

How Online Schools Serve and Fail to Serve At-Risk Students

By

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## Dedication

My children paved the way for me to complete this work and were dedicated cheerleaders throughout the journey. They prodded me; they gave me permission; they moved with me and they let me go. They delighted at my successes and listened patiently as I grappled with each challenge. When there were financial burdens, they offered to work harder. Even while I doubted my tenacity, they had complete faith in my persistence and ability. My children ground me in everything that is important and I dedicate this dissertation to Maya, Matthew and Gabriella, for their tireless support.

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## Abstract

### *Purpose:*

Online schools were initially designed to provide access to diverse courses to advanced and homeschooled students, however, many online schools now market their programs specifically to students whose needs place them at-risk in traditional schools. The capacity of technology to address any of the needs of under-served students is largely undetermined and it is unclear if online schools are in fact enrolling significant proportions of these students. Furthermore, little is known about the ways in which online schools are supporting the needs of the under-served students they are enrolling.

The purpose of this study is to establish how and in what ways online schools serve under-served students. Given the almost complete absence of research at the intersection of under-served students and online learning, a descriptive analysis is an appropriate place to start.

### *Data Collection and Analysis:*

This study was conducted in two phases. First, a near-census of state level enrollment and demographic data identifying students enrolled in Virtual Schools in most of the states authorizing fulltime online schools was completed by examining state websites and surveying state department of education staff. Second, case study analysis of four schools in different U.S. regions was completed, including in-depth interviews with administrators, teachers, support staff and students. Online and face-to-face classes and learning sites were observed. Schools were selected from states offering full-time online options and based on their enrollment of under-served students.

*Findings:*

In this study I define what under-served students need as four separate but interdependent components: *adequate resources, fair systems, excellent teaching* and *culturally responsive* practices. In each component I analyze the ways in which online learning can specifically contribute.

The reoccurring theme observed in 3 out of the 4 schools studied, however, is that technology's potential is barely reflected in online schools. Practitioners are still using online technology to deliver an education system firmly rooted in conventional school practices leaving the potential of online technology still untapped. However, one school – Blended Virtual H.S.-- consistently pushes itself to more fully garner technology's potential in innovative and substantive ways and their staff appreciates, challenges and is ready to empower their students

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## Chapter 1

### *Introduction*

The World Wide Web and the Internet have opened up myriad educational opportunities from both within and beyond the classroom. Students all over the world have become adept at searching out information, collaborating in academic and social spaces and making learning personally relevant and immediate. Colleges and universities seized the opportunity to develop online courses and programs, and K-12 schools, while slower to capitalize on the power of the Internet to teach students, have now fully joined the movement. Last year there were three million enrollments in online and blended K-12 courses (iNACOL, 2010) and in some states the demand for online courses continues to exceed the available options (Watson, Gemin, Ryan, & Wicks, 2009).

Online learning may have begun as a way to expand the curriculum and access to educational opportunities for more advanced students, but it is increasingly being used as a tool for education reform (Smith, Clark, & Blomeyer, 2005; Barbour, 2009). As funding shortages strain already depleted traditional school budgets, districts have sought online alternatives for their at-risk students. Advocates of online learning have been persuasive in arguing that, while research has claimed that students most likely to succeed in online courses are those who are strongly motivated, have academic and technical skills and are disciplined (Cavanaugh & Clark, 2007), online programs should not be limited to these students (DeTure, 2004). In fact, advocates charge that online learning's flexibility and potential for personalization should be used to target low

performing and at-risk students; “Today’s online programs and schools offer a broad range of online courses and services to reach a variety of students, from struggling to gifted...” (Watson & Gemin, 2008).

Online schools originally targeted academically advanced and homeschooled students in part because research indicated that students needed to be self-motivated or have strong familial support in order to be successful taking classes online (Barker & Wendel, 2001). However, online schools were also an educational reform around which religious and free market conservatives could align (Apple, 2006; Ahn, 2011).

Homeschooling parents were now able to acquire curriculum and instructional assistance for free – something they had previously had to pay for -- while still adhering to their commitment to educate their children from their homes (Apple, 2006). Online schools also provided the elements of choice that appealed to free market conservatives. This meant that many of the students initially enrolling in online schools had not been attending public schools. For example, more than fifty percent of the students enrolled in online schools in Pennsylvania in 2002 were being educated at the public’s expense for the first time (Gentzel, 2002). Huerta reported that the types of students enrolling in online schools were different from those in traditional charters because most online students had been previously homeschooled (2006).

At the same time, the first students to enroll in online schools were academically accelerated and looking for specialized courses and flexibility in instructional delivery. In the Virtual High School’s (VHS) first evaluation, researchers found that the vast majority of students in their courses were planning to attend a 4-year college (Kozma, Zucker, & Espinoza, 1998). A second evaluation of the VHS program by Espinoza established that

the bulk of the courses were identified as *honors* and most of the students enrolled planned to attend college (2009). The 2005 Keeping Pace Report also reported that 45 percent of the students who participated in e-learning opportunities in Michigan were ‘either advanced placement or academically advanced’ students (Watson & Kalmon).

Early research enumerated requisite skills online learners need to succeed: highly motivated, self-directed, self-disciplined, and independent learners with strong literacy and technology skills (Haughey & Muirhead, 1999). Roblyer concluded that students who volunteered to take online classes prized the ability to control the timing and pacing of their courses (2003).

Current trends, however, are very different. Barbour contends that possibly the majority of students attending virtual schools are students that would be considered at-risk in traditional schools (2009). He cites Susan Patrick, CEO of the International Association of K-12 Online Learning (iNACOL) who explained that the two courses with the largest enrollments in the United States are Algebra I and Algebra II – courses generally taken in the first and second year of high school. These are popular in part because many of the online students taking these courses are doing so for the second or third time (Barbour, 2009; 2011). Watson argues that schools that had initially targeted advanced students are now expanding their course offerings in order to provide options for at-risk students. He contends that once online schools moved beyond the “early adopter” phase, they redefined how technology could be used to address the needs of accelerated and at-risk students (Watson & Gemin, 2008).

Online schools now market their programs specifically to students with academic or other needs that place them at-risk in traditional systems. Consider, for example, the

way that the Florida Commissioner of Education described the advantages of FVS: “Florida Virtual School may also be a good fit for students who have medical or behavioral issues that may limit success in the traditional classroom...” (Smith, 2009). Watson’s 2010 Keeping Pace guide states that single district programs often target at-risk students, and some states, like Minnesota, have created task forces that have as their primary objective to propose policy and provide online learning options for credit recovery. In the case of Minnesota, funding is increased by twenty percent for students that “meet criteria that put them at-risk for graduation” (Watson et al, 2010).

Yet, while online schools have redirected their marketing approaches to target low performing and at-risk students, it is unclear that they are being successful in their strategies. For example, Education News, a Colorado newspaper, recently reported that while online school administrators profess that their school’s poor performance outcomes are a result of the at-risk student population they serve, in fact only approximately 120 of the nearly 10,000 enrolled in online schools in Colorado can be categorized as at-risk (Hubbard & Mitchell, 2011).

Furthermore, there is a paucity of research on the ways in which online schools are serving the population of at-risk and low performing students they have enrolled and whether these practices are leading to increased student achievement. Research in nearly every aspect of online schooling is still in its infancy and dominated by anecdotal personal experiences of practitioners, faulty research designs and a reliance on the educational practices of traditional brick and mortar schools (Barbour, 2010). Much of the information that is available in the literature comes from unpublished graduate

student research and studies on post-secondary students (Searson, Wold, & Jones, 2011) and briefs published by advocacy groups.

Many scholars have called for improved research designs that are empirical and go beyond observations of current practices. Cavanaugh stated that "...research should investigate intersections among student needs, course structure and support services" (2007). Barbour echoed the need to focus on student supports and at-risk student needs as well as factors that affect student success (2010). Glass and Welner recently reported that very little is known about the impact of virtual schooling on special needs students and no evidence exists that full-time virtual K-12 schooling is an "adequate replacement" for traditional face to face alternatives (2011).

### ***Purpose and Research Questions***

The purpose of this study is to determine to what extent online schools in the United States are serving at-risk students and to determine ways in which their practices support the specific needs of these students.

Research questions include:

- What share of virtual school students are at-risk?
- What do virtual schools do to serve their at-risk population?
  - What resources do they provide?
  - What systems do they put in place or remove in order to support at-risk students?
  - What are the instructional practices that support their at-risk students?
  - In what ways are they culturally responsive?

## Chapter 2

### *At-risk Students and Online Learning*

#### *Who are at-risk students?*

While educators profess that every child is capable of learning, there is a general consensus that a segment of the student population is unlikely to succeed. Every year approximately 600,000 students dropout of high school without graduating (Stillwell, Sable, & Plotts, 2011) so that in 2008, eight percent of students age 18-24 were not enrolled in high school and lacked a high school diploma (US Census Bureau, 2011). These students are disproportionately students of color and those from low socioeconomic backgrounds.

We label these students with a variety of terms - *disadvantaged*, *low performing*, *educationally deprived*, *at-risk* (Means, Chelemer, & Knapp, 1991). While scholars, experts and educators may disagree about a precise definition of the terms such as *at-risk*, there is agreement that poverty has a caustic effect on education. Income inequality, disadvantaged neighborhoods, unequal school conditions and the lack of security in the labor market contribute to increasing a students' risk of failure in school and these affect every element of life's chances (Duncan & Murnane, 2011).

Students who come from more advantaged backgrounds often have familial or community support they can count on to reinforce their education. When students are economically or socially disadvantaged they are less likely to be able to count on educational support or preparation from their families and social networks. When families experience financial hardships, do not speak English, have little education themselves they are less able to provide students with support in foundational educational

practices like reading. Furthermore, these students are also more likely to attend larger schools staffed by less experienced educators who do not provide the extra support they need to be successful.

At-risk students, according to Paul Thomas, are doubly disadvantaged by low-income households and impoverished neighborhoods that pose health and safety risks (2013). They become disaffected with schools, become resentful of mistreatment and generally disengaged. Since school attendance zones are determined by geography, at-risk students are hindered from attending high performing schools and are required to attend schools with less qualified educators and high attrition among teachers and principals (Clotfelter, Ladd & Vigdor, 2007)

There is also a correlation between poverty and a long list of student background characteristics such as race, ethnicity, English language learner, previous retention, a disciplinary record, pregnancy, drug and alcohol use and previous incarceration. These lists are commonly used to profile students. Researchers have developed profile charts and statistical models in an effort to provide instruments for identifying at-risk students based on these long lists of factors (Canales & Bush, 1992; Gleason & Dynarski, 2002).

More recently, the No Child Left Behind law sharpened the focus on these students by mandating that schools disaggregate their assessment data and meet achievement standards on all disaggregated groups. Some states like Iowa and Colorado have responded by legislating their own models and instruments for identifying and targeting at-risk students (State of Iowa Department of Education, 2007; Offices of Legislative Legal Services, 2010).

Yet, while we adeptly describe and classify these students once they dropout, we are less effective in developing broad solutions to their educational struggles. Even when we cast our nets wide to provide services for all *potentially* at-risk students we disagree about the ways in which we conceptualize their barriers and therefore, what we think they need in order to overcome them.

When explaining how students and their needs are conceptualized, it is often important to explain the range of possibilities by delineating polar views. It is reasonable that researchers, educators and policy makers agree with many of the components of their philosophies, however, there are important ways in which they differ. At the heart of the perspectives that I will examine are substantively different ways of understanding students and common knowledge and, therefore, what these students need from schools and their society. I do not ignore common ground; I simply emphasize the differences in order to make an important point.

The predominant way of conceptualizing at-risk students is by their deficits i.e. their personal and academic characteristics and family circumstances (Noguera & Akom, 2000). The underlying belief about at-risk students in these conceptual models is that their academic problems are a consequence of their subordinate personal backgrounds. Implicit in this interpretation is a devaluing of the culture, race and ethnic heritage of some students. In other words, those who render at-risk students by their deficits are not simply enumerating the resources and/or experiences that at-risk students are lacking, they are basing their appraisal of these students on the normative behavior - like sitting in chairs, answering questions and playing - of those students who come from families and

communities that prepared them for school long before they enroll (Harry & Klingner, 2007).

In a study reproaching the over-representation of minority students in special education the authors state, “Speaking about her African American 1st graders, one teacher in the study pointed out that ‘they don’t know how to walk, talk, or sit in a chair. It’s cultural!’ Comments like this really don’t refer to whether the students can or cannot do these things. Instead, they show that the manner in which the students do these things is unacceptable to the teacher” (Harry & Klingner, 2007). For this teacher, and others who adhere to deficit thinking, at-risk students are limited by their cultural practices and their differences are construed as pathological. Hence, those who adhere to deficit model have an underlying predilection to *cure* students of their backgrounds. Furthermore, they maintain that if the academic problems originate with the student, then solutions to these problems can be directed at individual students.

Deficit model conceptualization of at-risk students fundamentally reduces education to a technical problem that can be corrected with appropriate instructional methods, curriculum and resources. That is, it does not consider broader solutions, such as school policies, classroom procedures, and pedagogical changes because it does not conceptualize problems broadly. In a study and evaluation of a widely used professional development program created by Ruby Payne, the authors critique Payne’s representation of poor children as deficit thinking. “She never considers the alternative, that social, economic and political structures—not their own behaviors and attitudes—have provided barriers to success in schools for poor children” (Bomen, Dworin, May, & Semingson, 2008). Payne focuses entirely on remediating student knowledge and skill deficiencies

and offers little analysis of the “structural-institutional level issues”, such as school leader and teacher turnovers, lack of resources and dilapidated buildings, that characterize many of the schools that youth in poverty attend (Hughes & North, 2012).

