluded a number of studies in their meta-analysis including: studies without correlation data, studies where effect size were not comparable to correlations, and studies that did not measure the relationship between TPI scores and the indicators of teacher quality. To assess for bias, the researchers used a funnel plot to compare the small-sample studies to Gallup’s large sample studies and found no reason to exclude the Gallup studies.

The study concluded that there was a modest relationship \( (r = .28) \) between TPI and teacher quality and showed the strongest relationships between administrator ratings and teacher absenteeism. Metzger and Wu (2008) acknowledge “the median \( r \) is .22 suggesting that a few studies with strong positive results raise the average effect. Overall, we see a weak to moderate relationship between TPI total score and the indicators of teacher quality” (p. 929).

There are many complications exposed by this meta-analysis. As noted in the study, the data best predict that teachers scoring high on TPI will show up to work every day and that they will be highly regarded by their administrators (Metzger & Wu, 2008). The study notes that although TPI uses the same themes for teachers from kindergarten through Grade 12, the real indicators of teacher quality may differ at different grade levels. The study also raises the question of TPI’s ability to measure real or espoused
beliefs. The content and perceived “right answers” to commercial teacher interviews may be shared among teacher interviewees as they prepare for interviews.

Most importantly for this researcher, the commercially created interviews pay little attention to subject area content knowledge or pedagogical values. Teachers may come to work every day, be empathetic, caring, and relentless in their willingness to help students, but are they prepared with the requisite skills to impart the skills and knowledge our students will need to succeed in the future?

While research on teacher hiring and recruiting practices is abundant, it is limited in scope. It is generally limited to the description of existing practices around traditional methods of teacher recruitment and hiring. It further suggests that teachers can be hired based on the hypothesis that successful teachers have certain attitudes or beliefs about students and student learning. None of the research suggests that teachers may be recruited and hired because they possess the same skill set as school administrators believe students need to possess as they prepare for a successful entry into the 21st century world.

**Summary of the Literature Review**

The literature reviewed supports several conclusions. Computerization has created a continuing decline in the need for semi-skilled workers and an increase in the need for highly skilled workers (Autor et al., 2003). Highly skilled workers must have deep content skills including strong oral and written communication skills. They must also have the capacity for critical thinking and problem solving, creativity and innovation, collaboration, and multiculturalism and global awareness (Conley, 2007; Partnership for 21st Century Skills, 2009; Schoen & Fusarelli, 2008; Suarez-Orozco, 2005; Wallis et al.,
Education in the United States is failing to prepare students for positions that require highly skilled workers. The literature also recognizes the importance of a principal’s behaviors and, specifically, that the ability of a principal to establish a focus or vision for a school positively impacts student achievement (Bennis & Nanus, 1985; Bryk et al., 2010; Cotton, 2003; Kurland et al., 2010; Leithwood & Jantzi, 2006; Marzano et al., 2005).

The research on teacher hiring (Liu & Johnson, 2003; Metzger & Wu, 2008; Young & Delli, 2002) suggests that teachers can be hired based on desired characteristics or qualities for specific student populations. The unanswered questions include the following:

1. How can a school leader communicate a vision of a school steeped in 21st century skills with the goal of attracting teachers who have the pedagogical skills and traits needed to effectively educate students in the 21st century?

2. How do principals assess a potential teacher’s 21st century skill base throughout the recruitment and hiring process?

Chapter 3 will describe the details of the proposed research methodology for this study and the rationale for its selection.
CHAPTER 3—RESEARCH METHODOLOGY

Introduction

Teachers are the foundation for creating a dynamic and effective school environment, and they are directly responsible for improving student achievement (Darling-Hammond, 2010). The challenge for school leaders is to recruit and hire teachers with the content knowledge and critical thinking skills to provide students with a rigorous and relevant learning environment. The school leader’s vision for student learning must be the foundation for recruiting, identifying, and hiring teaching candidates who are best able to impart the skills and knowledge students will need to succeed in the 21st century workplace.

School leaders need a vision for student learning that will address the opportunities and challenges facing 21st century learners. The leader must then clearly articulate this vision for the classroom environment and identify pedagogy that will best develop and reinforce the ever-changing skill sets students need to succeed in the 21st century (Bennis & Nanus, 1985; Bryk et al., 2010; Cotton, 2003; Kurland et al., 2010; Leithwood & Jantzi, 2006; Marzano et al., 2005). Even if successful in articulating and communicating this vision, a school leader cannot succeed without able and competent teachers (Darling-Hammond, 2010).

The purpose of this study was to identify how a school leader’s vision impacts the strategies used to recruit, interview, and hire teachers who have the pedagogical skills and traits needed to effectively educate students in the 21st century. Further, the study determined whether the teachers and principal perceived the strategies to be effective.
Research Design

To address the research questions, this qualitative study used a historical, single case study method to document the actions of one school leader at a charter elementary school. First, the researcher examined how the school leader’s vision for student learning was mirrored in the methodology used to recruit, interview, and hire teachers. Second, the researcher analyzed the perceptions and reflections of the teachers about the recruitment and hiring process.

A single elementary school was chosen for the study because it is a revelatory case (Yin, 2009). Yin (2009) described a revelatory case as one in which an investigator has the opportunity to observe a phenomena rarely accessible to researchers. Although the hiring of teachers happens often across the country, a new school hiring all new teachers for a technology-based charter is a relatively rare opportunity.

The theoretical approach was a case study using the grounded theoretical method. The researcher sought to investigate the recruitment and hiring decisions as well as the perceptions the teachers and principal had of the recruitment and hiring process. Grounded theory is a strategy of inquiry in which the researcher derives a general, abstract theory of process, action, or interaction, grounded in the views and actions of the participants (Creswell, 2009). This approach was selected because it allowed for a systematic examination of emerging theories and ideas. This was the most appropriate lens because the researcher of this study sought to understand recruiting and hiring decisions, as well as emerging ideas of teacher and principal perceptions on the recruitment and hiring process. The case study was a bounded exploration at one charter elementary school.
Research Questions

Three essential questions were addressed:

1. How did a leader with a vision of 21st century skills design and implement a recruitment and selection process that communicated that vision to prospective educators?

2. How did this leader assess a potential teacher’s 21st century skill base throughout the recruitment and selection process?

3. How did the teachers perceive the vision of the leader reflected in the recruitment and selection process?

Setting and Environment

In 2000, local business leaders created the original High Tech High (HTH) as a charter high school operating under an agreement with the San Diego Unified School District (HTH, n.d.a). This charter organization currently includes 11 schools; 5 high schools, 4 middle schools, and 2 elementary schools. The HTH charter organization provides a teacher credentialing program and a new High Tech High Graduate School of Education (HTHGSE). The HTH charter organization is led by Larry Rosenstock, the Chief Executive Officer.

According to its website, the schools belonging to the HTH charter organization aspire to provide students with projects and assignments based on the following principles: personalization, adult world connection, common intellectual mission, and teacher as designer (HTH, n.d.a). The first three principles tie directly to the charter organization’s mission to prepare students for the adult world.
Personalization is described as an attention to the social and academic needs of the students. Each student has a staff advisor who acts as a contact for the family. The physical sites are also designed for a variety of large and small group workspaces. Digital portfolios are used to chronicle individual and group projects.

Adult World Connection is the integration of the adult world into the school culture. Students complete internships in the community. Community and business leaders come to the school to meet with students and provide feedback for student projects. The school spaces are designed to facilitate these interactions with seminar rooms, laboratories, and common workspaces.

Common Intellectual Mission is represented as a lack of college or vocational tracking. Students are enrolled in academic courses that are designed to prepare them for college and work. Performance-based tasks and assessments are used, and community panels often assess and comment on the final products.

Teacher as Designer was added to address the needs of the adults within the charter organization. Teachers have common planning time to work together to create project-based learning opportunities. Teachers also have opportunities to attend institutes and off-site professional development programs. The HTH charter organization also has established their own teacher credentialing program and graduate degree programs.

High Tech Elementary (HTE) is the newest charter school in the HTH charter organization. Student applications for HTE were accepted until February 28th, 2011, and a lottery was held in March. Four hundred and eighty students from a pool of 2,076 were selected in the lottery process. New students were notified of their acceptance to HTE in April 2011.
In an effort to identify qualified teachers and administrators, HTH organizers developed a hiring process called Bonanza. The process was designed to be the final process after a thorough vetting of qualified candidates. The HTH Bonanza is a daylong event, and candidates participate in a variety of activities designed to assess skills and organizational match. Throughout the day, candidates teach a demonstration lesson, interview with students and adults, develop a project, discuss an article about race, and tour the HTH facility.

Directors, teachers, and students are involved in the assessment of the candidate’s performance. After the demonstration lesson, students fill out a feedback form indicating whether or not the candidate should be hired. Directors and teachers are invited into the process for both casual conversations with the candidates, as well as more formal interviews. The adults also observe the candidates as they interact with everyone, including their fellow candidates. At the end of the day, all of the HTH Bonanza observers gather to assess the candidates.

On February 24, 2011, 12 prospective elementary teachers for HTE participated in the Bonanza process at HTH Middle School in the Point Loma area. The HTE Bonanza was a daylong interview process designed by the new director of HTE. During the HTE Bonanza, prospective teachers participated in a variety of individual and group activities. Applicants developed action plans based on student case studies, wrote project-based units of study, and participated in a group Socratic seminar on white privilege. The prospective teachers also became acquainted with HTH campus and staff through a “speed dating” session with HTH directors, administrators, and teachers. Each of the 12 applicants also participated in a student led facility tour.
From March 1, 2011 through April 30, 2011, eight more teachers were hired after participating in an individualized and abbreviated hiring process. The director observed them teaching in their own classrooms, or they were asked to submit a videotape of their teaching. After observing their teaching, these candidates were invited to the HTH campus, interviewed with the HTE director, toured the school, and submitted project-based units of study.

**Population/Sample/Participants**

This particular school was chosen as the unit of study for several reasons. First, this school was new and the newly hired director, i.e. principal, hired all new teachers. Second, because it is a charter school, the director was not bound by district hiring practices or the teacher union contract. Next, because this school is part of the HTH charter organization, there was an expectation that curriculum will be student-centered and project-based. Finally, unlike district schools, the curriculum is not closely linked to year-long standardized test preparation.

The school leader interviews were conducted with the director of HTE. The director was hired in June of 2010, and she spent a year planning, organizing curriculum, and staffing the new school. The school opened in September of 2011. For the teacher interviews, selected participants were identified as key informants. A key informant is defined as an individual able to provide in-depth information and knowledge that other professionals in the field of education do not possess (Gilchrist & Williams, 1999). The selected teachers’ experiences as potential candidates and ultimately employees made them uniquely qualified to discuss the recruitment and hiring process.
The researcher interviewed 10 of the school’s 18 newly hired teachers, one from each grade level. The first four teachers were selected from a pool of six teachers who had not previously worked for the principal and who participated in the hiring process. Six of the newly hired teachers went through the group, daylong Bonanza process. Eight of the new teachers went through an individual, abbreviated version of the Bonanza process. Both of these groups were eligible to be interviewed. Four of the teachers hired previously worked for the director, and they did not participate in the complete hiring process. These teachers were well known to the director, and she had first-hand knowledge of their instructional abilities. These four teachers were interviewed as a focus group.

Of the eligible pool of 14 teachers, 4 interviewees were randomly selected from teachers who participated in the group, daylong Bonanza process. Another 2 interviewees were randomly selected from the group who participated in the individual, abbreviated version of the Bonanza process. The names of the teachers were written on folded slips of papers, divided by both level of Bonanza process and grade level assignment and randomly selected by the researcher. In a case in which only one name is appropriate at a certain grade-level, that teacher was selected for participation.

**Instruments**

A semi-structured, in-depth interview format was used to give the researcher the flexibility to permit the teachers and the director to elaborate when necessary and appropriate. The in-depth interview process allowed the researcher to ask key informants about the facts of the case, but it allowed for interviewees to propose their own insights and opinions (Yin, 2009). The interview protocols were designed to identify the
director’s decisions regarding the recruitment and hiring process and the teachers’ reactions to the recruitment and hiring processes. Open-ended questions allowed the interviewee to use his or her own words to answer the question with as little or as much detail as deemed necessary. These interview questions were field tested with a small group of principals and teachers. The dissertation chair and the dissertation committee also reviewed the instruments.

The interview questions for both the director and the teachers were designed to directly correspond to the research questions. An observational protocol was developed and used by the researcher to record information during the document review. Researchers use an observational protocol to engage in a multiple observations during a qualitative study (Creswell, 2009). This method allows the researcher to examine the documents while recording her own reactions and reflections about the data.

The interview questions for the director were designed to elicit information about both the vision of the director and the design of the entire recruitment and hiring process. At the first interview session, the researcher explained the study, reviewed the interview process, and asked the director if she has any questions or concerns. The interviewee was known to the researcher, and preliminary questions to establish rapport were not necessary. The first interview session with the director focused on the director’s stated vision for student learning and the specific characteristics she looks for in teachers. The second interview focused on the design of the recruitment procedures and the decisions she made in constructing the “Bonanza” day. The third interview focused on the assessment system for each of the recruitment procedures and activities of the “Bonanza” day (see Appendix A). A fourth interview in December of 2012, was conducted with the
director in order to clarify the findings and further insure construct validity (Calabrese, 2009; Yin, 2009).

The interview protocol for the teachers began with questions to help the interviewees feel at ease and establish rapport with the researcher. The single interview with each of the six teachers focused on their recall of the recruitment and hiring process, as well as their perceptions about the specific activities of the “Bonanza” day, if they had indeed participated. If they had not participated, the Bonanza questions were not asked. The teachers were also asked to describe their perception or view of the director’s vision for the school (see Appendix B). The interview questions for the focus group of teachers previously known to the director also began with questions about the vision of the director. Finally, they were asked about their thoughts about the skills they hope their new colleagues possess (see Appendix C).

**Data Collection**

The sources of the data were documents including the director’s journal, the charter organization’s websites, candidate applications, candidate interviews, interview notes, and notes from the candidate debriefing. The researcher conducted face-to-face interviews with the director and posthiring interviews with 10 teachers, one from each grade level. The researcher audio recorded all interviews.

Data collection occurred August through December of 2011, after approval of the study by the University’s Institutional Review Board (Appendix D). A cover letter describing the research and asking for permission to conduct research at HTE was mailed to the Chief Executive Officer. It was signed and returned on October 14, 2011 (Appendix E). Document review began in August of 2011. The director and selected
teachers were contacted in September, 2011, and interviews were scheduled for early October. A cover letter describing the research was emailed to each interviewee along with a reminder of the interview time, date, and location. The letter also described the researcher’s measures to maintain privacy and confidentiality. Informed Consent forms were explained and signed prior to participation in the study (Appendices F and G).

The researcher conducted interviews during multiple site visits, and all interviews were conducted in a secure location on the campus of HTE. The teacher interviews took place after school, and did not interrupt the instructional program of the school. Each teacher interview lasted approximately 40 minutes, and the director initially participated in three, 40-minute interviews, over an 8-week period. A fourth interview with the director was conducted in December of 2012 to clarify the findings and further insure construct validity (Calabrese, 2009; Yin, 2009). The focus group interview lasted 1 hour and was also conducted after school on the campus of HTH. All interviews were audio taped, and supplemental observations were noted on comment sheets. All transcripts were transcribed verbatim. Transcripts were returned to the individual key informants to ensure accuracy and to provide them an opportunity to expand or clarify their original responses. This technique called member checking contributes to the construct validity of the study (Calabrese, 2009; Yin, 2009). All data were secured in a locked cabinet in a locked office at the researcher’s home.