E.D. Hirsch’s philosophy and his Core Knowledge charter schools exemplify a deficit conceptualization of at-risk students and a technical solution to their academic problems. Hirsch argues that economic equality for the disproportionate number of low socioeconomic status (SES) students represented in at-risk designations hinges on content standardization. That is, a lack of content knowledge is what causes inequalities in the market, therefore, instruction in properly sequenced core content is the appropriate solution. Additionally, efficient instructional practices, such as whole group instruction, memorization, uniform sequencing and ‘objective’ assessments are requisite in order to guarantee retention of core content (Feinberg, 1999). He believes that the ways in which children are taught is the single most important factor reducing student chances for success. He states, “ The reason for the state of affairs – tragic for millions of students as well as the nation – is that an army of American educators and reading experts are fundamentally wrong in their ideas about education and especially about reading comprehension. Their well intentioned yet mistaken views are the single reason (more than other constantly blamed factors, even poverty) that many of our children are not attaining reading proficiency, thus crippling their later schooling” (p. 3, 2006).

Hirsch’s oversimplification of problems faced by at-risk students and his limited understanding of the nature of knowledge leads him to narrowly define potential solutions. He maintains that educational achievement gaps are less about racial and economic systems that perpetuate inequalities and more about the fact that parents of

white, suburban children are more likely to be able to supplement local school curriculum to ensure that their children have the requisite knowledge for college success. Hirsch believes that if we can inculcate all children with *core knowledge*, economic and racial disparities will work themselves out. That is Hirsch, and others with similar ideas, believe that if children can master the content that is valued in schools and by legislators, they will have the economic opportunities that can mitigate the effects of racism. While there may be many factors contributing to student disadvantage, acquiring core knowledge is the most efficient road to prosperity.

Hirsch assumes that core knowledge can be extricated in ways that remove bias, values and political and cultural perspectives; that is, core knowledge includes only *facts* about scientific and historical events. Richardson and Villenas argue that E.D. Hirsch advocates a focus on content that is not pluralistic, but rather constitutes the exclusive perspective of the dominant culture (2000). Hirsch's curriculum is constrained to histories and literacies that are devoid of injustice and conflict for and over power. More than simply Western idealism, his content suppresses historical reality and creates what Giroux calls "a museum of information" that sanctions a particular perspective of history, which, given its venerated status and Hirsch's insistence that pedagogy amounts to merely transmitting knowledge that students are not permitted to interrogate – it is, in essence, a "crippling ethnocentricity," a singular vision that excludes the experiences, truths and voices of women, blacks and other groups from mainstream curriculum (Aronowitz & Giroux, 1988).

Students, particularly at-risk students, whose beliefs, experiences and values conflict with those defined by Hirsch find themselves at a disadvantage in school. If

curriculum is not approached more inclusively, meaning that educators have to tackle the knowledge, beliefs and experiences that students bring with them, knowledge is reduced to something disassociated and irrelevant in the lives and truths of many at-risk students; something they are required to passively memorize. “Given Hirsch's view of culture, it is not surprising that he espouses a clothesline-of-information approach to literacy that ignores its function as a technology of social control, as a feature of cultural organization that reproduces rather than critically engages the dominant social order” (Aronowitz & Giroux, 1988).

Although we can agree with Hirsch that we need to be knowledgeable about dominant cultural views, deficit models ignore cultural histories and literacies that have been made invisible and which impact or define at-risk students (Kellner, 1998).

Notwithstanding the popularity of deficit models, there are alternative conceptualizations for explaining and understanding at-risk students and envisaging solutions for their academic statuses. I will label these alternative ways of understanding students *systemic and asset-based*. At-risk students are disproportionately students of color and from low socioeconomic backgrounds and they encounter obstacles that are not shared by white students in more affluent suburban neighborhoods; their problems are different. However, alternative models for conceiving at-risk students reason that it is not just students' backgrounds that expose them to educational risk.

At-risk students are more likely to: attend schools in disrepair (Kozol, 1991); have fewer resources within those schools; attend segregated schools (Ladson-Billings, 1994); experience discriminatory school practices; have limited access to the advanced curriculum that is required for achieving high scores on college entrance exams (Means

et al, 1991) and receive instruction from inexperienced teachers (Shah, 2011). The US government recently shared data collected through its Office of Civil Rights that reveal the inequalities of opportunity and access that continue to limit students. Secretary of Education, Arne Duncan stated, “These data show that far too many students are still not getting access to the kinds of classes, resources and opportunities they need to be successful,” (Shah, 2011). The report indicated that in many schools, students did not have access to college preparatory classes as basic as Algebra II; pre-K programs for poor children were available in only one-fourth of the schools; in schools over-represented by minorities, teachers were twice as likely as those in primarily white schools to have only one to two years of experience (Shah, 2011).

Thus, the educational success of at-risk students is jeopardized not only by factors in their personal and individual backgrounds, but also as a result of institutional inequalities that limit their access to critical resources. Systemic and asset-based conceptualizations of at-risk students are more expansive and accept that classroom and teacher norms, school structure, state mandates, unequal expectations, discriminatory school practices, student interactions, and other social factors may affect students’ risk of failure. Furthermore, systemic and asset-based models recognize that academic content is not value-free and reflects power relations situated in the greater society, which often result in an absence of academic content about subordinate student cultures.

In addition, these unequal power relations and inequalities create conflict and disparities both within and outside of schools (Apple, 2006). As Bartolomé states “... a myopic focus on methodology often serves to obfuscate the real question --- which is why in our society, subordinated students do not generally succeed academically in

schools” (1996). In other words, shortsighted education reform that concentrates primarily on procedures – instructional or curricular– miss the real issue, which according to Bartolomé, have more to do with societal inequality. *Whither Opportunity*, a recent compilation of articles edited by two renowned economists, Duncan and Murnane, concludes that the effects of rising poverty and the disparity in incomes between the poor and the affluent is undermining public education. Their analysis finds that inequality is increasing and student achievement is proportionally decreasing (2011). Education, while an important component, cannot be the only solution to the complex systemic problems of racism and poverty. The “fate of at-risk students will ultimately depend on what is done to address inequalities, stereotyping, prejudice and discriminatory practices that have hindered their education in the past and threatens to hinder their education in the future” (Kozma & Croninger, 1992).

Idealistically speaking, at-risk students need what all students need: access to exceptional resources, responsive and caring school systems, skillful instruction from teachers who value them and their cultures and think *deep down* that they are capable. What makes some students more educationally at-risk is that they are less likely to encounter these requisite conditions in their local schools.

Individuals who work from a deficit perspective enthusiastically design solutions that aim at addressing some of these needs while emphasizing skill development and improved test scores. Systemic and asset-based thinkers share similar concern for skill acquisition and student achievement. However, these perspectives differ fundamentally in how they perceive students – one by their deficits and the other by their assets, - what factors contribute to their problems and therefore, what factors need to be changed.

Throughout this analysis I have labeled students *at-risk* because this is the most commonly used term in state policies, publications and in practice. However, during this research I was increasingly uneasy with the use of this term because it is a deficit model label that continues to place the onus of the responsibility and blame on the students who are compelled to bear it. Students in the schools that I observed pushed back against the term when, for example, they asked the title of my study and then stepped back and stated, “I ain’t no at-risk student.” After which they refused to participate. Clearly the label is pejorative in the minds of students.

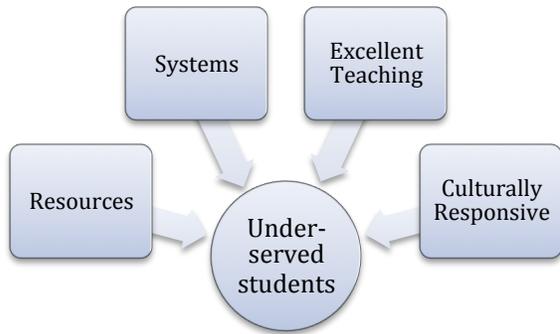
Yet, it is important to this study that I delineate the students who have unique needs and who have not been successful in traditional bricks and mortar schools. And it is important to choose terms carefully because labels are an indication of philosophical and/or theoretical foundations; what we think about students matters since it defines pedagogical practices, education policies and reform strategies. I do not think there is a perfect solution to this problem, but for the remainder of this analysis I will use *under-served*.

### ***What do Under-Served Students Need from Schools?***

In this section I outline the educational elements that are essential for at-risk students to succeed in school. These include access to resources, systems that defend their needs, excellent teaching and cultural responsiveness (see figure 1 *What Students Need*). Under-served students need an ethical education system that acknowledges resource disparities and is committed to addressing these. If under-served students are to be held to common standards they need access to the resources that will enable them to succeed. Schools must subscribe to policies that are not prejudicial to individual children and advocate for

their individual needs. Under-served students also need excellent educators whose beliefs about them will inspire rather than diminish them.

Figure 1 What Students Need



#### *Access to resources*

The disparity in resources between poor and wealthy schools has been well documented (Kozol, 1991, 1996; Peske & Haycock, 2006; Condrón, 2009; Shah, 2011).

Acknowledging school level resource inequalities provides a deeper and more expansive understanding of risk and is an obvious starting place for intervention (Stringfield & Land, 2002). Essential to this understanding is the fact that these dual systems of education did not just happen; they have been created by greed, ignorance, indifference, fear, racism and public policies (Ayers, 2004). Fundamentally, under-served students need these inequities remedied. They need safe, clean, well equipped and fully operating buildings as a minimum standard. They need access to the full range of curricular options that open up post secondary opportunities (Means et al, 1991; Shah, 2011).

*Educational systems that defend their needs*

In *Pedagogy of the Oppressed*, Paulo Freire's seminal work on the methodology for teaching subordinated individuals, he asserts that systems must change in order to be responsive to students: "The truth is, however, that the oppressed are not 'marginals,' are not men living 'outside' society. They have always been 'inside' – inside the structure, which made them 'beings for others.' The solution is not to integrate them into the structures of oppression, but to transform that structure so that they can become 'beings for themselves'" (1974). In order to reform these structures some argue that we must debunk the assumption that the education structures are fundamentally sound (Cloud Duttweiler, 1995). The burden for this must be on the adults responsible for the system -- not the students.

There are many school structures that can make it more difficult for some students to excel. One structural barrier that continues to be relevant for under-served students is tracking - the education system implemented during mandated segregation as a way to separate students once they were inside the building (Apple & Pedroni, 2005). School systems that utilize tracking create fundamentally different experiences for students attending the same schools (Condrón, 2009). In one track, students choose college-preparatory courses, engage in higher-order thinking, participate in cooperative and group work, tackle problem-solving tasks, write expressively and read for comprehension. In the other track, students are placed in compensatory programs that focus on "basics"; receive skill drills on the incremental components of reading; are taught mathematics as separate numerical operations; encounter less challenging curriculum; submit to more directive instruction and, most importantly, they rarely find their way out of these lower

tracks. Thus, we have “decried educationally disadvantaged students’ failure to demonstrate advanced skills while failing to provide them with the instruction designed to instill those skills” (Means et al, 1991). Under-served students need systems that won’t track them into programs, classes and curriculum that, at best, leave them ill-prepared for college transition or worse, alienated from school.

Another barrier is what Irvine calls a “conflict of culture,” which is a result of the convergence between students with varied ethnic/racial backgrounds and Eurocentric schools (1990). Evidence of conflict includes: discriminatory disciplinary practices (Noguera, 2003; Baker, 1999), a lack of understanding of students’ cultures including, language styles, values and norms, which result in poor communication patterns, and a hidden curriculum, which include norms and values that reinforce existing social inequalities (Irvine, 1990). Under-served students need caring communities that foster a sense of belonging and that provide them with positive social environments (Cloud Duttweiler, 1995). Under-served students need schools to stop treating them with hostility (Bartolomé, 1994; Baker, 1999). Research consistently affirms that African Americans, for example, are dispatched to the office for less serious and more subjective reasons than their peers, resulting in a disproportionate number of suspensions (Skiba, Michael, Carroll, & Peterson, 2000; Richardson, Casanova, Placier, & Guilfoyle, 1989).

And we know that punitive and control measures are ineffective in helping students develop adaptive behavior skills; they promote hostility (Cartledge, 2008). A focus on competitive models for instruction, a tradition of separating students by ability (Means et al, 1991), creating bell curves of grades where some have to fail, and a

devaluing of specific cultural backgrounds (Irizarry, 2011) are practices that alienate particular students and cultivate and intensify the risk of failure for these students.

*Excellent teaching*

All students need excellent teachers, however studies have shown that under-served students are particularly sensitive to the effects of a good teacher (Phillips, 2010)<sup>1</sup> and they are less likely to have access to one. Feng et al found that under new accountability systems higher quality teachers are more likely to leave schools that are classified as poor or failing, which obliges the schools with the greatest need to face the constant challenge of replacing staff, particularly the better teachers (Feng, Figlio, & Sass, 2010). Under-served students need excellent teachers that “have comprehensive knowledge,” “unshakeable convictions” and “high pedagogical skills” (Gay, 2000), focus on student learning (Lee, 1995; Delpit, 1995) and are culturally responsive (Bartolomé, 1994; Lee, 1995; Cartledge, 2008; Ladson-Billings, 1994; Hill, 2009; Delpit, 2012). Studies show that when students trust their teachers and receive guidance from them, they are more likely to persist. This is true for all students, but benefits under-served students the most (Croninger & Lee, 2001).

Since students’ risk status is socially constructed and intertwined with the ways in which their backgrounds are perceived and devalued by schools, teachers need to acknowledge that their own values, norms and expectations contribute to that process. Successful teachers of under-served students engage in critical self-reflection and understand their responsibility to become informed. Successful teachers are introspective and critically interrogate personal beliefs about their students, including their students’ racial, ethnic and economic backgrounds in order to avoid the differential treatment

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<sup>1</sup> Phillips found that when study results were disaggregated by at-risk status, the results showed that there

patterns in many teachers (Baker, 1999). They also develop comprehensive knowledge about their students including their positive historical heritage, their cultural values and norms, (particularly learning styles) and ethnic group achievements (Gay, 2000).

Teachers that do not understand the cultural backgrounds of their students rely on assumptions, stereotypes and deficit thinking. Excellent teachers understand that in order to communicate worth to their students, they must know who their students are. If classroom learning is to be powerful then teachers must begin by knowing their students as learners, by getting to know their many dimensions and by determining their assets (Ayers, 2004). Teachers will need to be supported through this process, but the investment is critical to ensuring that under-served students remain engaged participants in their education.

The number and magnitude of obstacles shouldered by under-served students and the often oppositional educational structures in which teachers and students must work, combine to make the teaching and learning process extraordinarily challenging. Under-served students need teachers who are resolute, unshakably committed to helping them to become all they can be (Ayers, 2004; Gay, 2000). Teachers will need to obstinately challenge curricular and administrative policies that are reductive, curative or ineffective.

Excellent teachers have high levels of pedagogical skills and maintain teaching philosophies firmly grounded on differentiation. Student needs are idiosyncratic and teachers must respond by understanding that it is part of their work to address those needs. Teachers cannot be responsive to learning styles, for example, if they approach all instruction from one platform (Tomlinson, 2000). Teaching is not about learning the one

method that works, it is about knowing many methods and having the skill to know when to use each.

Cognitive theorists who based their ideas on behaviorists, like John Watson, used to believe that learning was sequential and complex ideas had to be reserved for those who had mastered the less demanding components of higher level thinking. This often meant that under-served students were confined to pedagogy that limited their experiences to skill and drill. Current research, however, understands that complexity evolves as learners are engaged in practicing inference, judgment, analysis and other aspects of complex thinking (Zohar, Degani, & Vaaknin, 2001). Confining students to remediation defeats the purpose. Teachers who are successful with under-served students do focus on their students' academic learning. Delpit affirms, "Yes, if minority people are to effect the change which will allow them to truly progress we must insist on 'skills' *within the context of* critical and creative thinking" (italics in original, 1995).

Accordingly, teachers cannot assume that there is a hierarchical nature to learning because doing so means limiting under-served students to mastering basic skills at the exclusion of reasoning and higher level thinking skills (Means et al 1991) While under-served students cannot be relegated to remedial work at the exclusion of more complex learning, they must have opportunities to practice and increase skills within the context of meaningful work. Nothing will make a student gain under-served status faster than failing to learn to read or to communicate according to the rules of the dominant culture. Under-served students need explicit instruction in these skills (Delpit, 1995) and plenty of practice within contexts that tax their cognition.

At the same time, successful teachers view knowledge critically and are able to connect classroom knowledge to that of their students' daily lives (Lee, 1995).

Ultimately, students need teachers who question and prepare students to question social inequity, racism, and injustice (Ladson-Billings, 1994; Delpit, 2012) and how these are reflected in their lives. Under-served students need teachers who understand that learning is an academic and intellectual process, but also one that has social, political, personal and ethical components (Gay, 2000). And they need teachers who will honestly help them probe and discuss the value of normative behaviors (Ayers, 2004).

### *Cultural responsiveness*

Researchers argue that regardless of other risk factors, students that are not engaged or participants in their schooling are under-served of dropping out of school. For example, a National Center for Education Statistics (NCES) study that examined the achievement of more than 15,000 students found a positive correlation between achievement and engagement. Students who were not positively engaged in school were more likely to have lower measures of achievement and as I have stated, lower achievement is one of the factors that increase a student's chance of dropping out of school (NCES, 2007).

Educators and theorists disagree about ways in which schools can intervene to promote participation. Some, like Hirsch, stress cognitive factors like skill building and connecting learning to future aspirations, others emphasize behavioral factors like extra-curricular activities, extended school days and attendance (Furlong & Christenson, 2008). However, a considerable body of research supports cultural responsiveness as one of the key factors to engaging students in their education (Hill, 2009; Irizarry, 2011; Delpit, 2012; Calabrese, Goodvin, & Niles, 2005).

Cultural responsiveness necessitates situating oneself in opposition to the ways that schools typically characterize and treat subordinated student populations, teachers and parents (Ladson-Billings, 1994). It also requires that teachers take action to empower their students with sociopolitical awareness, to challenge the system when necessary and to “confront prevailing educational cannons” (Gay, 2000). It is not an instructional practice that comes with easy to follow directions; rather it is a process that demands on-going effort on the part of teacher and student. It forms the foundation of a classroom or building culture, but is not a foundation that can be administered to students as it requires co-construction by the school community.

Under-served students need the adults responsible for their education, as well as their educational systems, to recognize and value their individual cultures. Only when teachers and administrators recognize and respect students as they are can students begin to do likewise. Whitewashing students and pretending that all students are the same makes their cultural backgrounds invisible and permits teachers to dismiss paramount features of their identities (Ladson-Billings, 1994). In addition, failing to teach students to critically analyze their own and others’ marginalization leads to a sanitized curriculum that ignores critical elements of their lives (Hill, 2009).

At the same time, under-served students do not need their schools to function like cookie presses that take in students of different racial, ethnic and socioeconomic backgrounds and squeeze out students inculcated with mainstream values and attitudes. Cultural responsiveness means helping students to draw on the assets of their familial and cultural backgrounds. “... students are less likely to fail in school settings where they feel positive about both their own culture and the majority culture...” (Ladson-Billings,

1994). Excellent teachers are culturally responsive – they capitalize on the backgrounds, experiences, prior knowledge, learning styles and point of views of their students in order to make classroom learning meaningful (Cartledge, 2008; Hill, 2009; Popp, Grant, & Stronge, 2011; Irizarry, 2011). Culturally responsive teachers help under-served students learn academic content, but they also help students become politically active, socially conscious and responsible members of their communities (Gay, 2000).

***How can Online Learning Meet the Needs of Under-served students?***

In this section, I explore the potential advantages and disadvantages of online learning for addressing the needs of under-served students in the four essential dimensions mentioned above: access to resources, systems that safeguard their needs, excellent teaching and cultural responsiveness. It is important to note that curriculum is addressed in more than one of these dimensions. In an online environment curriculum can function all inclusively to encompass all of a student's experience within the school. In some fully online schools, instruction may be entirely embedded within the curriculum. Students progress through the content and only refer to an adult when/if they have a question. In these courses all or most elements of school design are embedded within the content of the software. The school environment is synonymous with the curriculum as there is little else for the student to experience. In these models, curriculum is significant in all four of the components that I argue under-served students need. It is the primary resource; system-wide design features like just in time scaffolding and reflective spaces have to be incorporated within the curriculum; elements of cultural relevancy also have to be embedded within the course content. Teachers may do little more than grade papers and facilitate smooth technology operations. It can be argued that curriculum is always more

than content and assessments, but in an online school it can be the vehicle through which most everything else is transmitted.

Most online schools, however, are not as drastically mechanical and teachers, leaders and other adults contribute in varying ways beyond the automated curriculum that is selected for the school. Teachers may supplement the content by providing instruction both synchronously and asynchronously and by developing alternative lessons or units. Educators may work together to design schoolwide components that work independently of or enrich the curriculum. In blended schools for example, teachers and leaders have the greatest opportunity to: design schoolwide features to support students; develop content that includes advanced uses of technology; and advance cultural relevancy beyond the course content.

Throughout my analysis curriculum will surface as it is intertwined with analysis of each dimension. Also, while I provide research to support my position, the limitations of current research are significant and motivate the proposed research.

#### *Access to Resources: What Online Learning Can Do*

Access to quality curriculum, aspirant peers, educational experiences and travel are generally restricted to students from primarily white and middle class neighborhoods. Minority and poor children more often are taught a reductive curriculum (Means, et al, 1991), associate with greater number of high school dropouts (US Department of Education, 2010) and attend schools that are in disrepair (Condrón, 2009). While online learning will not solve underlying causes of educational inequalities it may be able to provide access to resources for under-served students in three specific ways by: removing

barriers to full participation, permitting students to transcend geographical boundaries, and exposing under-served students to more inclusive sources of communication.

Technology and online learning can remove some of the current barriers to full participation. The Internet provides proxy experiences for students who previously did not have access to resources like museums, travel, concerts and reference materials (Collins & Halverson, 2009). Online programs can build on the advantages of the Internet to fashion culturally expansive courses and experiences for under-served students. Proxy experiences cannot be replacements for those of the real world, however, they can expose under-served students to many of the educational and experiential advantages which more affluent students are able to enjoy.

Furthermore, online learning can be a portal to more challenging and less basic curriculum and courses not available in schools frequented by a predominantly under-served student population (Bangert & Rice, 2009). Currently, nearly half of US high schools do not offer Advanced Placement (AP) courses; most of these schools serve under-served students (iNACOL, 2010). Online AP courses have been successfully delivered to schools that could not otherwise provide their students access to these rigorous classes (Collins & Halverson, 2009). In addition, online classes can be a cost-effective way for schools to provide more expansive course offerings (Cavalluzzo, 2005); Florida Virtual, for example, offers more than 100 courses including 14 AP courses to students within and outside of the state (Florida Virtual School, 2011).

Online learning can also remove barriers to full participation for transient students. Students who move often, who are homeless, who are adjudicated or have self-enrolled in recovery programs, who are in foster placements, or who lack household

stability for other reasons have the added burden of enrolling and un-enrolling in local schools. This can impact them socially and academically (Hartman, 2003). High school students who move often can find it more difficult to earn credits because course offerings and the pacing of courses vary between schools. Students who change schools often may find that they are unable to complete sufficient work in enough courses to stay on track for graduation. Online learning permits students to remain in the same classes regardless of where they are living or staying. Schools, teachers, friends and academic programs can remain anchored even when other factors in students' lives don't.

Age, childcare, emancipation<sup>2</sup>, employment and safety concerns can all be barriers to participation for under-served students. Students who have been retained or who have failed to earn sufficient credits may feel too old to attend local schools. Students who are parents may find childcare to be an obstacle to returning to school; others who have adult responsibility to provide financial resources for themselves or a family may find that work conflicts with brick and mortar school hours; finally some students may have concerns about the safety of their neighborhood schools, particularly in areas seized by gang violence. For these students, online learning can remove each barrier and provide the flexibility of *anytime, anywhere* schooling.

Furthermore, since online learning removes geographical boundaries for students who can attend from any location with internet access, it therefore also has the potential to integrate students. That is, students in an online school are not constrained by their neighborhood and can attend school with a more diverse population than the one limited

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<sup>2</sup> Emancipation means that students are independent and no longer dependent on families for support. This can also mean that young students are completely responsible for their own care and education.

to their community. For example, students attending Florida Virtual come from every school district in the state, school districts throughout the nation as well as from other countries (Florida Virtual School, 2011). While the research is not definitive, there is evidence that peers impact student achievement and attainment (Harris, 2010)<sup>3</sup>; online schools can provide under-served students access to higher achieving and more diverse peers. It may also be possible, in the context of fully online schools, for students to attend anonymously, at least maintaining the level of confidentiality that they desire.

Moreover, online learning can harness the advantage of a more diverse student population by developing enhanced discussion formats that offer advantages over face-to-face classroom communication for students. For example, asynchronous discussion formats offer students the opportunity to sustain group conversations over more prolonged time periods; they give students time to ponder and formulate responses (Shaffer, Squire, Halverson, & Gee, 2005; Major, 2012; McBrien & Jones, 2009). This can allow more students to participate, especially those who are often excluded. Major noted that students whose language backgrounds are not from the dominant culture find it easier to participate online than in face-to-face classrooms (2012). Electronic discussion formats can enable more balanced and equal participation (Warschauer, 1998), which is particularly supportive of under-served students whose brick and mortar classroom instruction does not often include discourse (Means et al, 1991).

McBrien and Jones also found that many of the students who benefitted from synchronous online discussions were those students who were hesitant about participating in face-to-face classrooms. Students in their study commented: “There seemed to be more

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<sup>3</sup> Although to date there are no studies that link peer support to achievement in an online setting

participation from classmates that are usually silent” (2009). The synchronous platform allowed students, particularly shy ones, to feel comfortable expressing opinions: “I felt like I could say anything without having my answer judged. Sometimes I’m afraid to answer in class” (McBrien & Jones, 2009).

Both synchronous and asynchronous online platforms can facilitate discourse in ways that are inclusive, more balanced and potentially democratizing (Warschauer, 1998). Students who are marginalized, those who are learning English, those who are reticent to speak publicly, those who fail to participate in face-to-face classrooms for myriad reasons can have an opportunity to do so online.

*Access to Resources: What Online Learning Cannot Do*

An obvious shortcoming of online learning is that it cannot include those who do not have access to the technology required for its application. Under-served students come from disproportionately poorer homes and consequently are more likely than their non-under-served peers to lack internet connectivity, computers and software requisite for taking online courses. Students that are provided access only at school forfeit many of the advantages of *anytime, anywhere* learning.

It is true that many K-12 schools are required to provide both hardware and an ISP (Lawriter LLC , 2008), and many others voluntarily provide equipment when necessary (Figueiredo-Brown, 2010). In addition, there are public sources of connectivity available when students are unable to personally connect to school. Mobile technology is also making it easier for students to connect to school from any location. However, the resources that online learning can provide are limited to those schools that commit to ensuring that all students who want to participate are outfitted to do so.

Secondly, it may be possible for online schools and courses to establish and benefit their diversified student body, however, it is also possible for schools to use a variety of methods to ensure that student populations remain segregated. Burch found that one technique used by virtual schools is to “counsel out” potential under-served students early in the enrollment process in order to avoid potential funding loss if students drop out (2009). Students that are considered a poor fit with the school are encouraged not to register. My own research revealed that student demographics, even in statewide virtual schools, vary considerably; some schools primarily enroll white students and others enroll predominately students of color (Figueiredo-Brown, 2010). Hence, technological advantages must be applied in ways that are equitable – they don’t generate equity on their own.

The technology that makes online learning possible also requires that people make design choices that can promote democratic, inclusive discourse within more expansive course offerings or not. Technology cannot meet the needs of under-served students without human agency. Some argue that technology (and by extension online learning) is being designed to emphasize information transfer over critical dialogue (Robertson, 2003); that is, computers are being used to deliver reductive curriculum that favors delivery over substantive content. Research on existing online curriculum is scant, so it is therefore difficult to say whether this criticism is reflective of a few, many or most online programs. However it is clear that access to online resources does not guarantee that any of the potential benefits listed thus far will occur unless programs are explicitly structured to provide these benefits (Barbour, 2010).