**Data Analysis**

The study was based on the theoretical proposition that the decisions and actions of a leader during the recruitment and hiring process influences the characteristics and the teaching style of the hired teachers. Yin (2009) described this theoretical orientation as a
preferred strategy because it organizes and focuses the analysis. During the analysis, explanations of the data were developed and rival explanations were explored.

Using the constant comparative method, the researcher analyzed the data independently and then compared all categories, themes, and patterns. The constant comparative method involved the researcher moving in and out of the data collection and analysis process (Glaser & Strauss, 1967). The transcribed interviews were shared with the interviewees for validation and accuracy and to ensure construct validity. None of the interviewees edited their responses. The researcher then identified themes and patterns and constantly compared all data sources until no new themes and patterns emerged. The frequency of responses related to the themes were calculated and analyzed. Once the data were analyzed, the researcher documented the common themes and patterns that describe the documents and the interviews of the director and teachers.

The collection of multiple sources of data allowed the researcher to examine a range of decisions made by the school leader, as well as the perceptions about the process by the participants. Yin (2009) posits that data triangulation allows the researcher to develop a “converging line of inquiry” (p. 115). Case study findings are more convincing when multiple points of data are collected and findings are based on more than a single piece of evidence. In this study, the perceptions of the director and teachers were compared with each other and with the documents from the hiring and recruiting process.

**Ethical Issues**

A researcher must consider the ethical issues at each phase of the research process (Creswell, 2009). Prior to beginning the research, the researcher applied to San Diego State’s Institutional Review Board (IRB) for permission to conduct the study. After IRB
approval, the researcher sought permission to conduct the study from the director of the selected school and the director of the charter organization.

Before the collection of data began, the director and the teachers received an overview of the study. This overview included the purpose of the study, the research design, and the benefits and risks of study participation. All participants were made aware that participation in the interviews was voluntary and that they could opt out at any time. The participants’ names and all data gathered are and will continue to be kept confidential. Each participant signed the consent form required by IRB.

During data collection, participants were informed that all interviews would be audio recorded and that pseudonyms would be used at all times. Tapes are and will continue to be stored in a secure location, identified using only the pseudonym, and reviewed only by the researcher and the dissertation advisor. Finally, research findings will be made available to participants upon request.

**Summary**

This qualitative study used a historical, single case study method to examine the impact of the vision of one school leader on the recruiting and hiring practices at a new charter elementary school. The researcher examined how the school leader’s vision for student learning is mirrored in the methodology used to recruit, interview, and hire teachers. It analyzed the perceptions about those decisions by the director and six teachers, who successfully participated in the recruiting and hiring processes. Research about the impact of director vision-setting on teacher efficacy exists, but little is known about how principal vision effects hiring and recruiting decisions.
This chapter described the methodology for the proposed study, as well as the ethical considerations. Chapter 4 will present the results of the study and an analysis of findings. Chapter 5 will summarize and discuss the conclusion, implications for practice, and recommendations for further research.
CHAPTER 4—RESULTS AND FINDINGS

Introduction

This study chronicled the actions of one school leader at a charter elementary school and examined how the school leader’s vision for student learning was mirrored in the methodology used to recruit, interview, and hire teachers for a newly founded school. The researcher used a historical case study method to examine the launch of a school and its hiring process for new teachers. The sources of the data were program documents including the school’s internal and external websites, transcriptions of individual and focus group interviews, and post-Bonanza survey results. The researcher conducted interviews with the director throughout the study and conducted individual posthiring interviews with six teachers. Four additional teachers who had previously worked with the director and who did not participate in the hiring process were also interviewed as a focus group.

This chapter will present the findings from the data collection and analysis in five sections. The first section will include an overview of the established hiring practices at High Tech High (HTH) to provide context as well as juxtaposition for this case study. In order to fully understand the decisions made by the director of High Tech Elementary (HTE), the second section will describe in detail the recruitment process and each of the activities included in the HTE Bonanza day as a means to better understand the decisions of the director. The third section describes the selection process for the interviews, as well as the coding of the interviews. The fourth section will include results and analysis of exit surveys completed by Bonanza candidates and poster evaluations completed by the HTH Bonanza observers. This section will also address the findings from the posthiring
interviews with selected teachers and the director. The teacher interview findings will be presented based on the themes that emerged from the data analysis. Finally, the fifth section will include the results of an interview with the director conducted 4 months into the first school year and will shed some light on the perceived success of the hiring and recruitment process.

The following research questions guided this study:

1. How did a leader with a vision of the 21st century skills needed by teachers design and implement a recruitment and selection process that communicated that vision to prospective educators?
2. How did this leader assess a potential teacher’s 21st century skill base throughout the recruitment and selection process?
3. How did the teachers perceive the vision of the leader as communicated through the recruitment and selection process?

**High Tech High Bonanza**

In an effort to identify qualified teachers and administrators, the HTH organization developed a hiring process called Bonanza. The process was designed to be the final process after a thorough vetting of qualified candidates. The HTH Bonanza is a daylong event and candidates participate in a variety of activities designed to assess skills and organizational fit. Throughout the day, candidates teach a demonstration lesson, interview with students and adults, develop a project, discuss an article about race, and tour the HTH facility.

The typical HTH Bonanza consists of a number of different activities, as well as an opportunity for students to meet with candidates and for prospective teachers to teach
classes with HTH students. Typically, HTH directors, teachers, and students are involved in the assessment of the candidates’ performance. After a demonstration lesson, students fill out feedback forms indicating whether or not the candidate should be hired. Directors and teachers are invited into the process for both casual conversations with the candidates, as well as more formal interviews. The adults also observe the candidates as they interact with everyone, including their fellow candidates. At the end of the day, all of the HTH Bonanza observers gather to assess the candidates.

As an example, at the May 21, 2010 Bonanza, candidates arrived at 9:00 a.m. and were presented with an overview of the “The HTH Story.” Candidates then toured the school and observed classes. After the tour, candidates met with HTH students for individual interviews. During the lunch period, candidates sat and talked with current HTH teachers. After lunch, candidates taught lessons in high school math and engineering classes. Students provided written feedback about both the interviews and the lessons. The remainder of the day was used for more classroom observations (see Appendix H, HTH Bonanza Day Schedule). An article written by a teacher at HTH and published in HTH’s online journal indicated that a typical Bonanza day also includes time for designing projects and discussing educational articles (Daley, 2010).

In a 2009 *Voice of San Diego* article, educational journalist Emily Alpert described the Bonanza process as follows:

Its hiring process is just as unique. High Tech High screens employees through a lengthy process—called a bonanza—that brings a crowd of applicants on campus to mingle with teachers and directors, tour classes, and teach sample classes to students who grade their work. They talk in a group about a sticky and sensitive
subject—white privilege—with their potential bosses listening in. And they are grilled by the same students they hope to someday teach in a whirlwind hour that looks and feels like speed dating for teachers. (para. 7)

The goal of the Bonanza process is to find teachers who will “work with colleagues and communities to develop innovative, authentic, and rigorous learning environments” (High Tech High Graduate School of Education [HTHGSE], n.d.). In order to find talented teachers, Liu and Johnson (2003) described the need for alternative strategies for hiring teachers including classroom observations and opportunities for candidates to interact with stakeholders. There are variations to the Bonanza process, but this decentralized process has the potential to provide expanded information about potential candidates.

**Context for High Tech Elementary: Teacher Recruitment and Screening Process**

The director for HTE was hired in July of 2010. She had 1 year to plan for the September 2011 opening of High Tech Elementary Chula Vista, a new school in a newly constructed building. This school is part of a larger charter school organization but the first launch of an elementary school. The director was also responsible for the recruitment and hiring of both the teaching and support staff. The recruitment process started in the fall of 2010, and in an early interview the director described three ways in which teachers were recruited. First, she described how she used her colleagues from the San Diego community. “I sent out some emails to different educators that I know that have similar values to me and I knew that they had high standards for teachers” (D1). The director also posted the job on the HTH website. Finally, the director contacted
teachers with whom she had previously worked and who she believed would be a match for HTE.

**High Tech High Website**

Positions for HTE were posted on the HTH website and applicants applied online. The information about the teaching positions was limited to grade level and, if applicable, content specialization. Candidates looking for positions had to explore the website to get a sense of the mission and vision of the charter organization. Currently, when an applicant first opens the website, the first two links they encounter are opportunities for professional development. Currently, HTH is running two programs for new and continuing teachers. The first was a 2-day assessment symposium in which teachers would have the opportunity to analyze projects and speak to HTH students and teachers. The second, *Collegial Conversations*, highlights an ongoing opportunity for teachers to dialogue with colleagues about assessment issues using specific protocols. Both of these events highlight the collaborative culture at HTH. Below these announcements, the prospective candidate has the following three options: find out more about each of the HTH schools; explore HTHGSE; or find information about projects completed by the students (HTH, n.d.a).

As a candidate continues into the website through the specific schools option, the HTH Design Principles are clearly articulated. According to the website, the HTH charter organization aspires to provide students with projects and assignments based on the following principles: Personalization, Adult World Connection, Common Intellectual Mission, and Teacher as Designer. The first three principles tie directly to the charter organization’s mission to prepare students for the adult world. Personalization is
described as an attention to the social and academic needs of the students. Adult World Connection is the integration of the adult world into the school culture and many students complete internships in the community. Common Intellectual Mission is represented as a lack of college or vocational tracking. All students are enrolled in academic courses that are designed to prepare them for college and work. Teacher as Designer was added to address the needs of the adults within the charter organization (HTH, n.d.a).

The candidate may then explore the opportunities provided through HTHGSE. The graduate program opened in September of 2007 and offers two master’s degree programs. The first, School Leadership, was designed for educators who are currently leading or who wish to lead innovative schools. The second, Teacher Leadership, was created for teachers who want to improve their skills while working to improve their own schools. The charter organization also offers a California teacher credential program, and it was the first charter school in the state to be authorized to fully credential teachers.

Beyond the master’s degree and credentialing programs, HTHGSE provides workshops, a speaker series, and the HTH journal, Unboxed (HGH, n.d.a).

Leithwood and Jantzi (2006) found that developing people included supporting teachers with professional development and ongoing adult intellectual stimulation. It is clear from the opportunities highlighted on the HTH website that continuing education and providing teachers with an education dedicated to project-based learning is an important facet of the HTH teacher experience.

Finally, the prospective candidate may take the opportunity to explore examples of HTH’s projects. The website highlights certain classroom projects and describes a variety of purposes for the sharing of curriculum. “Teachers can utilize this to show off
what they have done with their students, or get ideas from other teachers” (HTH, n.d.b, para. 1). The actual projects typically have a quick overview of the project, as well as written reflections from the teacher and a student. The projects are highlighted in HTH’s journal *Unboxed*, and sit next to articles written primarily by teachers (HTH, n.d.b). Again, the commitment to project-based learning and teacher collaboration is evident in this section of the website.

The director of HTE believes that the website represent the values of the organization and is effective in recruiting teachers that have “expectations that it will be a different educational philosophy, maybe something more progressive than what they’re used to” (D4). She also acknowledged that the website will need to be updated as an elementary school committed to project-based learning joins the charter organization. “I think that the website is helpful for candidates to see what we believe about teaching and children. I think now that we’ve opened an elementary we need to make the Design Principles encompass the K-12 perspective” (D4). Up until this point, the work of the HTH organization has focused on project-based learning for students in Grades 6 through 12. According to the director, the challenge for the new staff at HTE is to make the Design Principles appropriate and applicable for elementary age students.

**Director’s Assessment Role in Recruitment and Selection**

The director of HTE added activities to the traditional HTH Bonanza process in an attempt to gather more information about the candidates, to identify candidates suited to elementary education, and to find candidates with a 21st century skill base. She used initial screenings, classroom observations, and eventually the HTE Bonanza process to select teachers.
Initial Screenings

The director received and reviewed approximately 150 applications and resumes. She then contacted the most promising candidates and completed initial, in-person, telephone, or Skype interviews. During these initial interviews she asked the following five questions:

1. What appeals to you about project-based learning?
2. Tell me about one your mentors.
3. Tell me about a student who has impacted you as a teacher.
4. What aspects of teaching are the most gratifying to you?
5. Given that HTH is a K-12 organization, what is it that draws you to elementary age students (Appendix I)?

During the application review and the interviews, the director was looking for specific criteria and answers that would help her determine if the candidate was a good fit for HTE. The information in italics in Appendix I defines possible “look fors” or strong answers, as defined by the director, within the application and resumes as well as within the answers to interview questions (Appendix I).

The questions and the “look fors” provided by the director are predominately focused on the candidates’ beliefs about student-teacher relationships (Appendix I). She wanted teachers to talk about how students would be involved and responsible for their own learning. Candidates were asked about their own mentors in an effort to understand their personal beliefs about the relationships needed to facilitate and foster learning. The director also specifically asked candidates to talk about why they were interested in
working with elementary age students. The emphasis on student-teacher relationships was the focus of the initial interview.

**Classroom Observations**

If the candidates successfully completed the initial screening process, the director went out to observe the candidates in their own classroom. This was also a departure from the typical HTH Bonanza experience because, in the past, candidates were invited to Bonanza and asked to teach a class of HTH students on that same day. Kersten’s (2008) study included a random sampling of 398 principals from public schools across the state of Illinois. In this study, only about 7% of the principals surveyed reported asking teachers to perform live teaching demonstrations. The new director of HTE preferred to see prospective teachers interacting with students they knew and with whom they had already developed a relationship.

We asked candidates for a demo lesson with children they had already worked with, and this could be a live demo lesson, or a video. I either went to their school and watched them teach or I watched one of their videos. That helped me gauge the rapport that they had established with their kids. We did most of that work, the demo teaching work, in May and June. And, what I expected to see was really strong rapport between the teacher and the students in their classroom and that there was an ease to their working relationships. I also expected to see evidence of a mutual respect that I would hope be established by May or June of the school year. I didn’t think I would see that if the teachers were coming to High Tech High and doing a demonstration lesson with kids they didn’t know. It was really
important to me to see if they could make that connection with kids, so that was different. (D2)

The opportunity to see teachers in their own classroom, with the focus on student/teacher rapport, was the greatest change to the typical HTH Bonanza process. The director was more interested in the ability of a teacher to develop a strong relationship with students than the ability of a teacher to come in and be successful planning and delivering a lesson for an unfamiliar group of students.

**High Tech Elementary Bonanza**

After candidates reviewed the website, applied online, passed the initial screening and were observed teaching, they were invited to participate in the HTE Bonanza. With the invitation to participate in HTE Bonanza, teacher candidates were sent an email with a link to an article to be discussed during the Socratic seminar that would take place on the Bonanza day. An explanation of the Socratic method was included with the invitation to attend (Appendix J). The article, “Talking to Children About Race: The Importance of Inviting Difficult Conversations,” was a 2006 article written about the importance of openly discussing issues of race, privilege, and discrimination with young children (Copenhaver-Johnson, 2006).

The HTE Bonanza took place on February 24, 2011, and 12 candidates attended. The agenda in Figure 2 lists the activities and the time frames of the day’s activities (Appendix K).