*Systems That Safeguard Student Needs: What Online Learning Can Do*

Time and place are rigid structures that prevent many brick and mortar schools from delivering the flexibility that some under-served students need. Florida Virtual School's motto "any time, any place, any path, any pace" succinctly captures the advantage that online schools have to provide flexibility. Students in online programs can access their courses from any computer with internet access during those times that are most convenient to *their* schedules (Ahn, 2011).

Furthermore, students in online classes can expend the requisite amount of time for them to understand the curriculum (Repetto, Cavanaugh, Wayer, & Liu, 2010); they do not have to stop with the bell or be limited by the school schedule or by the pace of their classmates. Under-served students who need more time can allocate it and, just as important, students that need less time<sup>4</sup> are not obligated to accrue seat-time (Tucker, 2007).

Since assistive and adaptive technologies such as screen readers have become ubiquitous (Repetto, et al 2010), online courses can more easily be adjusted to meet the needs of some under-served students (Ahn, 2011). Likewise, just-in-time scaffolding can be built into courses to provide definitions, alternative explanations and additional examples (McCombs & Vakili, 2005). Students that need to repeatedly hear (or read) content are free to do so without the stigma that not understanding often creates for students in traditional classrooms (Repetto, et al, 2010). Technology also permits student progress to be easily monitored and on-going curricular adaptations to be made based on

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<sup>4</sup> iNACOL reports that "According to recent research from the Silent Epidemic study, 47% said a major reason for dropping out was that 'classes were not interesting' and they were 'bored'; 88% of drop outs had passing grades" iNACOL. (2010).

that data. Teachers whose pedagogy centers on whole group instruction make assumptions about the average ability level of the class; students below or above average may not benefit sufficiently from their instruction. Under-served students are more likely than their non-under-served peers to receive this kind of direct instruction (Means et al 1991). Computer adaptive courses allow students to always be learning at the correct level for them – not too difficult or too easy.

The Open High School of Utah, for instance, was developed around a just-in-time tutoring model. The founder of the school is a research professor whose studies led him to conclude that students were capable of greater learning if they could have one-on-one tutoring: “ For me the take-away of that series of studies is that the average student is capable of doing way more than they do in the classroom. But we just don’t, well, obviously we can’t afford to give every one of them a tutor, so they all do less well than they would... (Wiley, 2010). The school’s design requires teaching staff to provide tutoring for students when the data reveal that they need it: “All that they [teachers] do all day long is, they look at a dashboard of data coming out of the system that tells them who is in need of the most help and what they need help about. And all teachers do is tutor kids all day long one on one” (Wiley, 2010).

Finally, online programs and schools are not socially isolating; they can provide students with a community and associations with peers beyond their neighborhoods. Technology has advanced to a degree that significant socialization is feasible in online settings; tools are available to permit collaboration, community building and networking beyond the confines of time and place. Even when relatively simple tools are used, online

learning has the potential to unify students. In a study by Barab and associates, university online course was analyzed for elements of collaboration and researchers found:

“This course provided evidence that online courses can support deep learning about content, open sharing about personal experiences, and the development of a sense of camaraderie among participants. Students readily shared their feelings, critically examined course issues, extended their support in helping peers, and embraced many of the challenges of taking an online course. Implications are that benefits of online courses extend beyond the time and place independence they provide for participants, but also include the reflective and social environment they can foster” (Barab, Thomas & Merrill, 2001).

In addition to providing social spaces, online schools have been developed to provide *safe* spaces for students who have been bullied or violently treated in traditional brick and mortar schools. The LGBTQ Online High School for example, was developed to provide a college-preparatory experience for students who are gay, lesbian, bisexual, transgender or questioning their sexual identity. The school’s website states: “Imagine a school where you can be you” (LGBTQ Online High School). Online learning can provide spaces for under-served students to learn safely, both physically and emotionally.

More advanced technologies like web cameras, virtual conferencing software, mobile technologies and 3D virtual worlds (Bangert & Rice, 2009) can make collaboration easier and richer, but simpler technologies can also be used to bridge distance. The key is in the way a course is facilitated (Johnson & Aragon, 2002).

*Systems that Safeguard Students Needs: What Online Learning Cannot Do*

Technology does not have the ability to discriminate between quality curriculum content and skill and drill. Computer technology permits adaptation, individualization and scaffolding, however, humans design and embed content. If curriculum designers and content providers retain assumptions about the hierarchical nature of learning, that is, if they believe that some skills must be mastered before students can be permitted to

interact and participate in advanced thinking, then online curriculum - even with its technological advantages - will not be very different from the simplified content under-served students are exposed to in traditional classrooms (Kozma & Croninger, 1992). “The opportunities extended by distance education cannot be taken advantage of if, during implementation, they replicate the problems found in traditional classrooms” (Cooze & Barbour, 2007).

While online learning yields great potential for individualization, it does not guarantee that schools will not track students into limited online options. While it may be possible for every student to receive an unique instructional plan in an online school, the breadth and variety of those plans are still up to school personnel. There is no evidence that under-served students are taking advantage of expanded curricular opportunities. In fact, online classes for under-served students are often remedial; Tucker states, for example, that nearly one half of all classes taken at Utah Virtual are credit-recovery classes (2007). It is not clear that courses being taken for remediation have been developed to enhance higher level thinking or promote more problem solving; it is possible that the courses being offered to under-served students reflect business as usual: an emphasis on basics, a focus on discrete skills and instruction that is linear (Means et al, 1991).

Online learning will eliminate tracking only if and when school systems commit to its abolition. Thus, while technology affords the potential for personalization, it may be that online learning is only mirroring traditional school structures: “...there are troubling signs that virtual learning may not transform American education, but instead replicate many of its worst features” (Tucker, 2010).

Under-served students may benefit from online schools because they provide options for credit recovery and this by itself may be useful to students trying to complete courses they may have failed or that they cannot schedule within the timeframe necessary for graduation. However, whether under-served students are receiving quality instruction rather than a back-to-basics approach, or whether they are being exposed to culturally expanding experiences that technology can afford is unknown.

*Excellent Teaching: What Online Learning Can Do*

Teaching through technology has the potential to benefit under-served students in several ways by: reducing boredom, facilitating collaborative knowledge building, promoting sophisticated problem solving and developing new skills.

Students become bored when the tasks they are required to complete are not demanding and do not require their involvement and decision making (Kozma & Croninger, 1992). According to Collins and Halverson, half of all high school students are bored in their classes on a daily basis (2009). Students cite boredom with their classes as one of the reasons they drop of school (iNACOL, 2010). Online learning has the potential to provide students with engaging, highly interactive environments, that account for a range of learner preferences (Major, 2005) and create opportunities for students to take more control for their own learning (Collins & Halverson, 2009).

Videogame development is a billion dollar industry that has mastered learner engagement (Shaffer et al, 2005). Children and adults alike are willing to invest substantial amounts of time in the often-difficult challenges posed by videogames. Researchers have found that the principles around which videogames are designed can be used to teach students both virtually and in traditional classrooms. Gee outlined thirty-six

learning principles that are used in video game design that he contends should be utilized to design curriculum (2007). Gee's critical argument is that school learning does not have to include video games, but must include the principles around which they are designed if students are to become as committed to academic learning as they are to learning in virtual worlds. Online learning is a natural platform on which to do just that.

Gee's first principle is that game-based learning is active (2007). Likewise, online learning can place the locus of control with the learner and provide myriad ways for students to construct and take control of their own learning. Navigation is one way learners direct their own paths; many courses are developed so that students do not have to take a linear route, but can proceed in ways that make sense to them (Johnson & Aragon, 2002). In addition, technology can facilitate co-construction of knowledge by allowing students to contribute to information commons. Wikipedia is a good example of knowledge as co-constructed. People contribute content to the free encyclopedia based on their knowledge; everyone can share in the process by either contributing to the building of the encyclopedia or by using and learning from its content. Wikipedia does not contend that knowledge making is a top-down endeavor in which only credentialed people can engage. Class wikis, forums, course-authoring software and other public spaces can allow for collaboration, information sharing and debating. Interactive technology has the potential to be collective and interdependent - where democratic principles (negotiation, participation, etc.) not only have a place - they are requisite.

Another way that online learning can potentially provide excellent instruction is by focusing on inquiry and problem-based situated learning (McCombs & Vakili, 2005; Squire, 2005). Online curriculum can take advantage of the power of simulations and

virtual worlds to embed the “need for basic skills in higher order thinking” (Kozma & Croninger, 1992). In videogames, for example, players must be active participants in order to progress and designers skillfully provide opportunities for players to become committed to difficult problem-solving by providing real choices, plenty of ongoing practice and multiple paths to success all in a relatively low risk format. Players are taxed with challenges that stretch them but are not so beyond their ability as to completely frustrate their progress. A key to this is that assignments early on in the game are used to build skills and knowledge that can be used as the player progresses. Hence players can succeed right from the start.

When problem-based learning is contextualized within the learner’s real life there is a greater potential for the development of sociocultural consciousness. Technology allows for a unique application of student experiences as a starting point for classes to work on problem solving that builds “cultural sensitivity and awareness” (Major, 2005). Students enrolled in online schools that are not bound by geography can participate in more diverse online classes that interrogate the political and contextual nature of knowledge.

Finally, a value-added component of online learning is that it can enable and accelerate the acquisition of specific skills. Obviously technology skills must be developed in order for students to competently function online. However, technology also fosters development of an array of applied literacies. For example, students might learn to communicate effectively using a wide range of online formats such as e-mail, Web pages, forums, message boards, blogs and streaming media that each require unique literacy

skills. Students are not limited to text, but can develop their skills using audio, video and animation (NCREL, 2005).

*Excellent Teaching: What Online Learning Cannot Do*

In order for students to benefit from the kind of online learning described above pedagogical shifts must take place. Harasim surveyed online professors who explained these instructional shifts: "...instructors and students become more interactive, and instructors had to learn how to facilitate and engage rather than lecture (and/or entertain). Therefore, the instructor becomes less of a provider and more of a participant as the students assume more responsibility for generating input" (Harasim, 2000). Instructor beliefs about the nature of teaching and learning are critical to the kind of experiences under-served students will encounter online (Warschauer, 1998). However, researchers have concluded that there is no evidence that "instructors who adopt new and emerging technologies also adopt new pedagogy" (Cavanaugh, Barbour, & Clark, 2009).

Furthermore, in commonly used course management systems, it is possible for the teacher's instructional influence to be trivialized and for there to be an unwarranted concern with summary statistics (Herrington, Reeves, & Oliver, 2005). Research conducted by Herrington et al also found that course management systems deliver limited functions, around which it is easy for teachers to adhere. These limit teacher willingness and ability to think outside the functions (2005). Without pedagogical changes it is likely that "online technologies will frequently be implemented in a restrictive, teacher-centered fashion" (Warschauer, 1998), which will dilute the advantages of technology, but may also frustrate the achievement of under-served students.

In addition, since instruction is often built into online content, pedagogical shifts

must not only take place with online teachers, but also with content providers. Many content providers also manage online schools, hence in order for online instruction to fully utilize the benefits of technology, fundamental shifts in beliefs about the value of these specific instructional uses of technology will need to take place in companies that have traditionally been more aligned with E.D. Hirsch than with J.P. Gee (Ohanian, 2004). As Herrington et al states, “Universities and other educational institutions have failed to perceive the difference between educating learners and simply providing them with information and content” (2005).

*Cultural Responsiveness: What Online Learning Can and Cannot Do*

Online learning does not preclude cultural responsiveness, but is it not inevitably empowering to under-served students either. Online learning does not automatically confront stereotypes and inequitable educational structures and practices, but its structure does not prevent educators from drawing on student backgrounds to develop cultural competency and sociopolitical relevancy. Online learning is a tool that can be appropriated and used to provide under-served students what they need or it can be used to perpetuate the narrow, irrelevant and seemingly meaningless content that is characteristic of public education for under-served students in many traditional classrooms.

***Evidence – Limitation of the Research***

In general, evidence to support any claim about online learning is scant; even while online programs continue to proliferate, they do so without corroborating evidence. A recent article in the Chicago Tribune illustrated the online learning dilemma succinctly when it reported on a program implemented at a city high school. “The credit recovery program at Julian illustrates why supporters say online learning has the potential to

revolutionize education. It can be inexpensive, convenient and flexible—valuable attributes for a cash-strapped district like the Chicago Public Schools. For those reasons, it's now one of the fastest-growing areas of education. But research hasn't kept up with the rapid expansion, making it tough to know whether the programs really work” (Ahmed, 2010).

Rice stated that research about online learning has either been a comparison based on delivery method (online as opposed to face-to-face) or it has described the characteristics of online learning models (2006). Meta analyses have also been conducted in an effort to determine if online courses are as effective as face-to-face ones. The US Department of Education, for example, conducted a study and concluded that it appeared that online and face-to-face methods were comparable, but also conceded that it based its K-12 analysis on very few studies because, “ Few rigorous research studies of the effectiveness of online learning for K-12 students have been published” (Means et al, 2010). As a result, while there are some indications that online learning is as effective as face-to-face for K-12 students, this conclusion is based on scant evidence.

Research specific to under-served students and online learning is almost exclusively restricted to unpublished dissertations and briefs by advocacy groups. Even when unpublished dissertations were included in a recent literature review by Cavanaugh et al, the study concluded that more research is needed to “examine the quality of student learning experiences in virtual school environments, especially those of lower performing students” (2009).

### ***Conclusion***

The way in which under-served students are conceptualized determines the range of possible solutions that are considered for their academic obstacles. Deficit models focus

culpability on the students and their families and implicitly devalue students' cultures and backgrounds. Deficit thinking necessarily limits solutions to developing specific instructional practices and changing student behavior. As Bomer et al stated: "According to such a perspective, neither structural inequality, nor public policy, nor barriers to good jobs, nor lack of money cause the plight of the poor" (2008); they just don't know how to behave, speak properly or possess requisite content knowledge. More expansive conceptualizations of under-served students require a critical analysis of the ways in which broader societal and educational systems and structures impact students, families and communities and limit the pathways available for successful schooling. These models recognize that the responsibility to deracinate racism and poverty cannot be shouldered by education alone.

At the same time, research shows that there are things that schools can do to positively impact the learning of its most vulnerable students. At a minimum schools must be able to provide students with all of the resources they need to be successful; they need to ensure that school structures do not limit, but rather defend the needs of their under-served students; they must cultivate and insist on excellent teachers for the students that need them most; and they must do all of this in an environment that is culturally relevant -- meaning it supports, appreciates and encourages multiple values and ways of being as well as critiques power inequalities that exist and impact students disproportionately.

The potential of technology to completely shift our definition of schooling and divorce it from our notion of education has been documented (Collins & Halverson, 2009; Gee, 2007). Even if we do not fully utilize technology to do that, online learning is

poised to develop into options that could correct some of the most difficult and deeply imbedded features of today's schools. Under-served students could stand to gain access to resources now unavailable to them. They could benefit through systems that safeguard their interests, learning that is individualized and co-constructed and schools that are increasingly diverse and culturally responsive.

However, the impact of online learning's potential on under-served students remains questionable. Some researchers contend that although there is growing evidence that technology and virtual schooling can facilitate learning, "there is also evidence that they are unlikely to do so dramatically" (Kozma & Croninger, 1992). If our online schools are to capitalize on the strengths that technology affords to provide real reform opportunities for students that need it, educators must liberate online learning so that it can be used in ways that promote and advance the needs of under-served students.

## Chapter 3

### *Methodology and Results of Census*

Since there is extremely little research on how and how well online schools serve disadvantaged students, it is useful as a basic starting point to determine to what extent online schools in the United States are serving under-served students and the ways in which their practices support the specific needs of these students. It is a descriptive analysis of fulltime online schools.

Research questions include:

- What share of virtual school students are under-served?
- What do virtual schools do to serve their under-served population?
  - What resources do they provide?
  - What systems do they put in place or remove in order to support under-served students?
  - What are the instructional practices that support their under-served students?
  - In what ways are they culturally responsive?

### *Categories and Definitions*

Online learning options across the country vary in essential ways. Some of the defining characteristics include (Watson, Murin, Vashaw, Vashaw, Gemic, & Rapp, 2011) :

- Whether students are enrolled full-time, part-time or only in a supplemental course
- The expanse of the school – whether it is district, multi-district, statewide, multi-state, national and global

- How the school or program is governed – by charter, contract, district, private company, as a magnet or student’s home
- The way content is delivered (asynchronous, synchronous)
- The extent to which students work remotely or in person by being fully online, blended (online and face-to-face), fully face-to-face
- The level of teacher/student interaction

This study concentrates on virtual schools that are listed on state department of education websites as either fully online or blended and that are registered as enrolling under-served students. I include only full-time online programs and exclude individual online courses and blended or hybrid programs that are not listed as schools by state governments, such as face-to-face schools that offer online courses as either requirements or options for their students and supplementary programs like Utah’s Electronic High School, which offers a menu of courses for students living in the state, but is not a fulltime school. While I recognize that the greatest enrollment growth in online learning has been in district sponsored programs and courses, enrollment information about those programs is not currently consistently available.

Given the almost complete absence of research at the intersection of under-served students and online learning, a case study design is an appropriate place to start. However, this means the data and conclusions are not necessarily generalizable to the population of full-time online programs nationally. This research will suggest evidence and new hypotheses to be tested in future research.

This chapter provides a near-census of state level enrollment and demographic data identifying students enrolled in Virtual Schools. Only states that maintain at least 1 full-time online option are included. At the onset of this study there were 29 states that provided students with at least 1 full-time online option (Watson, et al 2011). I itemize state level data to include: virtual school(s), total student enrollment in each school by

available demographic categories, special needs and free and reduced lunch percentages and state totals in the same categories. State department of education staff were contacted to confirm final lists of virtual schools when that information was not explicitly delineated on the state department of education websites. The data are recorded on a spreadsheet and this information is used to draw conclusions about the percentage of under-served students served in online schools across the country. See the example for Arkansas provided below in Table 1 Arkansas. All other states are available in the Appendix.

Table 1 *Arkansas*

SCHOOL	Percent of students in each group							Free	Reduced	Special
	Total enrollment	White	Black	Multi	Asian	Native	Hispanic	Lunch	Needs	
Arkansas Virtual Academy K-8	500	86.20	7.80	7.80	0.00	1.00	3.80	0.00	10.20	
<i>State of Arkansas Data</i>	468,066	65.00	21.30	2.00	1.00	0.07	9.00	60.00	n/a	

As I previously mentioned, the definition of at-risk student is imprecise and varies ideologically and pragmatically. For the purpose of this study, I use state-specific definitions when available e.g. Colorado provides a legislated definition of at-risk and includes this information on state report cards. When that information is not available I use free and reduced lunch (FRL) percentages, a metric that has been accepted as a proxy for poverty at the school level, and race/ethnicity data. While clearly all students that qualify for free and reduced lunch or have minority status are not in danger of failing or

dropping out of school, under-served students are more likely to come from low SES and minority group backgrounds.

### ***Results***

The process of searching state websites for relevant information and data on multi-district or statewide virtual schools is challenging because of the great variation in the way states collect, organize and post data. Many states require online schools to submit disaggregated enrollment and test data, however, some states do not or they combine these data with data from bricks and mortar schools making it near impossible to determine which schools are online and which are not. Other states do not aggregate online schools or otherwise delineate them in a searchable database thus making it difficult to search for school data without the exact name of the school. In one state all of the online schools had a specific numerical prefix, but unless a person knew that prefix, which was not posted anywhere, it would not be possible to search for these data.

States also vary in the degree to which their departments of education websites are developed and interactive. Some states like Minnesota, make state, district and school level data easily available and in formats that are user-friendly. Other states collect requisite data, but do not have websites developed sufficiently to allow interaction with these data. Instead, they post spreadsheets that organize data but these can be daunting because many spreadsheets are very large and contain, for example, all of the state's school districts. While researchers are generally familiar with spreadsheets, some parents may have difficulty sifting through spreadsheets with thousands of fields in order to obtain information about their schools.

Furthermore, some states do not collect data on virtual schools. The Arizona Department of Education staff, for example, referred me to either the Arizona Charter

Association or the Arizona State Board for Charter Schools because the department of education does not have these data. Hawaii suggested that I go directly to the schools because the department of education currently does not collect these data on virtual schools. Other districts do not isolate virtual school data from the districts that charter them. Thus in Oklahoma, for example, it is impossible to determine which students are enrolled in a district's virtual school and which are enrolled in the bricks and mortar.

Notwithstanding these complications, I was able to obtain information on most of the multi-district and statewide virtual schools in states that permit them. Three distinct features surfaced from these data that I will discuss:

1. In general virtual schools enroll more white students and fewer minority students than state averages
2. In some states like Colorado a 1-2 virtual schools enroll disproportionate numbers of minority and poor students while the other schools enroll fewer.
3. In a few states like Ohio most virtual schools enroll disproportionate special needs and/or poor students than the state average and a few school enrollments are more than 50% special needs.

In general, virtual schools enroll more white and fewer minority, poor and special needs students when compared with state averages. I did not collect data on district virtual schools that were not at least multi-district. Most of the virtual schools in the study are statewide schools or schools that enroll students from across the state. In 21 out of 21 states in which I was able to obtain data, most of each state's online schools enrolled more white students. There are many reasons for this, including that schools enroll from specific pockets of students i.e. metropolitan areas with greater populations or rural areas because students might be seeking expanded online curriculum options. In other words, it is possible that online schools enroll disproportionately across the state – more in some districts, less in others. Further research is needed that can link virtual school enrollment

data to the schools and districts from which students transfer in order to determine if virtual schools are enrolling specific (white) students from those districts.

While the enrollment patterns of most states are similar to each other in that they enroll more white students and fewer poor and special needs students, a few states are unusual. Colorado is unique among states in that it has legislated standards for virtual schools and commissions a yearly process that audits and reports a variety of information about their virtual schools. When the data on the 25 statewide virtual schools is combined, as they are for the report's comparisons between virtual schools and bricks and mortar schools, the demographic data reflect state averages. That is, virtual school enrollments are very similar to that of non-virtual school enrollments. See Table 2 *Colorado Profile Comparisons*.

Table 2 Colorado Profile Comparisons

<b>Demographic Profile of Students by School Type</b>		
Race/Ethnicity	Non- Online Student	Online Student
American Indian	1.19	1.85
Asian	3.82	1.69
Black	5.99	8.01
Hispanic	28.51	20.80
White	60.49	67.64
<b>Gender</b>		
Female	48.95	50.65
Male	51.05	49.35
<b>IEP Status</b>		
No IEP	90.92	91.27
Yes IEP	9.08	8.73
<b>ELL Status</b>		
Non ELL	82.99	93.46
ELL	17.01	6.54
<b>Free/Reduced Lunch</b>		
Non FRL	60.90	70.93
FRL	39.10	29.07

However, when data are disaggregated so that schools are compared individually, there are great differences. Three of the 25 schools exceed the state averages in the number of black, Hispanic and poor students they enroll, while all other schools under enroll in the same categories. See Table 3 – *Colorado Exceptions*

Table 3 Colorado Exceptions

School	Total Enrollment	Percent of students in each group					Free Reduced Lunch	Special Needs
		White	Asian	Black	Native	Hispanic		
GOAL	2188	44.70	1.60	4.88	1.63	47.10	77.00	10.50
HOPE	2851	25.20	n/a	23.20	1.40	47.19	53.21	7.60
DPS	97	40.60	0.00	25.00	3.13	31.25	29.00	<=16
<i>State</i>	<i>854,265</i>	<i>56.00</i>	<i>3.10</i>	<i>4.80</i>	<i>0.80</i>	<i>31.90</i>	<i>40.30</i>	<i>n/a</i>

While there can be many reasons for this dichotomous enrollment pattern in some of these virtual schools, one possibility is that a few online schools have models that support minority and poor students while the other models do not. They may provide face-to-face sites where under-served students can drop in for assistance, childcare or free transportation. In this case it is possible that minority students and/or parents select these schools over schools that require parental management of the schooling process.

At the same time research has concluded that some schools develop programs that intentionally discourage under-served students from participating (Burch, 2009). When schools are designed to require substantive parental or familial contributions in instruction and management many under-served students cannot enroll. Whether by intent or design an education system is developed that permits some schools to opt out of providing supports that are requisite for an under-served student population.

This becomes a policy concern when public schools establish enrollment criteria that are exclusionary and by default require under-served students to enroll in the only schools willing to develop the kinds of support systems they need, particularly when the state funding formula remains the same whether a school develops a design that supports under-served students or not. It is possible that the new trend towards creating many school models results in greater choices for families and potentially better schooling for under-served children. There is also evidence that these models become ways that schools can systematically exclude students, particularly students who may not perform well on state tests and other measures that rank schools. In either case, funding formulas should be considered to differentiate between fully online and blended schools offering myriad supports for students who need more resources from schools and those who primarily serve students who need little school-level assistance.

Finally, in Ohio online student enrollment varies considerably from state averages because some online schools enroll large percentages of low-income and special needs students or students having IEPs (individualized education plans). Nearly all of the schools in the state enroll at least 50% low-income and in many of the schools more than 75% of the students receive free or reduced lunch. Table 4 *Examples From Ohio* details a few representative schools. See the appendix for a complete table. The Electronic Classroom of Tomorrow (eCOT) for example, is a statewide school and it enrolls nearly 77% low-income students; more than 20% of its students have an IEP. Lakewood Digital Academy does not claim to enroll any students receiving free and reduced lunch, however more than half of its students have a special education designation. (For a complete list of schools in Ohio see the appendix)

There are various possible reasons for this: a school might develop a reform effort and may target these populations specifically; schools might use online schools as a place to relocate their under-served students; schools may mirror the areas from which they target enrollment, which may not be similar to the state averages and so forth. Without additional research linking student-level data with their home districts, it is difficult to be certain.

Table 4 Examples from Ohio

School	Total enrollment	Percent of students in each group							
		White	Asian	Multi	Black	Native	Hispanic	FRL	Special Needs
Cardington Lincoln	49	100.00	0.00	0.00	0.00	0.00	0.00	42.80	<b>46.70</b>
eCOT	10454	76.90	0.30	4.90	14.20	0.40	3.30	<b>76.90</b>	20.20
Lkwd. Digital Acad.	46	97.40	0.00	0.00	0.00	0.00	0.00	0.00	<b>52.25</b>
Treca Digital Academy	2093	80.30	0.00	5.70	8.20	0.00	5.00	<b>72.40</b>	19.10
<i>STATE OF OHIO DATA</i>	<b>1,749,248</b>	<b>74.00</b>	<b>1.70</b>	<b>4.20</b>	<b>16.5</b>	<b>0.10</b>	<b>3.50</b>	<b>45.10</b>	<b>14.80</b>

According to the National Center for Education Statistics the most important reasons for offering online learning options are to maximize educational opportunities and meet the needs of diverse students (Zandberg, Lewis, & Greene, 2008). State level data of full-time online schools is a limited view of who is enrolled in online courses, but they do provide some important information. In general, in the information I collected from state departments of education, it appears that full-time online schools are enrolling fewer students of color, poor students and students with special needs compared with the overall public school student population. If this is accurate, then it calls into question tenets that online learning, as it is currently enacted, is an equalizer, providing access to education that is free of geographical constraints. However, a definitive conclusion

requires more attention to student level data that can connect students to their former home districts as well as provide more background information. Equally important are schools that appear to be enrolling unusually high number of poor and IEP students because the fact that some schools are serving large numbers of these students does not mean that they students are better served.