For the 12 prospective candidates, the HTE Bonanza day began with an overview of the agenda and introductions of the candidates and the participating HTH staff and faculty. The group was split in half, and Group A started by creating a 2-week project
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 - 9:00</td>
<td>Welcome and Agenda Overview</td>
</tr>
<tr>
<td>9:00 - 10:00</td>
<td>GROUP A: Project Planning / GROUP B: Interviews</td>
</tr>
<tr>
<td>10:00 - 11:00</td>
<td>GROUP A: Interviews / GROUP B: Project Planning</td>
</tr>
<tr>
<td>11:00 - 11:15</td>
<td>Project Share and Feedback</td>
</tr>
<tr>
<td>12:00 - 12:30</td>
<td>Lunch at HTM</td>
</tr>
<tr>
<td>12:35 - 1:15</td>
<td>Student - Led Tour of Campus</td>
</tr>
<tr>
<td>1:15 - 2:00</td>
<td>Student Case Study</td>
</tr>
<tr>
<td>2:00 - 2:45</td>
<td>Article Critique / Socratic Seminar</td>
</tr>
<tr>
<td>2:45 - 3:10</td>
<td>Connections Closing</td>
</tr>
<tr>
<td>3:10 - 3:30</td>
<td>Complete Feedback Survey of process</td>
</tr>
<tr>
<td>3:30</td>
<td>Candidates Adjourn</td>
</tr>
<tr>
<td>3:10 - 3:30</td>
<td>HTH Staff Debrief / Gallery Walk</td>
</tr>
<tr>
<td>3:30 - 4:30</td>
<td>HTH Faculty Feedback</td>
</tr>
</tbody>
</table>

*Figure 2.* High Tech Elementary Bonanza agenda.

for elementary students. Candidates were free to choose the topic and the grade level, and each was given a laptop. For this activity, the director proposed criteria to identify some specific characteristics of strong units of study including evidence of the following:

1. **Content Knowledge**: Project takes content knowledge to the next level.
2. **Relevance**: Kids would be curious about, and relate to the topic or tasks.
3. **Collaboration**: Student grouping is varied and strategic.
4. Critical Thinking/Problem Solving: Students are asked to consider essential question somewhere in each lesson.

5. Transference: Students are asked to apply the concept to something new.

6. Oral and Written Skills: Project is clearly written, and big ideas are communicated (Appendix L).

During the project planning, the director was looking for evidence of a number of the same 21st century skills this researcher identified in Chapter 2 of this study. Evidence of appropriate content knowledge, collaboration, critical thinking, and oral/written communication skills are identified in Table 1, Definitions of 21st Century Skills. Levy and Murnane (2004) describe “expert thinking” as “effective pattern matching based on detailed knowledge; and metacognition, the set of skills used by the stumped expert to decide when to give up on one strategy and what to try next” (p. 75). The ability of a candidate to solve problems and create solutions depends heavily of their ability to use deep content knowledge to analyze the relevant information. The director also expressed her desire to see if candidates could develop projects using effective essential questions. Essential questions are the big, guiding questions that help students understand the overall significance or importance of a unit or project. The ability of a candidate to create strong essential questions may also demonstrate a teacher’s own creativity and possibly global awareness.

Quick interviews, sometimes called “speed dating” with students and staff is a typical activity for the HTH Bonanza. During the HTE Bonanza, while Group A wrote their project plans, Group B participated in a series of six short interviews with panels of HTH teachers and directors. Students were not included on these panels. At the HTE
Bonanza, each panel was given one of six questions to ask each candidate. After the common question, the interviewers were free to follow up with any other questions of their choice in order to get a better sense of the candidate’s personality and interests. This was also a variation from the typical HTH Bonanza, which generally does not include any set questions to be asked of the interviewees. The six questions developed by the director can be found in Appendix M.

As mentioned above, in previous Bonanzas there were no set or common questions, and interviewers were free to ask any questions during the interview. Again, the change in the Bonanza process was a deliberate effort to better understand the candidates’ views and strategically assess for specific qualities.

I crafted some questions that would get at those qualities that I was looking for—creativity and flexibility. So I asked for scenarios that would help me understand if they were actually creative or flexible. Someone can say, “Oh yes, of course, I’m very creative,” and then not really be. I wanted really specific questions that would help me understand what they know and what they do, when they say, “Yes, I’m creative.” What do they mean by that—so their own definitions. There were six questions that were specifically asked of every candidate and that is not normally done at Bonanza. (D2)

The “look fors” created by the director for the interview questions provided candidates an opportunity to both share personal interests and passions, as well as educational and pedagogical experiences. Question 1 asked candidates specifically about how they would design collaborative time and what it would be used for. The director identified a number of responses that would demonstrate their experience with
collaborative planning as well as their belief about its value. Question 5 asked candidates to simply talk about what they are passionate about and how they would inspire students. The director looked for answers to include a personal passion, as well as some discussion about rich tasks and student choice (Appendix M).

After both groups completed the “speed dating” and the project planning, the entire group came back together. In groups of three, each candidate took a turn sharing his/her project plans, while the other two candidates provided feedback to the presenter. Throughout this session, HTH directors and faculty members facilitated the process, while another observed the candidates. The observers were asked to explicitly observe each candidate’s feedback to the presenter about the project. They were to look for feedback that was specific and would make the project stronger. They were also asked to notice the reaction of the presenter to the feedback.

During lunch, candidates and observers were free to sit and chat anywhere inside the building or outside at the student lunch tables. Immediately following lunch, the candidates were split into three groups, and students from High Tech Middle facilitated a tour of the school. A HTH observer was also assigned to each of the tour groups. Again, observers were looking specifically at the interactions of the candidates with the students. Are they comfortable around students? Do they interact and ask thoughtful questions?

The next activity was also a departure from the traditional Bonanza experience. Candidates were placed in three groups of four and asked to review two student case studies. The information for both of the students included demographic, behavioral, and academic information (Appendix N). Candidates were given 40 minutes to read each case and then to work as a team to write an action plan for each student. The director
designed this activity to assess the ability of the candidates to review a real student profile and propose possible solutions.

We also asked them to look at a case study of children and determine how they would instructionally make decisions based on what they knew about the child. And that wasn’t part of the High Tech High Bonanza originally. It’s just important to me that they also have some teaching craft and understand all the different ways that you can support a child. I thought that if we had a case study, we would be able to see how they would handle a child for instance that has English language issues or difficulty participating in groups. How would they approach that and what sort of tricks of the trade they already knew and what they valued. I knew I would see what they valued and what they knew to do based on their responses to the case studies. (D2)

As in the other activities, HTH observers watched how the groups worked together and interacted throughout the case study activity. In addition to listening to the plans the group developed, the observers watched the candidates to see how they worked as a team.

The Socratic seminar was another opportunity for the HTH observers to witness the behaviors of the candidates. Candidates were given 15 minutes to refamiliarize themselves with the article and to think about some reflective questions. The group was then split into two large groups and the candidates began discussing the article. Observer “look fors” for this activity were included in the Socratic seminar guidelines sent home with candidates with their invitations to Bonanza (Appendix J).
The use of Socratic seminar was another opportunity for the director and the observers to understand a little bit more about the beliefs and values of the candidates, while also watching how they interact and conduct themselves while discussing a potentially controversial subject. Levy and Murnane (2004) found that workers need the ability to work with a team to negotiate meaning. “The growing complexity of work has made uncertainty and disagreement prevalent in the workplace” (p. 93). The director agrees and further described the importance of the Socratic seminar.

One of the things that High Tech High does is they give the candidates an article that has some sort of a controversial viewpoint to it. And in reading that and then discussing it we’re able to see values that people hold and also leadership skills. So, in a group setting, do they push on each other’s ideas? Do they stand true to their own ideas? Are they able to share the air in a conference? When somebody says something they don’t agree with, how do they respond? Are they able to respond in a civil way and express a contrary viewpoint? How do they respond in that sort of pressure setting? (D2)

The Socratic seminar lasted for 20 minutes with the observers looking for evidence of the candidates’ ability to confidently express their opinions and listen to those of their colleagues. Occasionally, the observers did enter into the different conversations.

At 2:30 p.m. the group came back together with all of the observers. The candidates were thanked and a HTH director led a “Connections” activity. Connections is a wrap-up activity commonly used at HTH for all occasions including Bonanza. In this activity, the entire group of candidates and HTH observers formed a large circle and each person contributed a word or phrase that summed up their feelings or thoughts about the
day. The director describes the activity as a reflective opportunity, as well as an activity that represents the norms of the organization.

It’s very High Tech High. . . . I’m not looking for something necessarily, but I want the candidates to really understand that this is an organization where you do sit and reflect on your day and reflect on how you’re responding to things and making assessments about yourself as an educator and a person in a group. . . . And that’s actually part of our modus operandi around here. (D2)

The director acknowledged that the Connections wrap-up activity was an opportunity for candidates to share in the culture of the HTH organization. Liu and Johnson (2003) examined teacher hiring practices and whether these practices lead to good matches for teachers and schools. In the study they described the need for a “two-way process” (p. 2) to successfully determine fit between the teacher and the school.

The final activity for the candidates was an online survey about the Bonanza day. Candidates were asked to answer the following questions:

1. What initially attracted you this position? Why are you interested in working at HTE?

2. What was the best activity of the day for you? Why?

3. Why was this the best activity for you?

4. What was the most difficult activity of the day for you? Why?

5. Why was this the most difficult activity for you?

6. Based on the activities today, what do you believe are the educational values, beliefs, and goals of HTE?

7. After Bonanza, is your enthusiasm for the position greater or less? Why?
8. What did you notice about your fellow candidates throughout the day (Appendix N)?

Eleven of the 12 candidates filled out the exit survey (Appendix O), and, although names were optional, five candidates chose to include their names. The exit survey is not typically used as part of HTH’s Bonanza. The exit survey was an opportunity for the director to receive feedback about the day and the specific activities. It was also another opportunity to understand who these candidates were and how they might work together as a team.

**High Tech Elementary Bonanza Debrief**

At 3:30 p.m., all of the HTH observers met to debrief. The 12 candidates’ photos and names were put on individual posters. Before any whole group discussion, the observers wrote notes about their impressions of the candidates directly on the posters. An example of one the completed posters was included as Appendix P. After all of the comments were posted, an open discussion began. The approximately 15 HTH observers advocated for certain candidates. After a discussion of each of the 12 candidates, the group ranked the candidates on a scale of 1 to 4, with 4 being the strongest recommendation for hiring. There was not complete consensus regarding the eventual successful candidates, but the director articulated how the process helped her make her final hiring decisions.

You know as somebody new to High Tech High, it was really helpful to hear the other people’s perspectives when they were weighing in on our different candidates. That said, I have to say that there were no candidates that I picked up that I would not have picked up otherwise, meaning that if people were
enthusiastic about a candidate as a group in general, I was already enthusiastic about that person and would have picked them up probably even without the Bonanza. But it was nice to have that, that other lens. There were some people that were not enthusiastic about candidates I did end up picking. And I feel now that we’re 30 days into school, [I] feel really good about having picked them. I did appreciate having to sit and think if somebody else said, “You know, I don’t know about that person, and here are my objections.” I did appreciate having to reflect on that. Does that outweigh what I’m thinking about this person, and I really had to sift through that. It made my decisions that much more solid when I made them. (D2)

The debrief lasted approximately 90 minutes and 6 of the 12 candidates were offered teaching positions at the new HTE school. Of the 6 successful candidates, 2 received the highest rankings with all marks in the three to four range. A third candidate received three marks in the two range and another received two marks at one and one at two. The poster for the final successful candidate was missing, but the director acknowledged that this candidate had the lowest marks of the successful candidates. The posters for the unsuccessful candidates were not saved, so it is difficult to determine how their scores compared to the successful candidates. The recommendations of the observers were expressed, but the director eventually chose the candidates she believed had the most promise.

The next section describes how the researcher identified participants for the structured interviews.
Interview Participant Selection and Demographics

The researcher conducted personal interviews with 6 of the school’s 18 newly hired teachers, including one from each grade level. These interviewees were selected from a pool of teachers who had not previously worked for the principal and who participated in the hiring process. Six of the newly hired teachers went through the group, day-long Bonanza process. Eight of the new teachers went through an individual, day-long, modified version of the Bonanza process. Both of these groups were eligible to be interviewed. Four of the teachers hired previously worked for the director and did not participate in the complete hiring process. These teachers were well known to the director, and she had first-hand knowledge of their instructional abilities. These four teachers were interviewed as a focus group.

Of the eligible pool of 13 teachers, interviewees were randomly selected by teachers who participated in the full HTE Bonanza process. Another two interviewees were randomly selected from the group who participated in the abbreviated Bonanza process. The names of the teachers were written on folded slips of papers, divided by both level of Bonanza process and grade level assignment, and randomly selected by the researcher. Transcripts were returned to the individual key informants to ensure accuracy and to provide an opportunity for participants to expand or clarify their original responses. This technique called member checking contributes to the construct validity of the study (Calabrese, 2009; Yin, 2009). All data were secured in a locked cabinet in a locked office at the researcher’s home.

Using interview protocols (Appendices A, B, and C) the researcher interviewed the director and 10 teachers, 4 of whom were interviewed as a group. Additionally, exit
survey data and poster debrief data from the HTE Bonanza were analyzed. Table 2 summarizes the codes used to represent the data sources.

**Teacher Perspectives: Major Values**

The analysis of the findings of the interviews conducted by the researcher and the review of documents from Bonanza revealed three major expressed values: collaboration, creativity/risk taking, and personalization/organizational fit (see Table 3). The remainder of this section will address these three themes.

**Collaboration**

As referenced in Chapter 2, the Organization for Economic Cooperation and Development Project (OECD, 2005) defined collaboration as the ability to relate well to others, to cooperate, and to manage and resolve conflicts. Relating to others included empathy and effective management of one’s own emotions. The ability to cooperate included a focus on negotiation and a willingness to listen to other’s ideas. Solving and managing conflict included the ability to analyze and assess a problem, as well as the ability to prioritize and compromise. The traditional Bonanza experiences as well as the HTE Bonanza experience focused on the ability of a candidate to cooperate and collaborate with colleagues. Each of the activities selected by the director included some type of collaborative work. High Tech High observers were on hand and available to specifically observe the candidates’ ability to give and receive feedback. One of the six questions during the “speed dating” session articulated HTH’s commitment to collaboration and directly asked candidates to talk about their own thoughts about how collaboration works. That question was as follows:
Table 2

*Coding of Data Sources*

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<tr>
<td>Director (D)</td>
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<tr>
<td>Director (D)</td>
<td>D3</td>
<td>Live interview</td>
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<td>Director (D)</td>
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<tr>
<td>Teacher Focus Group (F)</td>
<td>F2</td>
<td>Live interview</td>
</tr>
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<td>Teacher Focus Group (F)</td>
<td>F3</td>
<td>Live interview</td>
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<tr>
<td>Teacher Focus Group (F)</td>
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<tr>
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<td>SCB3</td>
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</tr>
<tr>
<td>Successful Candidate Bonanza (SCB)</td>
<td>SCB4</td>
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</tr>
<tr>
<td>Successful Candidate No Bonanza (SCNB)</td>
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<td>Live interview</td>
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At High Tech High, we believe that teacher collaboration is essential to improvement of practice and effectiveness of lessons. Given complete freedom over your schedule, what opportunities to collaborate would you create and what would the purpose of that collaboration be (Appendix M)?

The director’s purpose in asking this question was to give candidates the opportunity to articulate specific ways they would structure collaborative time like consistent vertical and horizontal planning time. Strong answers about the purpose of collaborative time included the ability to align curriculum, to analyze student assessments, and to develop and design projects (Appendix M).

During the Bonanza experience, the candidates clearly understood that HTH was an organization that believed in the power of teacher collaboration. Collaboration with colleagues was mentioned 17 times in the exit survey. In 9 of the 11 exit surveys, candidates described the HTE Bonanza process as a positive experience because of the multiple opportunities to collaborate. One candidate wrote, “The aspects of HTE that is appealing to me is the opportunity to work with like-minded, smart, passionate teachers,
and today, I was able to see how I am elevated in the act of collaborating and listening to others” (E1). Another candidate wrote about collaboration during the Case Study activity. This teacher found the Case Study to be the most difficult activity of the day, but she valued the work with the other candidates.