## Chapter 4

### *Methodology for Case Studies*

This project is a *collective case study* (Creswell, 1998), involving multiple sources of data from various perspectives and within different contexts, both virtual and face-to-face. It is a multi-site study about educating under-served students virtually.

#### *Interviews*

This section describes my analysis of four schools that enrolled under-served students in the 2011-2012 school year. The analysis includes in-depth interviews with two levels of school staff: administrators (superintendents, principals, directors, CEOs) and teachers (coaches). Administrators are able to provide building level goals, mission and values that potentially impact under-served students. They are able to speak to systemic initiatives and policies as well as the ways in which students are resourced. Teachers can most accurately address instructional practices and curricular and technological supports that are intended to support under-served students. When available coaches, who are often the first level of support for under-served students, will be interviewed. They are most able to respond to questions about the ways in which programs address the daily needs of their under-served students. I solicited participation from teachers and mentors by making an in-person announcement at a staff meeting and/or by sending a recruitment letter by email from the principal or his/her representative.

In addition to completing interviews with educators, I conducted in-depth interviews with students about their perspectives on the school and classroom level supports being offered to them. Students were also asked to describe what they would need from their schools in order for them to successfully complete their course of studies.

A minimum of two students was recruited for participation from each of the teachers who agreed to be interviewed. I solicited student participation with both a formal recruitment letter (see Appendix) and/or an announcement. Teachers sent letters to their students.

The interview protocol includes open-ended questions designed to elicit responses relative to support for under-served students in four essential constructs: access to resources, educational systems that defend student needs, excellent teaching and cultural responsiveness. Interviews are conducted in person when possible or over the telephone. Interviews were 60-90 minutes long and did not involve follow-up interviews, although occasionally I conducted follow up questions for clarification by email. Respondents were provided with the transcribed copy of their interview upon request. All participants signed consent forms prior to interviews and confidentiality protocols were followed. Parents of minor students sign consent forms.

### *Observations*

In-person classroom observations allowed me to study interactions, classroom and, instructional practices, student engagement and myriad other potential student supports. Some schools provide class sites for students and some of these require in-person attendance. When these were available I attended these sites, where I assumed increased student supports were offered. When face-to-face classes were not a part of the design of the school, I observed synchronous online classes. Synchronous online “classroom” observations can provide opportunities to examine student supports that are similar to those in face-to-face classrooms i.e. interactions, class culture, instructional practices and student engagement. I did not collect data on other types of conversation: chats, email

and telephone conversations, although I did ask all participants about these other means of communication.

Field notes were also collected and an observation form was used (see Appendix) for both the face-to-face and online classroom observations. Pseudonyms are used for students, educators and schools.

### *Sampling*

Schools were selected from four distinct regions of the country i.e. the Southwest, the East, the Southeast and the Midwest. This maximized the variability of policies, models and student populations. The history, support, legislation, development and so forth of virtual schools varies by state and region. By obtaining a sample across multiple regions, I hoped to capture some of these differences. Only states offering full-time online school options were included (29 states at the time of selection). One state was chosen from each region; states having more full-time options were given priority as the likelihood of recruiting participation was increased. Additional states within regions were chosen only if participation was not obtained from the initial state.

Two schools that serve under-served students exclusively were selected and the remaining three schools were selected based on their enrolling some, but not an exclusive, under-served student population. Schools with enrollments between 30%-50% under-served were targeted. I wanted to test whether schools serving under-served students exclusively supported their needs in different ways from schools that serve a diverse student body.

### *State and School Profiles*

The following section describes each school and the rationale in selecting it for participation. See Table 5 *School Profiles*.

Table 5 School Profiles

	<i>Learning Centers Virtual School</i>	<i>Fully Virtual School</i>	<i>Blended Virtual School</i>	<i>Fresh Start Virtual School</i>
Enrollment	2188	312	413	150
Percent Minority	55	23.3	100	99
Percent FRL	77	39.4	92	89
Percent SN	10.5		21	16
Online/Hybrid	Fully online	Fully online	Hybrid, but students attend all day at a school	Hybrid – students attend for only part of every day
Model	Drop-In Learning sites available across the state offering extended hours (e.g. 10:00-9:00)	Traditional cyber school	Online content and delivery, but traditional classrooms	Site instruction for 3/5 of the day – independent work for 2/5
Unique features	Dual enrollment option		Many after school options, Saturday school and extended school day	Housed in a Community College that offers its students use of college amenities
Teachers	Online teachers – however teachers often come to sites	Fully Online teachers who work from a central office	On Site teachers	Online teachers assigned by corporation who never see students fact-to-face are part of the purchased curriculum. On site aides
Mentors/learning coaches/aides	Mentors assigned to every	No mentors	No mentors	Aids work at the site to provide additional support including

	student; they work in-person and remotely			direct instruction to 25 students in each class - ~50 total
Teacher/student ratio		75-125	25-30 per class	All students taking their classes (as many as 125 from Fresh Start V.S.)
Teacher experience		Most have fewer than 5 years	Most teachers have fewer than 5 years	Aids are not teachers and teacher information is not available
Beginnings	Contested start as a charter school managed by for-profit	Contested start as a charter school managed by a for-profit	Proposed to metropolitan district as an innovative alternative. It is part of the urban district	District staff initiated the program in response to drop-out students' survey responses
State role	Views itself as a "Choice State" and permits myriad options	Virtual schools were contested and the state was sued in response		

### *Learning Centers Virtual School*

I selected the state in the southwest for a variety of reasons including: there are many fulltime online options for students in schools that are governed and organized disparately; there are several e-schools that serve under-served students; the state department of education and legislature mandate regular auditing and reevaluation of online programs, which has resulted in more developed policies. I ranked the schools in this state based on how well they met the selection criteria and then solicited support. The first school that I approached agreed to participate.

Learning Centers V.S.'s evolution was politically tumultuous, but this did not prevent rapid and expansive student enrollment. The school began as a small program

with 20-30 students working in a computer lab in a traditional bricks and mortar school. In the program's first year the teacher, who also founded the program, was solicited for partnership by a for-profit management company that had chartered other schools in the state. The teacher agreed and the program became a school with nearly 70 students.

When the school sought a multi-district charter, state personnel recruited other individuals, who did not have loyalty to the management company, to assist in evaluating the proposal. These individuals promoted an independent school, which required severing ties with the management company. The management company had been governing the school, including all aspects of the school budget, however, the Department of Education stated in a news release that it questioned some of the management practices of this company and welcomed transferring governance to an independent board. This process was contested and control was disputed fiercely and publicly. In the end, the school emerged as an independent entity without a management company. Enrollment in the subsequent two years rose to approximately 2200 students statewide.

When asked if his school markets to students under-served or otherwise, one of the school's leaders told me that this is not necessary because superintendents across the state remove students regularly. "We have in our state an accountability system that creates tremendous incentives for schools to get rid of kids... In [our state] we have a single count day and it is not uncommon for high schools in [this state] once they have counted the kids after the count date to expel them in large droves. This past year we had a charter school in [another city] where they kicked out 11 students the day after count day and so the 11 students came to us..." In addition, "We had a principal of a high

school probably 10-11 months ago and he said that his superintendent had told him that he needed to improve his scores or he loses his job. And he told us that the only way to do that was to get rid of 78 kids and would we take those 78 kids?" In addition to students who are discarded by their local schools, Learning Centers V.S. enrolls students over the age of 21 despite having to educate them pro bono since state funding ends for these adults.

Learning Centers V.S. is a fully online school and many of its students remain at home and never meet teachers, mentors or other students except in online classes or formats. As long as students are completing their work and sticking to schedules developed by administrators, they are permitted to self-select out of face-to-face reinforcements. However, 18 drop-in learning centers are provided across the state for students that need face-to-face tutoring, additional resources, mentoring, a more rigid accountability system or other kinds of supports.

A key component in Learning Centers V.S.'s model is the learning coach or mentor. The school allocates 1 coach for every 25 students. I subsequently detail the ways in which learning coaches work to mediate the needs of under-served students in their charge in chapter 5. In addition to learning coaches, Learning Centers V.S. prescribes content specialists who are certified teachers responsible for all of the students assigned to a specific learning center and enrolled in their content area. In this way, content specialists are regionally assigned and available to come into a learning center to provide additional content support beyond what a mentor (paraprofessional) may be able to give. In the 2011-2012 school year the school employed nearly 180 staff. Hence, while Learning Centers V.S. is a large statewide school, mentors and content specialists are

assigned regionally. In essence, the school creates smaller schools within the larger statewide version.

Mentors at Learning Centers V.S. have varied backgrounds including as teachers, social workers, retired businessmen and the military. Teachers also come from diverse circumstances; some have been teaching in public schools for many years, some for less than 5 years and some came to teaching after working for decades in other professions including journalism, residential treatment programs and community organizations. Most of the leaders had been working in public education for decades, however, a few chose education after a career in another field like engineering. Except for the founding teacher none of the school staff with whom I spoke had had previous experience with online learning.

The students at Learning Centers V.S. are formerly homeschooled students, high school dropouts, advanced students who want to take advantage of the expanded course offerings or dual enrollment options, students who need flexibility in order to accommodate children, work and increased family responsibilities and others who, for myriad reasons, do not want to or cannot continue their education in a bricks and mortar setting. Collectively, 47% of the students are Hispanic, 77% qualify for free and reduced lunch and less than 11% qualify for special education services. However, these demographic data vary by region. In some learning centers nearly all of the students are Hispanic and in other centers, there are few if any Hispanic students. More than 90% of the school's enrollment is under-served by a least one state defined indicator.

*East (Fully Virtual School)*

I selected the eastern state because it provides a contrast to many pertinent selection

criteria. It is a state with many fulltime online options, but policies and legislation have been prescribed in response to a different, much more contested history of school choice. State demographic data indicates a larger percentage of white citizens and fewer Hispanic ones, and the school's cyber model is more traditional. There were many schools operating in this state at the time of the study. I eliminated two schools that had less than 100 students and solicited 6 schools for participation. Fully V.S. was the only school to agree to participate.

Fully V.S. is a small, statewide, fully online school without a face-to-face feature.<sup>5</sup> In this state the department of education currently charters all cyber schools. A controversial national education management organization (EMO) secured the charter for Fully V.S., however, the current superintendent lobbied the school's board of education for six years in order to become independent. He said that he did not want the EMO to run the school, particularly since he is responsible to the board and not the EMO. The board shoulders all of the responsibility for operating the school, even when the EMO manages it. In his opinion there was ongoing reason for concern about the EMO's performance. In the fall of 2012 Fully Virtual succeeded in terminating its contract with the EMO.

There are 22 teachers at Fully V.S.; 21 of these are female and predominantly in their first 5 years of teaching experience. None of the teachers that I interviewed had any experience teaching online before they applied. In fact, most of the teachers had very little teaching experience at all. The superintendent stated that he thought younger

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<sup>5</sup> There are field trips occasionally, however, these are infrequent, poorly attended, are strictly for enrichment and do not serve as curricular or academic support or as mentoring.

teachers knew more about technology: “So a lot of the kids now, the younger kids are more technically sophisticated than the older ones, so most of my staff...we have 60 years old, [but] most of these people could be my kids. Some of them could be my grandkids.” The teachers work from the school’s office under a more traditional school schedule. Teachers are assigned to courses based on their certification and maintain total course loads of between 75-125 students.

Students live throughout the state and access content, instruction, communication and all aspects of their education, remotely. They are 77% white, 19% black and 40% of them qualify for free and reduced lunch. Notwithstanding the demographic data, all of the faculty and administration describe nearly all of their students as under-served. The superintendent says that based on his students’ needs his school resembles an urban school

*Midwest (Blended Virtual School and Fresh Start Virtual School)*

The Midwest state was selected despite not having an abundance of full-time virtual school options. It was chosen, however, because it includes a large metropolitan area that provides various full-time options for its students, including two that consist of unique blended programs. I solicited the cooperation of these two schools because they enroll urban students of color from a metropolitan area associated with large numbers of under-served students. Both agreed to participate.

Blended V.S. was developed with grant funding under the leadership and vision of a long-standing faculty member of the metropolitan school system. It is not a charter school, but is part of the metropolitan school system. Eighty-five percent of Blended V.S.’s enrollment is required to come from its neighborhood, however, 15% of the

enrollment is open to the greater metropolitan area. Students come to a physical location daily, but access their curriculum online. The principal acknowledged that nearly all of the students are under-served because they test below grade level on the state test. "...we haven't had many kids coming with an *exceeds* and *meets* on [the state test]" In addition he said, "our students are at-risk, pretty much all of them, anyone that is in this neighborhood... because of gangs violence, poverty..."

Blended V.S. has struggled to refine its structure as a blended school and has made significant curricular and instructional changes yearly. One of the changes that the school made after the year was disallow students to take laptops and iPads home with them. During the first year students and the school were robbed, equipment was pawned and safety of both the students and the school was jeopardized. Staff had to develop ways to protect students and equipment while simultaneously making it possible for students to have sufficient time with their coursework. Most of the students do not have internet access or a computer of their own at home. Blended V.S. staff developed a menu of options for students that include: Saturday school, extended school hours and a half-day on Wednesday for catching up. Students and staff work together to address the realities of urban life in an impoverished neighborhood.

Of all the schools in the study, this school's model most resembles a traditional school. Most of the students reside in the neighborhood; those that commute live within 30-45 minutes from the school. Attendance is calculated based on physical presence and the school day begins and ends traditionally. The school is small and shares the building

with other small schools.<sup>6</sup> Classes are approximately 50 minutes long and bells ring to alert students and teachers that it is time to change. Students physically move to classes throughout the day, carrying their laptops and technological gear with them.

The staff at Blended V.S. consists of approximately 12 male and 16 female teachers, however, only 5 teachers have 5 or more years experience. For most of the teachers, their employment at Blended V.S. was their first teaching job. None of the teachers had experience teaching online although some teachers expressed an interest in technology or experience working with technology. Furthermore one fifth of the teaching staff consists of special needs teachers appointed by the metropolitan school district based on the number of special needs students. More than 20% of the students have Individual Educational Plans (IEP).

As a result of the policy that requires 85% of the students to come from the surrounding neighborhood, the school's demographic data reflects the segregated nature of the metropolitan area: 97.3% of the students are black, 2.2% are Hispanic and .5% indicate multiple races. Ninety-two percent qualify for free and reduced lunch and 21% for special education services.

#### *Fresh Start Virtual School*

Fresh Start V.S. began as a response to the dropout situation in the greater metropolitan district. According to the director, the metropolitan district developed and administered a survey for students who dropped out of school that was aimed at uncovering the reasons or "common threats" students perceived to interfere with their attendance. "... they seen

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<sup>6</sup> Each school occupies a floor of the building. Security is tight and once the school day begins the doors are locked to prohibit entry into each school. School personnel must let in all visitors and late students after they have been cleared by security.

that students were dropping out because of safety issues; they were dropping out because of homelessness; they were dropping out because of their inability to get to and from school; some of them had babies so they couldn't pay for childcare; some actually had to work full-time to take care of the whole front.”

The metropolitan school administrator in charge of developing an alternative program knew a few charter schools that she considered successful and wanted to create a program that provided some of the best characteristics of these schools, but could be flexible. The city's district's administrator was particularly interested in a charter school that had been working with students who had dropped out of the city's schools. Fresh Start V.S. is patterned and chartered after this school, but it is blended to provide additional flexibility. Fresh Start V.S. is considered a “full-service” school because it manages non-school issues like transportation, childcare, housing, healthcare and a wide variety of obstacles faced by its students even though it does not receive additional funding.

Fresh Start Virtual is open to students in the metro area who have at least 12 credits and have already dropped out of school. Generally these students range in age between 18 and 21 years. When asked if the director marketed the school he stated, “Everyone knows about this school because of a lot of mass media blitz and a lot of things that are going on because of the school's success. But before that, we had to do some grassroots marketing; we had to go out to different schools ... and let them know about who we are and what we do.” For example, “you know the students that you can't deal with or you want to, you know, recommend for other schools because they are problem kids – we will take those.” Once word circulated that this school educated those

older, already dropped out, potentially difficult students, school personnel would say, “Oh my God, I think I have like 10 students for you.”

Enrollment for Fresh Start V.S. is capped at 150 students, but they have not had a wait list – they have been able to accommodate all students who qualify for enrollment. In the 2011-2012 school year 70% of the students enrolled were black, 1.5% were white, and 28% were Hispanic, 89% qualified for free or reduced lunch and 16% had an IEP.

The school is a charter school similar to the original charter but also different because it uses a national online curriculum that is developed for the publisher’s other online schools. Students come to a facility located within one of the city’s community colleges. Students enrolled in the online high school receive a community college identification card and have access to many of the college’s amenities such as the library, cafeteria and gymnasium. The director informed me that older students who might have been embarrassed to attend a traditional high school are indistinguishable from the other college students.

Students are required to attend Fresh Start V.S. three hours per day and to complete online content on their own for two hours per day. Students may attend a morning shift or an afternoon shift. Evening shifts are established depending on enrollment needs i.e. if many students need the evening hours or there are too many students enrolled for the daytime shifts. Students may stay on campus to complete their 2 hour requirement or they can complete those hours elsewhere. Many students stay on campus.

The curriculum is purchased from the national vendor, however, local staff develop content that is uniquely required by the metropolitan district. The national

vendor provides online subject-specific and certified teachers; the school provides teachers to assist in the classroom. There are 4 teachers working at Fresh Start V.S.: Two male teachers, both of whom have 5 or fewer years experience teaching and 2 females, one is a former engineer who has been teaching for 3 years and the other has been teaching for several years. These individuals provide content support through direct instruction, time management, organization and mentoring. I do not have information about the teachers working for the school who are employed by the national vendor. Online teachers make assignments, provide content and grade non-computerized work. The school consists of 3 classrooms and an office; students are assessed and 25 are designated to one of the classrooms and to a shift. Tables are lined with computers – one for each student – and on the days I visited, students sat and worked quietly.

### *South*

Of the 10 states in the southeastern United States, 4 offer at least one multi-district fulltime online option. The other states offer supplemental programs or a state developed option. Of these 4 states that offer a fulltime option, I eliminated Florida because nearly all of the students enrolled in an online school in Florida attend Florida V.S. While this is one of the first online schools, is by far the largest in the country and is an important school, it is not typical of most online schools. Two national online school providers had schools in 2 of the 3 remaining states. I made a formal request to one of the national providers to participate in the study.<sup>7</sup> The proposal process was lengthy and included a 3-month waiting period. I also solicited participation from a school in each state that was not part of either for-profit chain. I called one principal repeatedly, left messages, sent

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<sup>7</sup> I did not solicit the largest for-profit school because it was already included in the sample in another region

emails, but she refused to respond. A principal from a larger district agreed to participate pending approval from the district. The district mandated a proposal process similar to that of the for-profit school. In the end, after nearly 6 months of emails, proposals, phone calls, signatures and compliance forms, all of the schools declined participation.

#### *Additional Obstacles*

The Internal Review Board (IRB) process at universities are designed to protect research participants and ensure safe protocols that comply with federal and international mandates and minimize harm to study subjects. Because online learning research is new, this process was complex and lengthy. This study necessitated securing IRB approval in multiple stages: initially for interviews with leaders, later for teacher and student interviews and eventually for online observations. Obtaining permission to observe online classes was particularly difficult because members of the IRB were not familiar with K-12 virtual schools. As a result they required consents that had not been previously required for observations I had made in traditional face-to-face classrooms. Requiring all students who could potentially attend an online class to assent and have their parents consent before an observation is impossible. High school class sizes in online schools can be over 100, and while not all of these students would attend a specific synchronous class they all *could* attend the class. Hence, the IRB requirement that all potential participants consent could be unyielding. In addition, synchronous classes are routinely recorded so that students who are unable to attend a live session can watch the class later. The IRB would not permit me to watch these classes because I could potentially watch them more than once and that would be different from a face-to-face class that I could only observe live. This eliminated enormous archives of classes that I could have analyzed, even if

only once. In short, less was required in order to observe a class where students were present than where they were remote and located in unknown parts of the state. It is likely that as IRB members become more familiar with online classrooms these apparent contradictions will be resolved.

Research of K-12 online schools is complicated by many factors and these contribute to the lack of transparency that is shaping education reform. Public schools make their budgets, meetings, curriculum, hiring, strategic plans and buildings open to the public. With a simple request a parent or visitor can receive a tour, visit classrooms, or volunteer time or services. Research policies for traditional schools are generally well established and straightforward. Online schools are closed, password protected and unavailable to the public. It is often even impossible for prospective parents or students to have access to the schools until after they are enrolled. Furthermore, curriculum is proprietary and unavailable to the public or even to researchers. Parents often have to sign paperwork explaining that they are not permitted to share the curriculum content. Lastly, management companies are not under the same obligation to disclose their budgets and expenses as traditional public schools. It has been difficult to determine the actual costs of starting and operating online schools when financial information is privately held. Research is dependent on the good will of some schools to participate in research and unable to penetrate other schools that are protected by their private companies who currently conduct their own research. Meanwhile, the public loses because it continues to make decisions about who and how much to fund when details about program effectiveness are limited at best.

Despite these constraints, the schools that agreed to participate in this study were

cooperative and open to ongoing observation and examination. Both online and face-to-face teachers generously opened up their classrooms and gave of their time. In fact, schools welcomed the opportunity to reflect on their practice and to have an objective analysis of their work.

## Chapter 5

### *Results: Access to Resources*

The focus of this study has been on four integral components requisite for the online education of under-served students: access to resources, systems that defend their needs, excellent teaching and cultural responsiveness. In this chapter, I summarize my findings regarding access to resources.

#### *Access to resources*

Marginalized students everywhere – including in traditional schools -- need access to resources. The literature summarized in earlier chapters prescribed ways in which access to resources could be expanded for students through technology, including online learning technologies. Specifically, advocates point to increasing access by: removing barriers to full participation (Collins & Halverson, 2009); virtual experiences (Collins & Halverson, 2009); providing access to a more challenging and less rudimentary curriculum (Bangert & Rice, 2009); transcending geography by exposing students to more inclusive sources of communication (Shaffer et al, 2005), and more diverse peers (Wu & Hiltz, 2004).

#### *Removing barriers to **basic** participation*

Learning Centers V.S. and Fresh Start V.S. work expansively to eliminate as many tangible barriers to attendance as possible. Most of their students had already or had nearly dropped out of traditional schools and have lives that are complicated by work, children, years of truancy and poverty. Administrators at each school and drop-in sites develop and maintain relationships with myriad agencies including social services, legal,

medical and law enforcement. They provide assistance to students in innumerable non-educational contexts. Learning coaches at Learning Centers V.S. have the responsibility to meet students, assess their needs and provide varied solutions to their problems. One coach explains:

“So my part with that is, I supported this kid with everything that they needed. I had her shadowing and basically trying to convince her that she could do this.... So that's one example, other examples is I write resumes for students, I help them find jobs, teach them how to do interviewing, we got all five maybe seven kids jobs this year. ...I get diapers, ... and other baby supplies... So that's pretty much what I do, I try to remove all of the obstacles that are non-academic from students' success...It's varied, I found a way to get free glasses for kids who don't have any kind of insurance or Medicaid, and I do have a contact in another way to help these kids get Medicaid when they're not on the Medicaid list...So it's pretty varied.”

An administrator at Learning Centers V.S. explained the coach's role in this way:

“ If a kid shows up and they call you and they can't come to take a test - because all of our tests are proctored - and they can't come into the site because their baby doesn't have any clean diapers. We expect you to go to the store, pick up some diapers, take them to the house and bring the kid back to the site and make sure that kid gets tested.”

I asked a coach how his support efforts were different from those that a brick and mortar school might provide. He stated that rather than just refer students to services that the school secured or organized, his job was to accompany the student through the process. “We will take them there; we will make the arrangement to make an appointment, and we will go with them. We have gone to court with students that have been in trouble. A lot of the schools don't send teachers to that. If one of mine goes, I go, that's for sure and that's the difference.” In this case the coach was referring to students who are required to appear in court for adjudication. To the coach, the fact that he

accompanies his students through the process was one marked difference between him and traditional public school teachers.

Fresh Start V.S. responds to student needs in similar ways. The administrator explained, “If you’re in need of child care services, talk to, you know, the registrar. She has connections with I think 3 to 5 different child care services that are free to our students and depending on the child’s, you know, age, where you live. We try to really accommodate the student in that way. If you need help on medical, we have that. If you need transportation, we have a program that offers students bus cards to get to and from school. We have an on-site clinical counselor if the students need that assistance on that moment. They have access to that.” I asked for clarification about the medical and he replied, “We provide them with the resource – so for example, we have partnerships with outside clinics, resources and agencies and we’ll refer them to those agencies.” In addition, pro-bono attorneys work with the school in order to have criminal records expunged for students trying to get on track to graduate.

Fresh Start V.S. regularly procures housing for homeless students, clothes for students who need them and there is a box of food available at all times in the office. Administrators travel to meet with students’ employers to resolve scheduling or other conflicts; attend court when students request support; meet with social workers to address innumerable complications to school participation. I observed repeated examples of ways in which these two schools in particular merged their programs with as many social services as students’ needs dictated. School administrators insisted that this “Is everything because if we don’t kick [students] into the school--that’s what I tell our team all the time-- we can have a pretty school with beautiful desks and all this other stuff, but

if we don't get them into the school, none of it matters. So we are spending a tremendous amount of effort trying to ramp up our ability to provide wrap-around services, to provide assistance to our students and to their families and to help educate their families and create these support groups for each student, which has been a challenge.”

In addition to removing these barriers, teachers at Learning Centers V.S. travel to meet student needs. Whereas a typical virtual school may have a core of teachers in a specific location or several teachers spread out over the state with a centrally located office, Learning Centers V.S. has offices and teachers all over the state. “For us, all our teachers are right where the kids are.” This is important because providing the kind of mentoring that SW aims to provide is more difficult in an online school where distance is factor. Teachers, mentors, coaches and directors are expected to take teaching to the students if the students are not coming to the school or logging into the school site. “So we have the ground face to face close proximity, where if students haven't gotten their work done or haven't logged in or they are falling behind, we will show up where they work; we will show up where they shoot pool; we will show up at their house; we will show up, you know, where they are hanging with their friends and we will bring a laptop. A lot of our teachers will meet students at McDonalds or meet them at Culvers or meet them at any kind of store that has internet and work with them during their break.”

Learning Centers V.S. also has a concurrent enrollment process for students that requires that students complete the Free Application for Federal Student Aid (FAFSA). Since parent taxes are required for the application, Learning Centers V.S. staff engaged volunteer accountants to complete family tax forms for free. At the same time, school staff completed FAFSA forms for students. The administrator for Learning Centers V.S.

was particularly pleased because the school has a substantial ELL population and parents of these students “don’t want anything to do with providing that kind of information...” The administrator felt that by providing this free service they were able to get the information they needed and maintain a “calmness” to the process.

At Blended V.S., neighborhood students typically enroll as freshmen and remain matriculated until graduation. These students contend with a wide range of issues related to poverty, teen pregnancy, violence and unemployment. Blended V.S. provides some assistance with uniforms, rides home or to activities and some flexibility in daily schedules to accommodate familial and neighborhood constraints students regularly have to shoulder. The school, however, does not seek to redress obstacles in student lives that prevent regular school attendance and only accepts students who can attend.

As a statewide school with no face-to-face components, Fully V.S. makes some assumptions about who can attend and the level of support that is warranted by school staff for students’ personal encumbrances. Students only receive non-curricular support if an individual teacher or administrator is willing or able to provide something extra, not as a matter of the school’s mission. Some teachers try to assist students when the opportunity arises. For example, one teacher had her husband repair a bicycle that was not being used and gave it to a student that needed transportation. Other teachers provide extra tutoring or additional websites. But the school does not seek to confront the barriers to participation that under-served students may have. If students do not engage in requisite activities, they are eventually removed. In other words, if students fail to complete assignments, take tests or complete other coursework, they are remanded to their local schools. Since Fully V.S. is a statewide school it does not engage in the local

work that traditional schools must tackle such as visiting the home of the student, employing a social worker to determine the cause of truancy or become embroiled with the court system.