I thought this was the most challenging part of the day—and therefore, the best, for some reason. It was really interesting hearing different perspectives on the same case and challenging, trying to collaborate with my peers, in a short amount of time to develop a real plan for our students. I felt like we were working a bit independently on the first student—merely sharing our personal ideas—and we honed our discussion skills to listen better and work off of each other with the second student. (E1)

Although less frequently, the teachers interviewed after the Bonanza process also described the collaborative nature of communicating and problem solving during the Bonanza process. Levy and Murnane (2004) assert that “complex communication” can be defined as “communication [that] requires the custom fitting of explaining, listening, persuading, and negotiating. Each of these involves a two-way information exchange” (p. 77). When describing the project planning and debriefing, one teacher found the fishbowl-like atmosphere challenging, but indicative of the collaborative nature of the organization and the value of engaging in complex conversations.

You pretty much have an hour to figure out your project. So, it was cool to see what other people were coming up with, and I remember the part afterwards when you were doing the feedback section, that was nerve wracking because it was in a fishbowl. But I think that part gave the message that is just as important the way
that you give feedback and how you interact with your peer colleagues. It is just as important as the quality of the idea that you come up with. So, I thought that was nerve wracking but it sent a cool message. (SCB2)

When asked about improving the HTE Bonanza process, two of the candidates believed that they would have benefitted from more collaborative time. “I would have liked to ask my partner more questions, and have him go further in depth into what his ideas were. I also wanted more feedback on my project, and how it could potentially be better” (E5). Another stated, “Since it was only an hour, there was limited time to create a project. As a strong believer in collaboration, I found myself wanting to bounce back ideas with a colleague” (E7). Although almost every part of the HTE Bonanza process provided an opportunity for collaboration, the candidates wanted more.

Bennis and Nanus (1985) described vision as an agenda. A leader’s vision pulls people toward an ideal and instills in them a confidence that the established vision can be achieved. Communication is essential; a great leader “defines what has previously remained implicit or unsaid: then they invent images, metaphors, and models that provide a focus for new attention” (Bennis & Nanus, 1985, p. 37). During one of the pre-Bonanza, informal meetings with candidate SCB1, the director and the candidate toured the campus and visited classrooms. When this candidate was asked about the vision of the director during this researcher’s in-person interview, she recalled a moment during the tour where she had an opportunity to witness the director model collaboration and focus her attention on the collaborative process.

Everybody is going to be collaborating to improve projects. . . . She actually showed that to me the very first time I met her. We met at the high school and we
went to see classrooms. We walked in and she immediately asked the teacher what they were doing. The teacher described the project and she had three amazing questions for him that took the project 10 steps further. She was just throwing out ideas. And, I was thinking, that’s what she wants in this school, and that’s going to make everything so much better. The idea that you can’t just work in a bubble because then your project might be good. But it’s going to be missing all these other facets that bright minds might bring to it. (SCB1)

During this brief encounter, the director validated that collaboration was the work of all of the members of the school and she provided the candidate with an image of what collaboration can look like.

The director designed the HTE Bonanza process to assess the candidates’ ability to collaborate and cooperate with colleagues. Many candidates described the collaborative nature of the process the reason why they found the entire process a positive and “energizing” (E9) experience.

Creativity/Risk Taking

The second value, creativity/risk taking, was mentioned 55 times throughout the interviews and documents and is also referenced in Chapter 2. Most proponents of the 21st century skills movement cite creativity and innovation as a key component to global competitiveness (see Table 1). Pink (2005) asserts that we are moving from an Information Age to a Conceptual Age and that we must have the “capacity to detect patterns, and opportunities, to create artistic and emotional beauty, to craft a satisfying narrative, and to combine seemingly unrelated ideas into something new” (pp. 2-3). Two of the main HTE Bonanza activities provided an opportunity for candidates to
demonstrate creativity. The project planning activity was designed to see how creative candidates were at designing interesting projects for students. The student case studies were also an opportunity for candidates to creatively highlight their pedagogical skills and previous experiences.

Amabile (1998) defined creativity as the imagination and flexibility with which people approach problems and includes an individual’s ability to distill disparate information; persevere through seemingly unsolvable problems; and view these problems from a fresh perspective. Amabile’s definition of creativity matches with HTH’s strong affinity for Project Based Learning (PBL). The HTE Bonanza candidates spoke and wrote about the importance and their commitment to PBL. Candidate SCB1 had little experience with PBL, but she found the Project Design activity a positive experience. In response to the interview question asking her to discuss why she thought the director asked candidates to design projects, she shared the following:

I felt like it was to get a sense of whether we could think of authentic projects and think broadly instead of specifically to standards or limiting ourselves to small little projects that we’ve done in the past. And that’s how I felt, and so that’s what I did. I was inspired to all of a sudden just start typing, and it was something I’ve never done before. It wasn’t like a project that I used or I knew was successful and it might be cool. The way that it was proposed, that activity, I felt like I had the freedom to just try something new. And so, I guess I felt like I was being tested to see if I was willing to do something like that. (SCB1)

Creativity/risk taking also emerged as an important value when candidates were asked about the vision of the director. In four of the six interviews with the successful
teaching candidates, the director’s focus on creativity and the freedom to develop strong projects was mentioned. Each member of the focus group had previously worked for the director. Their understanding of her vision for the school did not necessarily come from the hiring or recruitment process, but could be additionally shaped by their early experiences at HTE, as well as their experiences with their colleagues hired through the Bonanza process.

When the focus group was asked about the director’s vision for the school, each of the four teachers talked about her commitment to creativity and her support of risk taking for teachers and students.

F4: I think she really embraces technology and just like the 21st Century learning. And I remember being at Carson and she'd always want us to get on YouTube and she'd want us to try all these things online but we . . . you know, the district would have blocked us from that. So, I feel like here she's able to like really embrace that and have us use those things because I feel like that's something that she is really focused on.

F2: I think she wants us to take risks. I do.

F3: And have kids who take risks, you know, foster that in students.

F2: To take risks. To explore. To discover. To not just be passive learners, but to be actively engaged in the world. Not just what happens in the confines of this building; but in the world.

F1: And I think it would look different in every classroom. I think every teacher here is so different and brings different talents and different ideas to the table. That for one classroom it might mean like making an enormous twine horse and in
another classroom it might be making an instructional video . . . the sky’s the limit. Creative, innovative and very challenging for students [sic].

In a review of the Deke and Haimson (2006) research and other studies on the impact of NCLB, Berliner (2009) concluded, “The narrower the curriculum provided to our students, the less well-prepared they are likely to be for intellectual competition in a rapidly changing, quite unpredictable international economy” (p. 6). Each of the teachers in the focus group explicitly revealed their desire to join the HTH organization to escape from the confines of a narrow curriculum and a focus on high stakes testing. When asked why these teachers would give up the security of tenure within the public system, one responded, “It’s mainly for the freedom to teach and explore different things in the ways we see most fit for kids, rather than just following a prescribed district curriculum. That was one of the main things for me” (F2). These teachers did concede that leaving the security of a large public district was not an easy decision and something they continued to worry about. “It was difficult. I knew I wanted the freedom from testing. I wanted to focus on a well-rounded experience. For someone who's been in for [the district] 17 years, it was harder to leave than I thought” (F3).

The candidates expressed a desire for more pedagogical freedom, but they also wanted freedom for their students and an environment that supported risk taking and creative problem solving. Zhao (2007) emphasized the importance of creativity and innovation in meeting the challenges of globalization. Like Pink (2005), Zhao believes “we must develop niche talents that will fit in the large, integrated, global supply chain of talents” (p. 17). Zhao stated, “You cannot teach creativity. But you can kill it through standardization, conformity, and a monolithic view of intelligence” (p. 17). The teaching
candidates participating in Bonanza and those successfully hired expressed the desire for students to have the freedom to be engaged in authentic issues and real world problems. “I want to work in a school where students feel encouraged to turn their creative ideas into projects that are meaningful” (E6). Another candidate wrote, “HTE wants to create an environment where students can engage in rigorous and progressive project-based learning, which helps students to encourage and develop their voice” (E11).

Proponents of the 21st century skills movement cite creativity and innovation as a key component to global competitiveness (see Table 1). Pink (2005) asserts that we are moving from an Information Age to a Conceptual Age and that we must have the “capacity to detect patterns, and opportunities, to create artistic and emotional beauty, to craft a satisfying narrative, and to combine seemingly unrelated ideas into something new” (pp. 2-3). Both the tasks designed by the director for the HTE Bonanza process and the values expressed by the participants and the current teachers indicate that creativity and risk taking are important skills for both students and teachers.

**Organizational Fit/Personalization**

The final theme, organizational fit/personalization was the most frequently mentioned value by the participants in this study. Liu and Johnson (2003), in an effort to examine teacher hiring practices and whether these practices lead to good matches for teachers and schools, conducted a study of 486 first and second year teachers from four states: California, Florida, Massachusetts, and Michigan. The four states were chosen because all were experiencing teacher shortages, all have charter school legislation, all are unionized, all participate in high-stakes testing, and all have adopted state level content standards. Liu and Johnson found that the majority of teachers gained a moderately
accurate picture of their school and felt that they were a moderately to good fit with their school. Liu and Johnson asserted that a more interactive hiring process would help teachers understand the expectations of the organization and contribute to greater teacher satisfaction and effectiveness while reducing teacher turnover. Candidates recruited for HTE perceived the recruitment and hiring process as personal experience and a valuable way for them to understand the culture of the school.

Two of the candidates interviewed by the researcher did not participate in the formal Bonanza experience. They were hired in April of 2011, and their interview process consisted of an individualized process. Each of the teachers applied on-line and the director screened their applications and resumes. The two candidates were invited to meet the director of HTE at HTH Point Loma site. On different days, the two candidates interviewed with the director and toured the school. Both candidates SCNB1 and SCNB2 were observed teaching, one in his/her own classroom and the other via videotape. After the day with the director at HTH Point Loma, both candidates produced a project plan and emailed it to the director. Both candidates described a very personal interviewing experience. When candidate SBNB1 was asked about the hiring process, he also discussed the personal nature of the meeting and contrasted it with methods used by a large school district.

I went to High Tech High and visited her [the director]. And she showed me around the campus. But in the beginning she actually just sat down and just asked me questions like a normal person. It wasn’t a real . . . didn’t feel like a formal interview like Chula Vista [School District] does. With Chula Vista it seems like there are 15 adults and you’ve got seven questions that you’ve got to answer. And
it’s just this big panel interview. It can be really intimidating. So it didn’t feel that way at all. And it felt like she wanted to know who I was and what my background was and my experiences and see if that was something that would fit with the school. And then she walked me around and she introduced me to a lot of the teachers, and I just thought it was a phenomenal place. (SCNB1)

Another candidate, SCNB2, also believed that the informal interview and tour of the school was an informal opportunity for the director to get to know her better. “I did my research on High Tech . . . I brought everything, but it was more of a conversation. I think she just wanted to get to know me as a person” (SCNB2).

During the full day Bonanza, the variety of activities during the day helped the director and the HTH observers to see the candidates in a variety of situations. “I think as some of the candidates became more comfortable—they let us see more of their own true personalities, which I enjoyed and I thought was valuable” (D2). The teacher candidates involved in the preinterviews and then the full Bonanza experience also perceived that the director was interested in getting to know them as individuals. Candidate SCB2 discussed the contrast between the HTE Bonanza process and other charter school interviews.

It was different from other interviews that I’d been participating in at the time with some other charter schools that didn’t really care much about me. The schools that I’d interviewed at before had a thing that they wanted you to already be, and you had to pretend to be that thing. It was them just judging whether you were that or not and that was it, like whether you could put the objectives up front
and make sure the students would answer the questions correctly at the end. And that wasn’t Bonanza, it was basically the exact opposite of it. (SCB2)

Each of the candidates submitted resumes, filled out applications, were observed teaching, and created a project, but many perceived the parts of the experience as a personal attempt by the director or the observers to really get to know each of them.

Many of the candidates expressed that the process reaffirmed what they hoped they would find at HTE. Some were skeptical that the beliefs espoused by the charter organization would actually be evident in the classrooms. Liu and Johnson (2003) found that classroom and school observations by potential candidates provided valuable information for “both parties to collect information about one another” (p. 21). Candidate SCB4 was happy at her current school and unwilling to make the move unless she was convinced that HTE would be project based. During the preinterview she met with the director, toured the HTH Point Loma campus, and ultimately decided to apply for the position. She stated, “going into it, I needed her [the director] to confirm to me that it would be very project driven and teacher driven. And that is what she gave me. She kind of reassured me of that” (SCB4). When candidate SCB2 was asked if the Bonanza process was a positive experience, she expressed her initial reluctance to believe in the school without first experiencing it.

I really liked being able to be at the school and see what it really was like. And I think it was hard for me to believe that an organization, like a school, would really live those values that it says because I had worked in schools and had been learning about schools that were so married to data. And to have that actually not
be the priority—I really had to see it again and again and again and again to believe it. (SCB2)

The entire HTE recruitment and hiring process afforded the stakeholders at HTH and the teaching candidates an extended opportunity to get to know each other. Liu and Johnson (2003) call this an “opportunity for schools and candidates to exchange rich information about each other” (p. 5).

In the exit survey, candidates were asked if their enthusiasm for the position at HTE was greater or less after the Bonanza experience. All 11 of the responses were positive, and the most common reason was that it had been an energizing experience. Although it was a busy and potentially stressful day, HTE participants cited a variety of reasons for feeling “empowered, inspired, and energized” (E8). Many felt like the collaborative nature of the activities created the energy. “The people I met at Bonanza have such wonderful ideas, and I am eager to learn from them. This experience has fueled my passion for teaching and makes me hopeful for educational practices” (E4). Others found the interaction with the students and teachers most exciting. “Speaking with the students and meeting so many fabulous teachers makes me even more enthusiastic. The culture of the school is evident from the moment you walk in the door, who wouldn’t want to be a part that environment?” (E5). Others were inspired by the possibility of designing projects. “I have an idea about the process of creating and developing projects. After creating the project during Bonanza and hearing my colleague’s ideas for it, I’m excited to give it a try!” (E10). According to the exit surveys, the candidates all felt like the Bonanza experience had been a positive experience as well as one that confirmed for them that HTH was an organization that fit with their own
beliefs about teaching and learning. It should be noted that the exit survey was completed at the end of Bonanza process and candidates were still competing for teaching positions at HTE.

Those teachers interviewed expressed positive impressions of the recruiting and hiring process at HTE. The next section addresses the director’s perceptions 4 months into the school year.

**Director’s Perceptions: Four Months After School Begins**

In a follow-up interview, 4 months after the school opened, the director discussed the HTE Bonanza process and how well it actually worked for hiring teachers. The director discussed two candidates whom she did not pick up at Bonanza. The first was eventually hired at High Tech Middle Chula Vista (HTMCV), and the director became better acquainted with him because the elementary and middle schools share the same building. “I’ve gotten a chance to know him since Bonanza, and he is really very thoughtful and really very, very bright. And so it has occurred to me a couple times that maybe I should have asked him to come” (D4). She did not initially hire him because she did not think he had enough experience or understanding of the potential of elementary age students. She is confident that he is a good fit for the middle school program. The director found the classroom demonstration of the second candidate very strong and she was confident as she invited him to participate in the Bonanza process. Her colleagues found him a bit “one-dimensional,” and they did not think he would be a good fit for the organization. She did not hire him and believes that the Bonanza process was helpful in screening for organizational fit.
He was warm. He was engaging. He had a great rapport with his kids. So, he was really very connected to them and that’s one of the things I was looking for. But he really had a very linear thought process. And that came out at Bonanza. It came out in his interviews in a stronger way than it did when I was watching him teach. I’m glad that he went through Bonanza because I didn’t pick him up.

The director saw this teacher engage with students in his own classroom, but she had not seen the candidate interact with other adults or with situations that called for inventive or creative thinking. The Bonanza process provided her with an opportunity to see the candidate engage in another forum.

The director also discussed how some of the behaviors of candidates during Bonanza made them universally viewed as not a strong fit for HTH. The director and the observers noticed one candidate who seemed disturbed by any change or shift in the schedule. The director and observers worried about candidates who seemed rigid or inflexible.

When there were small shifts in the schedule, you could see the one who really had a difficult time when we weren’t right on time, or maybe we were in a different room than we had originally planned to be in. (D4) Inflexibility or difficulty with change was not a desirable characteristic. Another candidate, who the director was initially very excited about, was clearly identified by the HTH observers as not a good fit for HTH.

One of the candidates was having a difficult time engaging with the other candidates, with interviewers, with other High Tech High faculty and students. She sort of self segregated. I was really surprised by that because we had two
interviews that were really amazing. They were just one-on-one interviews, and I really liked her, and I liked the things that she said. It was a surprise to me that she would shut down like that in a stressful setting. (D4)

Again, the Bonanza process offered the director an opportunity to see the candidates in a number of situations. In this case, a candidate with great initial one-on-one interpersonal skills, but with an inability to connect with students, staff, and colleagues was screened out of the HTH organization.

Although committed to the idea of finding creative teachers, the director indicated that she struggled with how to measure creativity. Amabile (1998) defined creativity as the confluence of expertise, creative thinking, and motivation: “Expertise encompasses everything a person knows and can do in the broad domain of his or her own work” (p. 78). Creative thinking may be defined as the imagination and flexibility with which people approach problems and includes an individual’s ability to challenge the status quo; distill disparate information; persevere through seemingly unsolvable problems; and view these problems from a fresh perspective. In general, the director expressed the need to clearly articulate HTE’s philosophy and then to look for activities and projects that could measure the desired attributes during the recruitment and hiring process.

When the director was asked about the specific qualities she was looking for in teachers, she discussed the characteristics of the teachers she had previously worked with, and whom she had hired, but who had not gone through the Bonanza process. She described a teacher with the ability to provide a supportive environment that promoted risk taking for students. She described the teachers she brought with her from her previous schools primarily as teachers who had strong relationships with students.
In those particular teachers, I was looking for teachers that I knew were really good with kids. Really connected with kids and able to ask children to be risk takers. I had seen them communicate to kids that they would be safe—that it was okay to take a risk. They would encourage them to step out even farther on a limb. (D1)

Although looking to assess a potential teacher’s 21st century skill base throughout the recruitment and selection process (see Table 4), the director only mentioned creativity/risk taking as a specific quality she was looking for in the teachers she selected from her previous school. The director only mentioned one of the skills identified on Table 1, and with these four hires, seemed to be more concerned about teacher/student relationships. This is consistent, however with the structure of the classroom observations and the desire of the director to observe teachers working with their own students.

The HTH Bonanza process is an expensive and time-consuming process. The director affirmed that the benefits of the process outweighed the time and the cost of the process. She was able to measure the skills of the candidates and weigh their ability to fit in to the HTH organization. She was also given the freedom to create a Bonanza process that matched her vision for HTE. “It’s a really costly thing to do; to have the staff come and stop what they’re doing to participate. But, I think it is really beneficial” (D4).

The final question for the director of HTE was whether or not she found any flaws in the recruitment and hiring process. She acknowledged that it is an imperfect system and that she had possibly made hiring errors. The two teachers she is most concerned
about did not go through the full-day Bonanza process. But, she believes that their personalities may have predetermined their success at Bonanza.

I have a question about 2 of my 20 teachers and they may or may not be good for us. They didn’t actually go through Bonanza. They are both a little bit linear in their thinking, and I’m not sure that’s a good fit for us. So, I’m not sure that I was a hundred percent successful in my hiring. One of them would have done beautifully [in the Bonanza experience] because she is very outgoing, very gregarious, very warm, totally about children, young, enthusiastic, so she would have done very well. The other one is a stronger teacher but is not outgoing and is not at ease in large groups. So I don’t think this teacher would have done well in Bonanza. (D4)

Both teachers are struggling to fit in with the HTH culture, but the director is unclear whether or not the Bonanza process would have identified the least compatible candidate for HTE.

Although not foolproof and requiring a large commitment of staff time, the director found the Bonanza process a viable opportunity for prospective candidates to understand the culture of HTH. This was not just an opportunity for the director to assess candidates; it was an opportunity for candidates to buy-in and choose the HTH organization.

I think that Bonanza serves as a way for the candidates to come in and see what High Tech High is about. If I could change something, I would make Bonanza even more clearly represent who we are so that candidates understand if this is a place they should work. I want them to think, am I a good fit for them? (D4)
The director acknowledged that starting a new school was hard work, and she wanted teachers with a clear understanding of what to expect. Liu and Johnson (2003), cited one of their earlier studies which suggested that teachers do not enter teaching thinking that it will be their only career. In this study, they “found that teachers were approaching teaching tentatively or conditionally, rather than as a lifelong career” (p. 5). According to the director, the Bonanza process is an important and worthwhile method for teacher selection, as well as for prospective teachers in school selection.

**Summary of Findings**

The director designed many opportunities throughout the HTE recruitment and selection process for candidates to demonstrate their skills and for her to assess a potential teacher’s 21st century skill base. In order to better understand how the HTE process matched a 21st century skill set, this researcher used the skills categories developed for Table 1 to examine and analyze the findings related to the HTE recruitment and hiring activities (see Table 4). The six column headings in Table 4 correspond to those in Table 1.

Each of the activities or the “look fors” designed to assess the performance of the candidates could be mapped onto the 21st century skills chart. Content knowledge had three correlations. Creativity/innovation/adaptability, collaboration, multiculturalism/global awareness, and oral and written communications each had four correlations. The skill identified as critical thinking/problem had the greatest number of correlations: six.

The director of HTE developed a hiring and recruitment process designed to attract teachers with a vision of developing 21st century skills in students. The activities in the recruitment process were designed for the HTE Bonanza day to provide prospective
Table 4

*High Tech Elementary Bonanza Activities Mapped to the Definitions of 21st Century Skills*

<table>
<thead>
<tr>
<th>HTE recruitment and hiring</th>
<th>Critical thinking/problem solving</th>
<th>Creativity/innovation/adaptability</th>
<th>Collaboration</th>
<th>Multiculturalism/global awareness</th>
<th>Oral and written communication skills</th>
<th>Content knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications/resumes</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Phone/skype interviews</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Project planning</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Speed dating</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Project share/feedback</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student led tour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Student case study</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Socratic seminar</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Connections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

candidates the opportunity to demonstrate their skills in critical thinking, collaboration, multiculturalism, and oral and written communication skills. After participating in the recruitment process, the full Bonanza day, or the abbreviated Bonanza day, the teachers perceived that the selection process reflected three major values: collaboration, creativity/risk taking, and personalization/organizational fit. The director found the Bonanza process helpful for her to see candidates in a variety of situations. Both the director and the candidates found the HTE recruiting and hiring process as an opportunity for employers and candidates to see if HTE was the right fit for their personal teaching philosophy.
Conclusion

This chapter presented the findings of the data collection and analysis. An overview of the established hiring practices at HTH Charter Organization provided context for this case study. In order to fully understand the decisions made by the Director of HTE, the recruitment process and each of the activities included in the HTE Bonanza day were described in detail. Exit surveys completed by the candidates and poster evaluations completed by the HTH Bonanza observers were described and analyzed. Data from the 11 interviews, 4 with the director, 4 with teachers who participated in the full Bonanza experience, 2 with teachers who participated in the abbreviated hiring process, and finally the focus group were presented. The interview findings were presented based on the themes that emerged from the data analysis. Finally, the interview with the director, conducted 4 months into the first school year, shed light on her perceived success of the hiring and recruitment process.

In Chapter 5, the researcher will present a summary of the study, including the statement of the problem and research focus, methodology, and findings. The chapter will conclude with recommendations for future research and implications for practice.
CHAPTER 5—DISCUSSION OF THE RESULTS,
CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents a summary of the study and conclusions drawn from the data presented in Chapter 4. It begins with a brief review of the previous chapters, including an overview of the problem and the methodology used in the study. Chapter 5 also presents major findings, limitations, implications for action or practice, recommendations for future research, and concluding remarks.

Statement of the Problem

Teachers are the foundation for creating a dynamic and effective school environment, and they are directly responsible for improving student achievement (Darling-Hammond, 2010). A potential teacher’s academic background, preparation for teaching, certification status, and previous experience are all important quality indicators. Beyond these indicators, successful teachers need to clearly understand and be willing to address the challenges of the 21st century learner. The problem presented is how to incorporate a school leader’s vision for 21st century students into the recruitment process and interview protocols that results in the selection and hiring of teachers who possess the skills and traits needed to inspire children to succeed in the 21st century.

The purpose of this study was to describe how a school leader’s vision impacts the strategies used to recruit, interview, and select teachers who have the pedagogical skills and traits needed to effectively educate students in the 21st century. Further, the study considered whether the teachers and principal perceived the strategies to be effective.

The following research questions guided this study:
1. How did a leader with a vision of the 21st century skills needed by teachers design and implement a recruitment and selection process that communicated that vision to prospective educators?

2. How did this leader assess a potential teacher’s 21st century skill base throughout the recruitment and selection process?

3. How did the teachers perceive the vision of the leader as communicated through the recruitment and selection process?

**Methodology**

This study used a historical, case study method to examine the launch of a single charter elementary school and its hiring process for new teachers. The sources of the data were program documents including the school’s internal and external websites, candidate applications, candidate interview protocols, and interview rubrics. The researcher conducted interviews with the director throughout the study and conducted posthiring interviews with 10 teachers, including one from each grade level. A fourth interview with the director was conducted to clarify the findings and further insure construct validity (Calabrese, 2009; Yin, 2009). The researcher audio recorded all interviews.

The researcher used the grounded theoretical approach during the interviews since the researcher sought to investigate the perceptions the teachers and principal had of the recruitment and hiring process. Grounded theory is a strategy of inquiry in which the researcher derives a general, abstract theory of process, action, or interaction grounded in the views of the participants (Creswell, 2009). Further, the researcher chose grounded theory because it lessens the pressure to build on previous evidence (Leithwood, 2005). Additionally, this approach was selected because it allowed for a systematic examination
of emerging theories and ideas. This was the most appropriate lens because the researcher of this study sought to understand emerging ideas of teacher and director perceptions on the recruitment and hiring process. The case study was a bounded exploration at one elementary school.

Using the constant comparative method, the researcher analyzed the data independently and then compared all the categories, themes, and patterns. The constant comparative method involved the researcher moving in and out of the data collection and analysis process (Glaser & Strauss, 1967). The researcher transcribed the interviews and identified themes and patterns, and then constantly compared all data sources until no new themes and patterns emerged. Once the data were analyzed, the researcher documented the common themes and patterns that describe the document review and the interviews of the director and teachers.

**Discussion of Major Findings**

The recruitment and hiring process for High Tech Elementary (HTE) was a time-consuming method for hiring teachers, and the Bonanza process required a large commitment of staff time. Was this lengthy recruitment and hiring process, in addition to the full day and the abbreviated Bonanza process, worth the time and effort? Did the teachers involved in the process perceive the vision of the leader as communicated through the recruitment and selection process? This discussion will address three major findings of this case study and the pertinent literature from Chapter 2. The first finding addresses the specific decisions made by the HTE director to modify the traditional High Tech High (HTH) Bonanza process in order to create an information-rich experience designed to assess 21st century skills. The second finding addresses the reciprocal nature
of the process. The third section addresses the question as to whether or not the recruitment and hiring process communicated the director’s vision for the school.

**Information-Rich and Grounded in 21st Century Skills**

The recruitment and hiring process for HTE provided the director with more information than is traditionally garnered from typical teacher hiring processes. The director of HTE had a year to recruit, read resumes, observe, and interview teachers. Kersten’s (2008) study of Illinois principals found that most of the principals surveyed relied on application materials including resumes, transcripts, and letters of reference. Only about 7% of the principals surveyed reported asking teachers to perform live teaching demonstrations, yet the survey data found that principals were looking for candidates who were knowledgeable and up-to-date on the latest educational trends (22.3%), hard working (13.7%), friendly and caring (10.5%), student focused (9.4%), team players (7.2%), strong oral communicators (7%). These principals also looked for candidates who were committed to children and were perceived to be self-learners (Kersten, 2008). In addition, according to the study conducted by Liu and Johnson (2003), the majority of teachers were interviewed and hired by principals, but only about 50% were interviewed by their future colleagues.

In contrast, the HTH Bonanza process is more comprehensive and creates an information-rich experience for the employer and the prospective candidates. Typically, HTH screens candidates through their online application process and then invites the most promising candidates to participate in HTH Bonanza. During Bonanza, candidates come to the HTH campus for a full day of activities. The candidates teach a sample lesson and the lesson is observed by HTH employees and evaluated by both faculty and
students. Candidates are also taken on a student-led tour of the campus. Candidates are then interviewed by a number of stakeholders including students, faculty, and occasionally parents. Finally, candidates participate in a Socratic Seminar involving a potentially controversial subject, while observers listen and watch to see how candidates conduct themselves. So, what additional methods were utilized by the director at HTE to create an information-rich experience that would better identify the requisite 21st century skill set envisioned by the director?

**Prescreening process.** During the application review and the prescreening interviews, the director was looking for specific criteria and answers that would help her determine if the candidate was a good fit for HTE. Many of the prescreening interviews were conducted at HTH Point Loma, but others were conducted using SKYPE. The director of HTE created specific “look fors” in the application, as well as for a set of interview questions. In their study of teacher hiring practices in California, Florida, Massachusetts, and Michigan, Liu and Johnson (2003) concluded that the process for hiring teachers relied heavily on the initial paper screening and an interview with the principal of the school. The prescreening process for HTE was as comprehensive as the entire hiring processes for most districts and schools.

**Classroom observations.** In addition to wanting to attract teachers with a 21st century skill set, the director of HTE valued a candidates’ ability to establish rapport with students, so she chose to observe teachers working in their own classrooms. Liu and Johnson (2003) found that the majority of teachers are never observed in advance of being hired. But while HTH typically asks candidates to come to the HTH campus and teach HTH students, the HTE director went out to observe the culture established by
potential candidates in their own classrooms. The ability of a teacher to engage a group of unfamiliar students with a “catchy” lesson may assess a candidate’s general demeanor and ability to plan a lesson. But, it does not measure the ability of a teacher to develop strong relationships with students. The act of observing a teacher in their own classroom provided more information for the director and may have provided candidates with an opportunity to better understand the commitment of the director to positive and personal teacher-student and student-teacher relationships. Liu and Johnson found that “requiring candidates to teach sample lessons can send a strong signal to them about a school’s values and priorities regarding teaching” (p. 30).

**Project planning.** As described in Chapter 4, HTH relies heavily on project-based learning. During the project-planning segment of Bonanza, the HTE director was looking for evidence of appropriate content knowledge, collaboration, critical thinking, and oral/written communication skills. These same skills were also identified as 21st century skills categories by this researcher (see Table 1). The ability of a candidate to solve problems and create solutions depends heavily on their ability to use deep content knowledge to analyze the relevant information. After candidates developed their lessons, they shared them with one another while observers watched and listened to the quality of the feedback and the candidates’ reaction to the feedback. The project planning feedback activity was an opportunity for the director and other HTH observers to watch how candidates communicated and collaborated with their colleagues. The ability to collaborate was also identified as a 21st century skill category (see Table 1).

**Modified speed dating.** During the HTE Bonanza, 12 HTH employees interviewed candidates, and a total of 19 participated in some part of the Bonanza
experience. The typical HTH Bonanza “speed dating” activity is completely unscripted and interviewers are free to ask any questions. The HTE director created six interview questions, one of which was to be asked by each panel of interviewers. She also created “look fors” for each of the six questions. Each pair of HTH interviewers had one question to ask each candidate. After the initial common questions, interviewers were free to ask any questions.

This modification was developed to better understand candidates’ personal interests and passions, educational and pedagogical experiences, and views on 21st century learning. The director provided each pair of HTH interviewers with a single question on a paper with a space at the bottom for taking notes. Although the director believed that the pairs of interviewers asked the question, few gave her their notes about the candidates’ responses to the question.

Although the content of the questions reflect the desire of the director to assess 21st century skills and create an information rich experience, it may have been a missed opportunity. The director did not get feedback about the specific questions for each of the candidates, and the “look fors” were not shared with the interviewers. The HTH “speed dating” interviewers did participate in the candidate debrief and the candidate’s responses to the questions certainly influenced their overall evaluation of the candidates’ beliefs and potential match for the organization.

The HTH Bonanza process and the modifications to that process by the director of HTE were an attempt to place potential teaching candidates in situations that will most likely occur in the life of the HTH organization. The candidates worked through problems and issues, and their responses and interactions were observed. The process
matches the vision of HTH to find teachers who can “work with colleagues and communities to develop innovative, authentic, and rigorous learning environments” (HTHGSE, n.d.). The modifications to the HTH process by the HTE director added activities that matched her vision of 21st century skills and enhanced an already information rich experience.

Although information rich and designed by the director to assess 21st century skills, further attention to specific protocols or rubrics designed to capture the responses in relation to the director’s “look fors” would likely have improved the quality of the information about each candidate. This is especially important when hiring all new teachers for a school, because the interviewers may not have a clear sense of the vision of the director or principal of the school. In the case of HTE, the interviewers and observers clearly understood the vision and mission of the charter organization, but some had little experience with elementary students and may not have been looking for the same responses as the director.

**A Reciprocal Process**

All of the teachers hired through the HTE Bonanza and the abbreviated Bonanza felt that the experience matched the culture of the school and helped them decide that HTE would be a match for their teaching philosophy. During the interviews conducted for this study, and after a review of the exit surveys completed by both successful and nonsuccessful candidates, Personalization/Organizational Fit was the most common value expressed (see Table 3). The value of Personalization/Organizational Fit is defined as the perception of the candidates and successful teachers that the process was designed to get to know them as individuals, as well as an opportunity for them to understand more about
the HTH organization, and more specifically, HTE. Traditional hiring practices are not typically designed to help a candidate gain a better understanding of a school culture. Liu and Johnson’s (2003) study found that the majority of teachers who participated in a traditional hiring process gained only a moderately accurate picture of their school and felt that they were only a moderately to good fit with their school.

The two candidates who participated in the abbreviated Bonanza toured the HTH Point Loma facility, and many of the 12 full-day Bonanza candidates also visited with the director and toured the facility before they were invited to participate in Bonanza. During Bonanza, candidates participated in student-led tours, and observed HTH classes. Throughout the tour, they were encouraged to talk to HTH students and teachers. The activities during Bonanza and the interactions with students and staff provided a model for what they could expect at HTE and a glimpse into the culture of the HTH organization.

Without a clear understanding of the culture of a school, teachers may not be well suited to a school or organization. Liu and Johnson (2003) came to the following conclusion:

Many new teachers thus may be surprised by what they find in their schools. Their expectations about what they would be doing and what their work environment would be like would not be met. To the extent that this contributes to new teachers’ dissatisfaction, ineffectiveness, and turnover, it is cause for serious concern. (p. 30)

The recruitment and hiring process for HTE was a unique opportunity for prospective candidates to gain a better understanding of the HTH organization, and, once hired, the
teachers were not surprised by the mores of the school. The interviews and exit survey data confirmed this positive impact.

**Director’s Vision Versus Communicated Vision**

The HTE director designed an interactive process aimed at recruiting and hiring teachers with the skills to prepare students for the 21st century. She identified the most promising candidates and modified the traditional Bonanza experience to more closely match her vision. Was the vision of the director communicated clearly through the recruitment and hiring process?

According to the teachers interviewed by this researcher and the Bonanza candidates’ exit surveys after the HTE Bonanza, the perceptions about the process and the director’s vision for the school did match two of the six identified 21st century skills categories (see Table 1). Teachers found strong evidence that the process focused on and valued both collaboration and creativity/risk taking. Likewise, Table 4 illustrates the activities designed by the HTE director that could be mapped to these two expressed values.

It is interesting to note that just as research indicated that content knowledge was the least mentioned skill when experts defined 21st century skills (see Table 1), the importance of strong content knowledge could only be associated with three of the HTE recruitment and hiring activities (see Table 4). As stated in Chapter 2, the absence of content knowledge in the definitions may be attributed to a widely held belief that strong analytic skills necessitate a strong foundation in content areas. It may be that the naming of content skills as a value is superfluous if strong critical thinking and problem solving skills are evident.
While the skill of critical thinking/problem solving was specifically called out in all of the research describing 21st century skills (see Table 1), and was the most common skill when the HTE recruitment and hiring activities were analyzed and mapped to the 21st century skills categories (see Table 4), it was also not a value identified by the majority of the teachers based on the recruitment and hiring process. Although many of the teachers stated that the process valued creativity and the ability and willingness to take risks, these values were not articulated or partnered with critical thinking/problem solving. As with the case of content knowledge, the 21st century skills (see Table 1) vocabulary may be too vaguely defined and overlapping in nature. It may also be that teachers view critical thinking/problem solving as a prerequisite value for authentic creativity and purposeful risk-taking.

The teachers clearly identified two of the 21st century skills (see Table 1), but certainly not the majority. But, the majority of the teachers described the director’s vision as an extension of project based learning. Candidate SCB4 described her vision as “project driven and teacher driven.” SCB2 described her vision as a “school where teachers are the designers of projects that address real world problems and create authentic products for a real world audience.” The description of the director’s vision in terms of project based learning may be further evidence that the teachers found more than two of the identified 21st century skills (see Table 1).

Candidates leaving the HTE Bonanza were specifically asked the following question: “Based on the activities today, what do you believe are the educational values, beliefs, and goals of HTE?” The majority of the candidates also articulated the vision and goals of HTE in terms of authentic, project-based learning. Candidate E2 stated, “HTE
definitely values teaching individuals; giving all students a voice; bringing the real-world into the classroom, meaning real problems and real issues.” Candidate E2 included in her answer both the projects and a description of the skills students will need for successful learning through projects. “I believe that HTE will strive to create meaningful learning experiences for their students through the use of relevant and authentic projects that will encourage students to think critically and solve problems” (E2).

The focus group, comprised of the group of teachers the director had previously worked with, and who did not participate in the Bonanza process, also described the director’s vision in terms of her pedagogical belief about students taking charge of their learning through projects and hands-on learning. When directly asked about the vision of the director, one member of the Focus Group stated, “[The director wants students] to take risks. To explore. To discover, not to be passive learners, but actively engaged in the world” (F2). Another Focus Group member stated, “I think she really embraces technology, and 21st century learning” (F4). The focus group’s perceptions about the vision of the director were not related to the hiring process, but, instead, either to their previous work with her or their early experiences at HTE.

Based on the interviews conducted by this researcher, the exit surveys completed by the Bonanza participants, the program documents, the school’s internal and external websites, the candidate applications, and the candidate interview protocols, it is clear that the teachers and the Bonanza candidates believed that project based learning has the potential to build the requisite 21st century skills. Candidate E9 summarized the relationship between project based learning and life long, 21st century skills.
I think HTE values and respects children’s ability to inquire, choose, and discover their way to an outstanding, lasting, REAL education that will prepare them for life. The respect for children is evident in the responsibility they are given over their learning. The goal is to give students learning experiences that connect to them in an authentic, real-life manner. (E9)

The teachers found the process energizing and affirming, but did the process lead to the recruitment and hiring of the teachers with a 21st century skill set? In an interview 4 months into the first semester, the director indicated that she only had concerns about two of her teachers. Neither of those teachers went through the full Bonanza process, and neither worked with her at a previous school. Both of the teachers in question participated in an abbreviated Bonanza experience. The director also acknowledged that she hired some very strong teachers who participated only in the abbreviated Bonanza process.

In the final interview with the director, she stated that she was not 100% sure that the recruitment and hiring process worked, but she hired 6 of the 12 candidates through the HTE Bonanza, and she stated that she was very satisfied with the effectiveness and the fit of all 6. At least after the first 4 months of the school year, the full Bonanza process appears to function as a valuable hiring tool. The abbreviated Bonanza process yielded strong teachers, but also two with whom she is still unsure.

The director of HTE designed and implemented a recruitment and hiring process based on a vision of the 21st century skills needed by teachers. The director developed activities and “look fors” to assess the quality of those skills. During the analysis of the data, it also became apparent that parts of this vision were clearly communicated while
other parts were not easily discernable or articulated by teachers. This may be due to the general and sometimes overlapping definitions of the 21st century skills (see Table 1). Alternatively, the interpretation of some of the skills as prerequisite skills to other skills may skew the responses from the teachers. Finally, the recruitment and hiring process worked as a reciprocal method for gathering information for the director, as well as allowing prospective candidates to better understand the culture of the school.

**Recommendations for District Policies and Practices**

Researchers and scholars agree that if children are to be prepared well for the future, the curriculum must shift from a reliance on rote memorization of facts to a balance of deep content knowledge along with strong thinking and reasoning skills (Autor et al., 2003; Conley, 2007; Friedman, 2005; Jerald, 2009; Murnane & Levy, 1996; Partnership for 21st Century Skills, 2009; Reimers, 2008; Schoen & Fusarelli, 2008; Suarez-Orozco, 2005; Wallis et al., 2006). In order to insure this shift away from rote memorization toward a robust, critical thinking curriculum, the school leader must establish a set of values and beliefs about student learning (Cotton, 2003; Leithwood & Jantzi, 2006; Marzano et al., 2005). Current research also suggests that teachers can be hired based on a set of beliefs, attitudes, and values (Liu & Johnson, 2003; Metzger & Wu, 2008; Young & Delli, 2002). There are three recommendations for districts based on this case study. The first is that districts should consider focusing on professional development opportunities for school leaders that help them clearly articulate 21st century teaching and learning. The 21st century skills should include critical thinking and problem solving, creativity and innovation, collaboration, multiculturalism and global awareness, strong oral and written communication skills, and deep content knowledge.
The second recommendation is the need for districts to shift away from the current curricular focus on low-level standards and minimum competencies. Finally, districts should consider developing and utilizing strategies to maximize a teacher recruitment and hiring process to discern the skills and habits of teachers most likely to create robust 21st century learning environments.

**School Leadership and Vision**

Research clearly suggests that effective leaders have a defined and well-articulated vision (Bennis & Nanus, 1985; Cotton, 2003; Leithwood & Jantzi, 2006; Marzano et al., 2005). Many school leaders are promoted from the teaching ranks and have little school-wide leadership experience. Districts need to provide school leaders with the tools to develop and clearly articulate their vision for the school and, specifically, for expectations around teaching and learning. Bennis and Nanus (1985) found that strong leaders had a clear vision and a means to communicate that vision to stakeholders. According to Bennis and Nanus, a great leader “defines what has previously remained implicit or unsaid: then they invent images, metaphors, and models that provide a focus for new attention” (p. 37).

One very important model to communicate the vision for 21st century teaching and learning is through the teacher recruitment and hiring process. A school leader with a clear understanding of 21st century skills, including critical thinking and problem solving, creativity and innovation, collaboration, multiculturalism and global awareness, strong oral and written communication skills, and deep content knowledge, will have the capacity to create a robust teacher screening process. School leaders need the resources and tools to articulate and communicate their vision through their development of this
process. Through professional development, districts can assist school leaders in the articulation of their vision and then allow a decentralized hiring process that will give these leaders the freedom to design and implement a school-based hiring process.

**Curriculum Based on 21st Century Skills**

As school leaders begin to fully understand and confidently articulate a vision for 21st century skills, a reevaluation of teaching and learning will occur. Standardized testing has narrowed the curriculum, leaving less time for the subjects that may more naturally promote creativity and critical thinking skills (Deke & Haimson, 2006). Districts must work at the state and federal levels to mediate the pressures of standardized testing so that students will have the opportunity to participate in a rigorous and thoughtful 21st century curriculum.

Amabile (1998) defined creativity as the imagination and flexibility with which people approach problems and includes an individual’s ability to distill disparate information; persevere through seemingly unsolvable problems; and view these problems from a fresh perspective. Amabile’s definition of creativity matches with HTH’s strong affinity for Project Based Learning (PBL). The rote memorization work and repetitive task careers will not be available to our students. Jerald (2009) argues that creativity and innovation are even more important in today’s workplace because if a task “is well defined and has one or more ‘correct’ or preferred solutions” it will be performed by computers (p. 63). Districts should examine the pedagogy behind PBL and develop curriculum based on this or other inquiry-based models.

Districts implementing PBL will need to take great care to develop both a rigorous vertical and horizontal mapping of the curriculum, as well as an assessment system able
to measure both the quality of the content and the development of 21st century skills.

Project Based Learning is an alternative means to engage students in a thoughtful school experience that has the potential to prepare them for an unknown future.

**Robust Recruitment and Hiring Process**

In order to meet the needs of students and prepare them for the future, districts must develop a robust teacher recruitment and hiring process. While resumes, cover letters, references, and interviews are important, and can be used for early district-level screening, a more interactive and information-rich process is needed. Districts may centralize the initial recruitment process, but should decentralize the final hiring process. The three specific recommendations for a more robust teacher recruitment and hiring process include the following: (a) the inclusion of a wide section of the school community, (b) demonstration lessons by potential candidates, and (c) multiple opportunities for candidates to experience the culture of the school.

Liu and Johnson’s (2003) study found that the majority of new teachers were hired through a decentralized, school-based hiring process, but few “interviewe[d] with teachers, department chairs, students, or parents” (p. 2). So, while the process is often decentralized, Liu and Johnson found that the majority of teachers were primarily interviewed and hired by principals. Although about 50% of the candidates were interviewed by teachers from the school, the number of teachers interviewed by parents and students was described as “minuscule” (p. 17). The inclusion of a cross section of a school community taps into the experiences and expectations of the many different constituents with whom teachers will ultimately work. Meeting and interacting with a variety of constituents also provides the prospective teachers insight into the culture of
the school or organization and may lead to a better teacher-school match. The involvement of the different stakeholders may also contribute to the initial support of new teachers by these constituents because of their involvement and interest in the process. A school-based hiring process should be designed so that potential candidates interact with multiple members of the school community.

The process for hiring teachers should also include some form of a teaching demonstration by the candidate. According to Liu and Johnson (2003), “Teaching demonstrations are among the most authentic indicators of a candidate’s teaching ability and potential” (p. 30). But this study found that fewer than 7.5% of the teachers were observed teaching. The HTH organization asks teachers to come to their campus and teach a class, while the director of HTE watched teachers in their own schools. Districts should find a way to observe teaching candidates working directly with students. If classroom observations or demonstration lessons are impossible to arrange, candidates should send videotaped lessons.

A robust and information-rich teacher-hiring process should provide screened candidates the opportunity to spend time at potential school sites and to interact with multiple stakeholders before they are hired. This would afford prospective teachers an opportunity to understand the culture of a school and determine if it would be a good match. According to Liu and Johnson (2003), teachers who do not have an adequate understanding of their school before they are hired may not be effective with students, and turnover may be high. “A new teacher’s effectiveness in working with students may thus depend on whether she has been hired to do a job that is a good fit for her” (Liu & Johnson, 2003, p. 1). Student led tours, interviews with multiple stakeholders,
demonstration lessons, and classroom observations should all be part of the hiring process. Interactive activities and simulations like those used at the HTE Bonanza will also offer candidates insight into the mores and culture of a school or organization.

**Limitations of the Study**

This study adds to the research literature on the recruitment and hiring of teachers with the skills to prepare students for the 21st century, but with certain limitations. First, this study is limited to an analysis of a single charter elementary school that by definition has greater flexibility in the selection of teachers than traditional district-managed schools. Also, the interview sample is small with only one director and 10 teachers. Transferability or generalization of the findings may not be possible.

Another limitation is that the primary source of information was gathered from interviews with a group of teachers being hired for a new charter school within the HTH organization. Teachers may have been attracted to a new school and a new school building for many different reasons. New, young teachers may have been attracted to a school whose leadership has the flexibility to hire teachers unencumbered by the local teacher union.

This study did not address or evaluate the actual effectiveness of the teachers hired for the school because the collection of data took place early in the first semester of the teachers’ employment. This timing enhanced the potential accuracy of the participants’ memory of the hiring process, but it was too early in the teachers’ employment to address teacher effectiveness.
Finally, interviews were conducted with only the successful teacher’s, those that were hired by the HTE director. The findings are therefore limited because the unsuccessful candidates’ perceptions of the recruitment and hiring process are unknown.

**Areas for Future Research**

Several areas for future research emerged from this case study. The first would be a follow-up to this study to determine if the teachers hired did in fact possess the skills and traits needed to inspire children to succeed in the 21st century. More importantly, did the teachers hired through the process positively impact the academic achievement of the students? This would need to be a longitudinal study with a clear definition of academic achievement tied to 21st century skills. For this study, traditional academic measures such as standardized test scores may be used, but should not be the primary metric for defining academic achievement.

Another related study would be to examine the effect of the hiring process on teacher retention rates. This longitudinal study would examine and compare the retention rate of teachers hired by two different processes. The first would include teachers hired through a centralized process in which candidates had little contact with the school community or school stakeholders. The second would include teachers involved in a robust, decentralized process including multiple opportunities for candidates to interact with school stakeholders. This type of study could possibly lead to better understanding of the role of organizational fit as identified in this study and its impact on teacher retention.

This researcher found it difficult to find clear and succinct definitions for 21st century skills. A study to simplify and clarify the definitions would make future research
on this topic more accessible and manageable. The study may be a meta-analysis of existing studies examining and assessing 21st century skills.

Another study could analyze the categories of 21st century skills identified in this study and design instruments to specifically measure and assess skills like critical thinking and problem solving, creativity and innovation, collaboration, multiculturalism and global awareness, strong oral and written communication skills, and deep content knowledge.

A study designed to review how both educational and noneducational organizations assess and screen for specific characteristics or qualities would assist school leaders in developing an information-rich recruitment and hiring processes. A clear set of “look fors” for the different 21st century skills would be an excellent resource for districts and school leaders.

Finally, it would be important to conduct a study to find out if an alternative hiring process like the one used at HTE would be a feasible practice for regular public schools. Public schools leaders could work with teacher unions to waive certain hiring restrictions and interactive, school centered hiring practices could be adopted. Such a case study of a new or existing public school could inform the human capital management practices in school districts.

**Conclusion**

Chapter 5 began with a brief review of the previous chapters, an overview of the problem, and the methodology used in this case study. This chapter discussed the major findings based on the three research questions. Next, the chapter highlighted the
limitations, recommendations for policies and practices, and implications for future research.

The findings from this study suggest that a recruitment and hiring process can be designed and assessed based on a leader’s vision of teaching and learning. The data also suggest that the teachers experiencing the process can identify some elements of the vision for the school, while other elements were unnoticed or not articulated. Finally, this study also found that the recruitment and hiring process designed by this school leader worked in a reciprocal manner; the process provided valuable information for the director, as well as information for the prospective candidates about the culture of the school.

To maximize the usefulness of the data collected during the recruitment and hiring process, school leaders need to clearly define and articulate their vision for teaching and learning. They will then be able to develop specific rubrics to assess the desired skills and establish protocols for recording the observations. Stakeholders involved in the hiring process must fully understand the vision, as well as the rationale, for specific recruitment and hiring tools.

Our world is constantly changing, yet many of our schools are slow or unwilling to adapt. This study chronicled the actions of one school leader at a charter elementary school and examined how the school leader’s vision for student learning was mirrored in the methodology used to recruit, interview, and hire teachers. The findings from this study have implications for charter organizations, superintendents, school board members, human resource or human capital administrators, principals as leaders of such
processes, teachers, parents, students, and communities who strive to attract, hire, and retain teachers with the skills to create a robust 21st century learning environment.
REFERENCES


Appendix A

Director Interview

**Director Interview I**

1. What is your vision for the students of your school?

2. What do you believe are the skills students will need to be successful in the future?

3. What are some of the specific qualities or characteristics found in the teachers you invited to work at the school (those that did not go through one of the two processes).

4. Describe the ideal qualities of the teachers you are hoping recruit and hire for HTE.

**Director Interview II**

1. Tell me about your recruitment tools. How did you go about attracting teachers?

2. The activities you selected for the “Bonanza” day were a little bit different from those conducted in past HTH Bonanzas. What were you looking for in the changes you made?

3. Can you explain the “Bonanza” activities and why you thought they would be important?
   - Project planning
   - Student case studies
   - Socratic seminar
   - Connections activity
   - Feedback survey
   - Candidate debrief

**Director Interview III**

1. What tools did you use to initially assess and screen your applicants?

2. How did you assess the applicants’ performance in each of the following activities?
   - Project planning
   - Student case studies
   - Socratic seminar
· Connections activity
· Feedback survey
· Candidate debrief

3. Which of these activities were most helpful? Why?

4. Is there anything you would change about the hiring and recruitment process?

5. Tell me about the two different Bonanza processes. Which yielded the most valuable information. Why?

**Director Interview IV**

1. Do you think that people applying for High Tech jobs have certain expectations?

2. How does the website help with recruitment? Or does it?

3. Was there anyone who you interviewed that you did not pick up that you perhaps have had second thoughts about?

4. Was there one thing or what were the things that really turned you off from certain candidates?

5. Now that you are a semester in, what would you change about your hiring or your recruitment practice or both?

6. In your earlier interviews you said that all the people you initially found most interesting ended up being hired. You also said that your High Tech High colleagues did not always or necessarily completely agree with some of the candidates. So was it beneficial to spend a whole day on Bonanza?

7. If you look back now and you think about someone who you hired through whatever process, you brought on your own, or you went through Bonanza, or they went through a modified Bonanza, are you satisfied, completely satisfied with all the people you picked up?
Appendix B

Teacher Interview

1. What attracted you to HTE? (How did you hear about the opening?)

2. What did you think about the school and the leadership after your first contact with the director?

3. Can you describe the director’s vision for the school? Why do you think that?

4. Why do you think the activities for Bonanza were selected?
   - Project planning
   - Student case studies
   - Socratic seminar
   - Connections activity
   - Feedback survey
   - Candidate debrief

5. Was it a positive experience? Why?
Appendix C

Teacher Focus Group

Teacher Focus Group

1. What attracted you to HTH?

2. All of you had permanent status with your former districts/employers. Why leave?

3. How would you describe the director’s vision for the school?

4. What kind of skills do you hope the new teachers hired will possess?
Appendix D

Institutional Review Board Approval

August 24, 2011

Student Researcher: Carol Barry
Faculty Researcher: Dr. Kathy Cohn
Department: Educational Leadership

IRB Number: 721077
Title: Effect of Principal's Vision on Recruiting and Hiring Teachers for 21st Century Students
Contract/grant number: N/A
Risk Level: Minimal
Exemption: 45 CFR 46.101(b)[1]/(2)

Dear Carol Barry:

The project referenced was reviewed and verified as exempt in accordance with SDSU's Assurance and federal requirements pertaining to human subjects protections within the Code of Federal Regulations (45 CFR 46.101). This review applies to the conditions and procedures described in your protocol.

SPECIFICALLY FOR THIS STUDY PLEASE NOTE: Exempt verification is contingent upon you providing the IRB with a copy of any necessary permission from the director of the selected school and the director of the charter organization.

The determination of exemption is final and requests for continuing review (Progress Reports) are not required for this study. However, if any changes to your study are planned, you must submit a modification request and receive either IRB approval (per 45 CFR 46.110 or 46.111) or IRB verification that the modification is exempt (per 45 CFR 46.101). To submit a modification request, access the protocol via the WebPortal, on the protocol Main Page, you will need to click on "Modifications" under Protocol Maintenance and enter a report. Once you have filled in your responses on the report form, click "submit". Additionally, notify the IRB office if your status as an SDSU-affiliate changes while conducting the research study (you are no longer an SDSU faculty member, staff member or student).

Please note the following for all exempt studies:

a) If this research involves the use of existing or secondary data sources, information obtained must be recorded so that subjects cannot be identified, either directly or through identifiers linked to the subjects.

b) If information will be obtained from individual medical records, please check with the organization authorized to provide access to these records to determine whether regulations relating to the Health Insurance Portability and Accountability Act (HIPAA) pertain to your research. Likewise, if academic records are accessed, Federal Education Rights and Privacy Act (FERPA) requirements must be respected. Notify the SDSU IRB office if protocol revisions are necessary to comply with HIPAA regulations.

c) If study recruitment will take place through an outside agency or organization, confirm with the
organization that the necessary permission for you to conduct the study prior to initiation of any study activities has been obtained.

e) Approval is contingent upon the completion of the SDSU human subjects tutorial (found at: http://www-tohan.sdsu.edu/~gra/locia.php) by all members of the research team. This certification must be renewed every 2 years.

For questions related to this correspondence, please contact the IRB office ((619) 594-6822 or e-mail irb@mail.sdsu.edu). To access IRB review application materials, SDSU’s Assurance, the 45 CFR 46, the Belmont Report, and/or any other relevant policies and guidelines related to the involvement of human subjects in research, please visit the IRB web site at http://gra.sdsu.edu/research.php.

Graduate Students: This notification may be used as documentation to register in Thesis 799A. Attach a hard copy of this notice to your Appointment of Thesis/Project Committee form prior to submitting the completed form to Graduate and Research Affairs - Student Services Division.

Sincerely,

Jeanne Nichols
Chair, Institutional Review Board

Amy McDaniel
Regulatory Compliance Analyst

Choya Washington
Regulatory Compliance Analyst

Brianae Larsen-McCoy
Regulatory Compliance Analyst
Dear Mr. Rosenstock,

This letter confirms my interest in conducting research at High Tech Elementary, Chula Vista. I am currently pursuing a doctoral degree in educational leadership from San Diego State University. My dissertation topic is a study of the impact of a school leader’s vision on the recruitment and hiring of teachers.

Using a qualitative comparative case study approach, I intend to build upon existing knowledge and current research pertaining to this topic. While illuminating best practices in teacher hiring and recruitment, and filling gaps in the research literature, I believe that my research will be of value to school systems seeking to improve or replace existing hiring practices.

The sources of the data will be documents including the director’s notes, the charter organization’s website, candidate applications, including demographic information, candidate interviews, interview notes, and notes from the candidate debriefing. I will conduct face-to-face interviews with the director, post-hiring interviews with six teachers, one from each grade level, and a focus group interview composed of teachers previously known to the director. I will audio record all interviews.

In collecting data, I will adhere to a “do no harm” philosophy, ensuring that participants are not put at risk in any way. My first priority will be to protect the privacy of all participants. In interpreting and analyzing the data, I will take all steps necessary to ensure the anonymity of those participating in the research. At every step of the research process, my work will be conducted with the utmost respect for participants and institutions.

It is my hope that the proposed research study will prove useful to educational leaders who wish to identify and hire teaching candidates who are best able to impart the skills and knowledge students will need to succeed in the 21st Century world. I thank you...
for your consideration of this request and look forward to your response either by email barryfam06@yahoo.com or U.S. mail service at the address above.

Your signature below indicates that you have read the information in this document and give consent to the research at High Tech High Elementary, Chula Vista. Your support is very much appreciated.

________________________________________
Name of Participant (please print)

________________________________________
Signature                                                                             Date

Sincerely,

Carol Barry
Doctoral Candidate, SDSU
Appendix F

Consent Form: Director

**Consent Form:** Director

**Title of Study:** Effect of Principal’s Vision on Recruiting and Hiring Teachers for 21st Century Students

**Study Investigator:** Carol Kuhl Barry, SDSU Educational Leadership Ed.D. Program

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**Invitation to Participate & Study Description**

As participant in this study, your input will help to delineate the effect of a school leader’s vision on recruiting and hiring teachers. By agreeing to participate in this study, you are agreeing to be interviewed three times this semester at your school. The interview will take about 40-60 minutes to complete and will be digitally recorded. Supplemental notes will be recorded on comment sheets. Information about you will not be disclosed. If you choose not to be audio-recorded you may still participate in the study and notes from the interview will be hand written.

**Risks and Benefits**

This study does not involve any type of physical risk; you will be asked to answer questions about your perceptions of the recruitment and hiring process. Although this study is not designed to help you personally, the information will help me to better understand how the effect of the vision of a school leader on the hiring and recruitment process. The results of the interview will also be made available to interested research participants. Respondents are welcome to contact me for more information.

**Confidentiality**

The information you provide will be kept strictly confidential. To protect your privacy, your responses to the interview questions will only be identified with a code number and will be kept in a locked cabinet in the researcher’s home. All project materials will be kept for three years after the study has ended, and will be accessible only to the researcher and the dissertation chair. The information obtained in this study may be published in scientific journals and presented at professional meetings, but only group patterns will be described and your identity will not be revealed.

**Your Right to Ask Questions**

You have the right to ask questions about this study and to have those questions answered by any of the study investigators before, during or after the research. If you have any other concerns about your rights as a research participant that has not been answered by the researcher you may contact Dr. Kathleen Cohn, Professor at San Diego State University.

**Consent**

Your signature below indicates that you have decided to participate voluntarily in this study and that you have read and understood the information provided above.
Additionally, you may opt out of this study at any point. You will be given a copy of this form to keep. You may also contact the Institutional Review Board at SDSU (619-594-6622) to report problems or concerns related to this study.

Signature of Participant: ___________________________ Date: ________________

Name of Participant (Please Print): ________________________________
Appendix G

Consent Form: Teacher

Consent Form: Teacher

Title of Study: Effect of Principal’s Vision on Recruiting and Hiring Teachers for 21st Century Students

Study Investigator: Carol Kuhl Barry, SDSU Educational Leadership Ed.D. Program

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Invitation to Participate & Study Description
As participant in this study, your input will help to understand the effect of a school leader’s vision on recruiting and hiring teachers. By agreeing to participate in this study, you are agreeing to be interviewed once this semester at your school. The interview will take about 40-60 minutes to complete and will be digitally recorded. As a participant in the focus group interview, your input will also help to understand the effect of a school leader’s vision on recruiting and hiring teachers. As a participant selected for the focus group interviews, you will also be agreeing to be interviewed once this semester at your school. The focus group interview will take 60 minutes to complete and will be digitally recorded. Supplemental notes will be recorded on comment sheets. Information about you will not be disclosed. If you choose not to be audio-recorded you may still participate in the study and notes from the interview will be hand written. If as a participant in the focus group, you choose not to be recorded, all notes from the focus group interview will be hand written.

Risks and Benefits
This study does not involve any type of physical risk; you will be asked to answer questions about your perceptions of the recruitment and hiring process. Your choice of whether or not to participate will not affect your relationship with the director or your job standing. Although this study is not designed to help you personally, the information will help me to better understand how the vision of a school leader may effect the hiring and recruitment process. The results of the interview will also be made available to interested research participants. Respondents are welcome to contact me for more information.

Confidentiality
The information you provide will be kept strictly confidential. There is however, no guarantee that what is disclosed during the focus group interview will not be discussed outside the group. As a focus group participant, you should not share information that you are uncomfortable with others knowing.

To protect your privacy, your responses to the interview questions will only be identified with a code number and will be kept in a locked cabinet in the researcher’s home. All project materials will be kept for three years after the study has ended, and will be accessible only to the researcher and the dissertation chair. The information obtained in this study may be published in scientific journals and presented at professional meetings, but only group patterns will be described and your identity will not be revealed.
Your Right to Ask Questions
You have the right to ask questions about this study and to have those questions answered by any of the study investigators before, during or after the research. If you have any other concerns about your rights as a research participant that has not been answered by the researcher you may contact Dr. Kathleen Cohn, Professor at San Diego State University.

Consent
Your signature below indicates that you have decided to participate voluntarily in this study and that you have read and understood the information provided above. Additionally, you may opt out of this study at any point. You will be given a copy of this form to keep. You may also contact the Institutional Review Board at SDSU (619-594-6622) to report problems or concerns related to this study.

Signature of Participant:___________________________________________ Date:_______________

Name of Participant (Please Print):____________________________________________
Appendix H

Bonanza Schedule

Bonanza Schedule for Friday, May 21, 2010

9:00 – 9:15  Candidates Arrive at High Tech High Chula Vista

9:30 – 9:45  "The HTH Story" - Meet in HTHCV Conference Room

9:55-10:55  Candidates Observe Classes

11:00 – 12:00  Student Interviews – HTHCV Commons

12:00-12:40  Seated lunch in HTHCV Commons (1 candidate will be seated at each table. HTHCV teachers will converse with candidates)

12:40- 1:40  Candidates Teach Lesson in Junior Classes (see below for schedule)

1:45 – 2:45  Candidates Observe Classes

<table>
<thead>
<tr>
<th>Teaching Candidates</th>
<th>Teaching</th>
<th>Classroom</th>
<th>Teaching Time</th>
<th>Interested In...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allison Deppe</td>
<td>Engineering</td>
<td>Rod</td>
<td>4th Period (12:40 – 1:40)</td>
<td>12th grade engineering/ 11th or 12th grade math</td>
</tr>
<tr>
<td>Bashir Najar</td>
<td>Engineering</td>
<td>Jenny</td>
<td>5th Period (1:45 – 2:45)</td>
<td>12th grade engineering</td>
</tr>
<tr>
<td>Gilbert Garcia</td>
<td>Math</td>
<td>Allison</td>
<td>5th Period (1:45 – 2:45)</td>
<td>12th grade math/engineering</td>
</tr>
<tr>
<td>Alicia Crump</td>
<td>Engineering</td>
<td>John</td>
<td>4th Period (12:40 – 1:40)</td>
<td>12th grade engineering/ 11th or 12th grade math</td>
</tr>
</tbody>
</table>
Appendix I

Prescreening Interview Questions and “Look Fors”

High Tech Elementary Teaching Candidate Screening Process, Spring 2011

a. Review Applications / Resumes
   - elementary experience
   - years of teaching experience
   - area of professional expertise
   - personal passions
   - bilingual
   - recommendations by other trusted sources

b. In-Person/Phone (or Skype) interviews

1. What appeals to you about project-based learning?
   - students as all around contributors to the process and product
   - student choice in project design and project execution
   - transfer and application are deeper with a PBL
   - teacher as facilitator - help students access content

2. Tell me about one your mentors.
   - how mentor modeled belief system
   - a warm demander
   - makes risk taking become a desirable habit of mind

3. Tell me about a student who has impacted you as a teacher.
   - persistent, close work with the student changed/validated teacher beliefs
   - cultural understanding provides insight into child’s behavior and how to respond
   - transfer of learning to future students

4. What aspects of teaching are the most gratifying to you?
   - inspiring children - students take action and are intrinsically motivated by the content/skills
   - when kids access the rich learning opportunities because I thoughtfully scaffolded lessons

5. Given that HTH is a K-12 organization, what is it that draws you to elementary age students? Capacity to absorb more capable than people tend to realize.
Appendix J

Socratic Seminar Guidelines

**Guidelines for Participants in a Socratic Seminar**
1. Refer to Text when needed during discussion. A seminar is not a test of memory. Your goal is to understand the ideas, issues, and values reflected in the text.
2. It’s OK to “pass” when asked to contribute.
3. Do stay focused; ask for clarification.
4. Stick to the point currently under discussion; make notes about ideas you want to come back to.
5. Don’t raise hands; take turns speaking.
7. Speak up so that all can hear you.
8. Talk to each other, not just to the facilitator.
9. Discuss ideas rather than each other’s opinions.
10. You are responsible for the seminar’s quality.

**Dialogue is characteristics by:**
- suspended judgment
- examining our own work without defensiveness
- exposing our reason and looking for limits to it
- communicating our underlying assumptions
- exploring viewpoints more broadly and deeply
- being open to disconfirming data
- approaching someone who sees a problem differently not as an adversary, but a colleague in common pursuit of better solution

**Expectations of Participants in a Socratic Seminar**
When evaluating Socratic Seminar participation, I ask the following questions about participants. Did they…
- Speak loudly and clearly?
- Cite reasons and evidence for the statements?
- Use the text to find support?
- Listen to others respectfully?
- Stick to the subjects?
- Talk to each other, not just the leader?
- Paraphrase accurately?
- Ask for help to clear up confusion?
- Support each other?
- Avoid hostile exchanges?
- Question others in a civil manner?
- Seem prepared?
8:30  in HTM Large Commons
Welcome, coffee, photos
Agenda Overview
Brief self - introductions, HTH faculty

9:00 - 10:00  GROUP A: Project Planning / GROUP B: Interviews
in HTM Large Commons with laptops
Prompt: Using the Internet create a basic two-week Project for Elementary age students.
You may choose the grade level and content areas. Be sure to include a general outline for
approximately 10 days, an essential question, and a product.

10:00 - 11:00  GROUP A: Interviews / GROUP B: Project Planning
Prompt: Using the Internet create a basic two-week Project for Elementary age students.
You may choose the grade level and content areas. Be sure to include a general outline for
approximately 10 days, an essential question, and a product.

10:00 - 11:00

11:00 - 11:15  Project Share and Feedback  in HTM Large Commons
(3 groups of 4 candidates)
Protocol: HTH Faculty to facilitate, another HTH Faculty to observe
Presenter gets 5 min to share, 1 comment each to give feedback to presenter
something specific that would make the project stronger

12:00 - 12:30  Lunch at HTM (break, relax, chat - no interviews)
12:35 - 1:15  Middle School Student-Led Tour of campus
1:15 - 2:00  Student Case Study  in HTM Large Commons
(3 groups of 4 candidates)
Review information about a student, Reflect, make notes
In small group:
Write a brief Action Plan for this student based on the info above: What are the first 5 actions you
would take to support this child? Please list in order of importance.

• strengths
• areas of concern
• action plan
• who executes
• timeline
2:00 - 2:45  Article Critique / Socratic Seminar
Review Article provided ahead of time (15 min)
Socratic Seminar norms (5 min)
Socratic Seminar (20 min)

2:45  Close in HTM Large Commons
Candidates are thanked
Complete Feedback Survey of process
Anne to lead “Connections”
Candidates are notified (phone and email) by May 1 if they are invited to teach at HTE/ HTMCV

3:10  Adjourn
3:00 - 3:30  Set up for Debrief / Gallery in 6th grade room? (Anne, Melissa)
3:30 - 4:30  HTH Faculty Feedback
Gallery walk of photos with stickies
Oral sharing of impressions
Advocate (or not) for a candidate
3:10 Adjourn
3:00 - 3:30 Set up for Debrief / Gallery in 6th grade room? (Anne, Melissa)
3:30 - 4:30 HTH Faculty Feedback
Gallery walk of photos with stickies
Oral sharing of impressions
Advocate (or not) for a candidate
Appendix L

Project Planning Matrix

<table>
<thead>
<tr>
<th>Candidates</th>
<th>Candidate 1</th>
<th>Candidate 2</th>
<th>Candidate 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Knowledge:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>project takes content</td>
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<td></td>
</tr>
<tr>
<td>knowledge to the next</td>
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</tr>
<tr>
<td>level</td>
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</tr>
<tr>
<td>Relevance:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Kids would be curious</td>
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Appendix M

Speed Dating Questions

1. At High Tech High, we believe that teacher collaboration is essential to improvement of practice and effectiveness of lessons. Given complete freedom over your schedule, what opportunities to collaborate would you create, and what would the purpose of that collaboration be?
   - Consistent planning time with grade level colleagues
   - Lesson study opportunities
   - Planning time with specialty teachers
   - Tuning protocols
   - Vertical planning time
   - Align/spiral curriculum
   - Gathering resources
   - Assessment feedback
   - Data analysis
   - Project design

2. At High Tech High, student “voice” and “choice” is particularly honored. Why is it important to give elementary children choice? What are the ways you have given (or plan to give) elementary children “voice” in their education?
   - Students have buy-in
   - Relevant and interesting projects
   - Develops independence and responsibility
   - (Specific project)

3. Teaching credential programs do not prepare you for every kind of student. Students come in many packages, and they all have something to offer us as teachers. Please tell us about a student who shaped you as a teacher, (maybe gave you a different perspective on how to teach.)
   - Candidate focuses on how the student made him/her think differently
   - Student made candidate change his/her actions
   - (Look for specifics)

4. At High Tech High, we create projects that allow children to have roles. We intentionally help our students take on new roles they may be unfamiliar / uncomfortable with, in a safe environment. We teach them to stretch themselves in new ways in order to develop the whole child. What professional / personal roles or areas do you see yourself needing to “stretch” in? How have you addressed this thus far?
5. What are you passionate about? How will you help your students find their passions?
   - Give student freedom to explore
   - Provide rich, interesting experiences
   - Provide a place to take risks

6. “Suppose you knew that your child would be part of a group that went to form the first colony on another planet, how would you prepare this child for life there? That’s the kind of thing we should be asking ourselves about education. You can’t prepare the child for the job market that will exist 20 years from now. So, how can you build a curriculum that will shape an individual to be a pioneer in an unknown land because that’s what the future is?” (Mary Catherine Bateson, daughter of Margaret Meade)
   What does this quote mean to you? What attributes and skills will our students need to navigate an unknown future?
   - We don’t know what skills students will need
   - Resiliency, flexibility, creativity, innovative, interpersonal skills
Appendix N

Student Case Studies

Case Study: Sarah

Sarah is a first-grade girl, who has very advanced skills, is well behaved and socializes well with her peers. She reads at a fourth grade level, her writing skills are well above what is expected of first grade. Her math skills are also strong. She can often be seen, completely absorbed in reading books at different times throughout the day—often preferring to bring a book outside at recess and lunch.

Although her skills are strong, Sarah is often unproductive at work times throughout the day. During writer's workshop activities, Sarah will approach her teacher saying she can't think of anything to write about. Her teacher conducts frequent mini lessons with the entire class, and regularly consults with individual students about ways to decide on topics and how to develop ideas into narratives. This process often seems ineffective with Sarah. Her immediate response to suggestions is "No, I don't want to write about that."

At times Sarah has been able to choose a topic, and when her teacher leaves her side, constantly comes to him asking, "How do you spell ________?" Many of the words she asks for help with are words that she knows how to spell, or are on the word walls and spelling resources in the room. When she does write a word independently, she will consistently ask the teacher, "Is this right?" After writing a sentence, Sarah will often say, "I don't know what should come next," and is persistent in her attempts to get her teacher to tell her what she should write next.

When she is writing, Sarah also erases and rewrites almost all her letters and words, wanting to make sure they are formed correctly. She has often dissolved into tears when her eraser tears a hole in her paper.

One strategy her teacher uses is to start with drawing a picture of an event that happened, that Sarah might want to explore in her writing. This strategy is often useful to get her started, but invariably, Sarah approaches her teacher, paper in hand, indicating a small crayon or marker line, saying, "I messed up." This process occupies much of the time set aside for writing. While Sarah has advanced technical skills in writing, her lack of productivity and fluency in her writing has resulted in a thin portfolio of writing projects.

These behaviors are repeated throughout the day, with other subjects as well. They seem to be most prevalent when the task involved requires the completion of a product—a piece of writing, an art piece, a math journal or recording sheet. Sarah is less likely to behave in these ways when engaged in a group task, a math exploration or game, for example, or in a whole or small group lesson about writing or spelling. She proudly and freely demonstrates her knowledge and skill in those contexts.
Case Study: Victor

Victor is a fifth grade student who is a second language learner. He has a strong grasp of social language and his academic language is developing well. Victor is an active and engaged student. He participates in whole class lessons with enthusiasm, often raising his hand to contribute to classroom conversations. He can be seen engaging in impromptu games of foursquare and basketball at recess. He is well liked by his peers and is often chosen as a group partner or teammate at recess or during P.E.

When Victor engages in small group activities, different characteristics are evident. In a recent project in which students were developing a map that combined the economic activity and physical geography of the Massachusetts colony, Victor had difficulty interacting with his group mates. His teacher observed him leaning back in his chair, staring at the ceiling while the other three students were discussing the variety of economic resources in the colony. She asked Victor to sit up and participate with his group. He complied physically, leaning forward and observing, but did not contribute any ideas to the conversation.

Later in the group work time, the teacher was called over to the group by two of the members, who complained that Victor was being inflexible about what he wanted to do. They had developed a plan for which student was going to complete a particular portion of the map, and Victor was refusing to go along with the group’s decision. He was insisting on being able to complete a particular portion of the map, although the other students had agreed upon a rock-paper-scissors approach to determining who would work on each section.

As the activity came to a close, Victor’s group again summoned the teacher, asking for help with the group’s clean-up efforts. Victor was insisting that the markers they were using be put away in a particular order, and he was aggressively grabbing markers from his teammates and refusing to listen to their requests that he collaborate with them and work together to put their materials away.

Victor’s teacher has observed these behaviors of disengagement, rigidity, and competitive aggression in many of the academic collaborative group projects she has implemented in the classroom. For example, at times, while engaging in math games with his peers, Victor can be seen commandeering the supplies, such as dice, base-ten blocks, or pencils and keeping them from his peers, disrupting the flow of the game or activity. She has spoken to Victor, and with his parents about the importance of collaboration with his peers, but these efforts have had little impact. invariably, she is drawn into problem solving with the collaborative groups to which Victor is assigned, with little long-term success. She often resorts to removing Victor from the group so that they can complete the assignment and giving him an independent assignment.
Appendix O

Bonanza Exit Survey

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<tr>
<th>Question</th>
<th>Candidate 1</th>
<th>Candidate 2</th>
<th>Candidate 3</th>
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<tr>
<td>What initially attracted you to this position? Why are you interested in working at HTE?</td>
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<td>What was the best activity of the day for you? Why?</td>
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<td>What was the most difficult activity of the day for you?</td>
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<td>Based on the activities today, what do you believe are the educational values, beliefs, and goals of High Tech Elementary?</td>
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<td>After Bonanza, is your enthusiasm for the position greater or less? Why?</td>
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<td>What did you notice about your fellow candidates?</td>
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<td>What are your suggestions for improving the Bonanza process for future candidates?</td>
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Appendix P

Sample Candidate Debrief Poster