*Removing barriers to **full** participation*

Learning Centers V.S. and Fresh Start V.S. spend a good deal of their budget and a lot of time trying to remove barriers that derail students like food, housing, transportation and childcare. And these are certainly critical to many students. However, their efforts have not involved using technology as a resource. When Collins and Halverson defined *full* participation they were referring to virtual exposure to “high-quality experiences” (p120-121), not concentrated efforts on the lowest levels of Maslow’s hierarchy of needs. They envisioned a virtual experience that would confer the power to transcend students’ geographical limitations, which often include rudimentary, uninteresting curriculum, limited opportunities to communicate and little access to cultural experiences outside of their neighborhoods. Canadian e-learning researcher D. R. Garrison debated the potential of virtual learning: “Is e-learning to be used simply to enhance inherently deficient existing practices (e.g. lecturing)? Or does technology have the potential to transform the educational transaction toward the ideal of a community of inquiry” (Garrison, 2011)?

Researchers tout the potential of technology to provide opportunities that are currently unavailable to many students. My observation of the four virtual and blended schools provided little evidence that this kind of full participation is consistently occurring or that there is an institutional mission to develop technology in this direction. This is not to say that it never occurs. In Blended V.S. I observed several examples of serendipitous high quality experiences, which I will subsequently detail. However, all of

the schools rely on teachers to transcend curriculum and mechanical and disengaging skill development. While teachers do develop some experiences beyond the curriculum, schools are not using technology to systematically and consistently provide high quality experiences that could allow students advantages in ways that more privileged students routinely receive.

For example, students need authentic spaces to publish their work. There are many websites and software companies that design spaces for students to upload their work, add music, graphics, audio or video. Others can view the work and provide feedback –students can also learn to provide important feedback to other authors. Virtual labs are also becoming more common, however, there are programs that allow students to create their own lab experiment videos. In this way students not only observe experiments in virtual spaces, they become scientists in developing their own videos.

Technology provides countless options from which to choose; the important choice has to first be whether to become immersed in the often more difficult process of teaching students to become producers of knowledge and finding opportunities for them to experience education at levels common to suburban students.

#### *Access to a more challenging and less rudimentary curriculum*

In this section I examine curriculum content and while this study is not a critical analysis of specific curriculum, I observed classes, teachers and students as they engaged with their content and I analyzed dozens of interview transcripts from educators and students that specifically addressed their.

Most of the content used by three of the schools in this study is “canned” curriculum purchased from national vendors. It is structured and sequenced and the

primary role of the teachers and mentors is to assist students as they make their way through the lessons. Each administrator praised the curriculum used in their schools while mentors and teachers were more specific about advantages and potential challenges.

However, even as they were happy with the product they were using they still considered curriculum to be a necessary evil; there was a consensus that the curriculum functioned a bit like cod-liver oil. That is, it was a necessary component of successfully completing high school, but there was little expectation from either students or teachers that in and of itself curriculum could be engaging and motivational.

#### *Learning Centers Virtual School*

Learning Centers V.S. administrators are advocates of “prescriptive” curriculum, which is computer adaptive. That is, the purchased curriculum is outcomes-based and defined by knowledge and skills to be acquired by students. These curricula often focus on skill development, comprehension and recall. Their structure pre-tests a student in a particular skill and places him/her within the course. As students correctly respond to questions they move through the content. Advances in this technology now permit vendors to add elements of learning styles to the process, so that students can have content presented in various modalities. The content process can be more or less entertaining depending on the product, however, the objective in the curricular design is not expanded experiences, but content recall. As one coach explained, “Social studies are the hardest to help students with because it is multiple choice so it is about teaching note taking skills and memorization – the other subjects I can teach concepts, but social studies the students just have to know facts.”

Content specialists (teachers) do make an effort to expand the prescriptive content: “As specialists, we have a little bit more time to think about curriculum and think about what might be more valuable for our kids.” Her example demonstrates a desire to make curriculum relevant to students given her perspective. She explained that she has developed a unit in which students read a book that describes the protagonist’s rape, shunning and eventual recovery. Part of the assignment required students to create a public service announcement in which they document local support agencies: “...one of the things they have to include is where do you go in my neighborhood if you need help, so this is a way of getting them access to stuff that they might not have known that they need...”

I am not suggesting that students do not need skill development or awareness about local support agencies. I do not argue that under-served students should not engage with literature that may be more relevant or address topics that are prevalent in their lives. However, it is not apparent that technology is being used to advance virtual exposure to quality experiences or to move beyond the status quo transmission of information. In its current form, technology use appears to reflect *more of the same* rather than an understanding of its transformative ability to not only provide under-served students with experiences beyond their neighborhoods, but to challenge students with a dynamic virtual community. Simply allowing students choice in what they read and how they demonstrate understanding, access to technological resources that will expand their experiences like video, music, publication sites and so forth, and support during the process are sufficient to turn passive learners into producers.

*MS Virtual 1*

Midwest Virtual 1 began its program with curriculum purchased from a national vendor, however, during the last few years it has made significant changes. Most of the teachers currently use Flexbooks, an open source textbook authoring program that allows teachers to repurpose content in order to customize texts for their students. Teachers are free to use content, produce new content or remix content from multiple sources. Flexbooks is designed to mirror the format used by traditional textbook companies while enabling teachers to include video or other multimedia available on the web.

Flexbooks was initially recommended by a special education teacher who wanted a way to provide content at reading levels that were appropriate for her students.

However, the principal and the staff supported being able to modify textbooks for all the students, even though the workload exponentially increased for the teachers.

Using content that is customizable is a significant step towards providing curriculum that is challenging, engaging and relevant to the lives of the unique underserved students enrolled at individual schools. However, while the format allows teachers and students to move beyond instrumental rationality with its focus on efficiency and uncritical reasoning (Hyslop-Margison, 2004) it doesn't guarantee that teachers will not simply replicate the format and content. Some teachers were conscious of the need to use technology to enlarge student experiences. One teacher at Blended V.S. designed a short unit in which students used the Central Intelligence Agency (CIA) and other websites to research problems confronting African countries. Students were taught to use Google maps to search locations and survey terrains and landscapes from across the world. The teacher asked the students, "What does Angola look like?" and Google maps allowed

them to see a bit of it. They then considered geographical features that contribute to both problems and potential solutions for each African country in the assignment and why it is not always possible to export solutions. Students used the maps to provide a window into an unfamiliar location and then to make inferences about the ways in which location and geography might impact their problems.

The music teacher at Blended V.S. used keyboards connected to computer software to engage her students in writing as well as listening to music, including music like Hip-Hop that is relevant and meaningful to the students. Students also chose a musical group or person and used timeline software to place the music in a social context. They were able to able to research, learn relevant historical events and analyze ways in which music can reflect, impact or change society.

Other teachers, however, used their flexible platform to emphasize information transfer and included few if any opportunities for students to engage in less rudimentary and expanding work. In order to successfully rethink traditional automated versions of curriculum consistently, across all grades and subjects requires a school-wide commitment rather than irregular or serendipitous changes by individual teachers.

In these, and other ways, teachers at these virtual schools ventured beyond the prescribed and automated curriculum with which they are supplied and expected to teach. However, these experiences appear to be idiosyncratic and not engineered as a fundamental design element. That is, students sometimes benefitted from well planned or spontaneous “quality experiences” that technology can deliver, however, schools do not appear to frame their design with these experiences in mind.

*Inclusive sources of communication*

Another component to full participation is more inclusive communication earmarked by interactions with adults and peers in cognitively challenging dialogue over an extended period of time. Cognitive theorists argue that this is a critical element to improving the reading levels of under-served students (Gee, 2004), which generally improves their ability to succeed in school. However, under-served students rarely have opportunities to engage in challenging dialogue owing to deficit model thinking, which surmises that learning is hierarchical and therefore students require grade-level skills as a pre-requisite to participating in more challenging assignments (Means et al, 1991). Online learning, as I have stated, affords space for students who are often not extended opportunities to engage in cognitive discourse or for whom face-to-face dialogue is challenging.

Administrators and teachers at all of the participating virtual schools indicated that their students are often years behind their peers in reading. Since the research into cognitive theory indicates that challenging communication improves students' reading, I probed educators and students about the opportunities for substantive and extended communication on single topics either online or in the case of blended schools, in a face-to-face context. The results are varied and contingent on individual teachers and their understanding of what challenging dialogue should entail.

*Informal Communication*

Many of the forms of communications that were evident to me and that respondents mentioned during interviews can be classified as informal/social, cooperative or technical. Some students interacted informally with other students in face-to-face settings (drop in centers and classrooms). At Learning Centers V.S., students who came to drop

in centers were more likely to develop friendships with other students and arrange common times for dropping into the learning center. Most of the interaction in these friendships was social and not academic. I observed students chit-chatting about social plans, their workload and sports. Some students came to the center with other students, neighbors or relatives whom they had known before enrolling at Learning Centers V.S. and others paired with new acquaintances at worktables. One administrator stated that he valued social interactions among students and counselors and Learning Centers V.S. worked to facilitate that when possible. In the following conversation the administrator refers to the concurrent enrollment program that allows students to simultaneously enroll in high school and college. He explains how the school tries to coordinate students so that they car-pool and develop familiarity: “Even in our concurrent enrollment, I found as far as helping some of the students get their college classes scheduled at least at the same time even though they have totally different interests and degree areas so that they can carpool together and get beyond campus together and meet up in the students’ lounge and study together while they are in over in [the city] taking classes. So we foster that for sure.” Content at Learning Centers V.S. is, however, individualized and completed autonomously. Most of my exchanges with students at Learning Centers V.S. were comparable to the following examples:

Student #1

I: So what about collaborating with other students?

R: My personal experience here, I haven’t really met many of the students.

I: So when kids come to a site, you could run into a student; but in terms of actually doing your work, you don’t ever work with the student?

R: I haven’t.

Student #2

I: You come in here [to a drop in center] with a friend?

R: I met her here.

I: And so you became friends and you come together?

R: Yes

I: Do you ever work with anybody in your school?

R: No, just myself.

Student #3

I: Do you ever participate?

R: No.

I: You don't. And when you're online, do you ever get to interact with other people?

R: Just with the teachers, I mean, on Skype, you can talk to friends; I just talk to teachers.

While Learning Centers V.S. provides spaces for some students to interact and even develop friendships, curricular work is completed in isolation or with teacher assistance if students choose to seek it. Students do not interact through course content nor do they engage in any cooperative learning experiences or in joint problem-solving exercises. Socializing opportunities exist for students who come to a learning center and seek those experiences, but interaction in learning communities is not provided.

### *Process Communication*

Respondents at Blended V.S. and 2 detailed many example of cooperative work that was meant to facilitate completion rather than prolonged engagement. In one class, I observed the teacher instruct students to work in groups to complete a worksheet on Ethiopia. Students divided the components of the worksheet (introduction, people and society, etc) in order that their combined effort reduced the time it took to complete the assignment. A student from MW 1 provided an explanation:

I: Do you get to collaborate with other students in your class?

R: Yes, most of us, they don't, but my teacher, if he knows your grades are low, he will get you in the group; like if you do partial work, he'd give you grades as long as you did some work getting it done. So, a lot of kids work in groups so they can get their grades up and they say, "We do this our grades pass and we do that - so most kids work in groups

I: So they divide up the work?

R: Yes and everything goes faster.

I: So you say most kids do that or just some kids do that?

R: Most kids. If a teacher say you can work in a group, it's likely that they will get to work in a group.

I: But are there assignments that are ever created...that are not just trying to make your work easier, but a different kind of assignment? Or is it usually when you divide up the work?

R: Most likely because some assignments are mostly tests and we take some assignments from books, so that's when we work individual from a book...

Process communication is intended to facilitate completion of students' work and the myriad ways that students tutor and support each other in the mechanics of attending school i.e. how to take tests in the software and where to find resources. At Learning Centers V.S. I observed students quizzing each other before their tests. Students helped each other by reviewing vocabulary or testing content recall, even when they were working in different and disconnected lessons. "We actually do have a good bit of peer tutoring between students because often the counselors and the coaches will work with their immediate peer group and try and counsel them into classes together because we recognize that that can be a really helpful thing and very strong bond for them to be able to work on their Math together or if they preferred social studies together."

Coaches at Learning Centers V.S. often set up times when their students can gather at the learning center in order to study, practice or receive tutoring: "Every Wednesday, she has site duty, which she serves at the [learning center] and she will have anywhere between 10 and 15 students come and just work in their classes. So she could have the study group going every Wednesday night. So it's a time and a place for these students so that they can come and interact and socialize with other students in a safe environment. Now, they might not all be working in the same class but they're all there and they have the coach report immediately if needed."

At Fresh Start V.S. peer tutoring is organized by teachers as a way to increase assistance to students who need extra help. “We have small group instruction and one to one instruction. We’ll have them do jigsaws, pair share, committees and group projects. We have students who also work as peer tutors so the students have an opportunity to work with them after schools.” Blended V.S. recently initiated peer tutoring by having the top 4 students in each core area commit to helping struggling peers. One of the students told me: “ Yes, we have study groups like, I said, on Saturdays we have Saturday school where some students tutor other students. So it answers, you know, we have a student that’s not doing so good in Math and, you know, we come with them and we tutor.”

I asked each of the participating Fully Online V.S. teachers about ways in which they create online spaces for their students to interact and communicate and the respondents indicated that they had not been successful in their attempts.

I: So is it possible or do you have situations where your at-risk students in your class do any collaborative work?

R: I have not had success with that.

I: How about just interaction with other students?

R: I try to do group projects and things but I have not been really much successful

This is not to say that communication is not a major factor in the school. Teachers and staff strive for many kinds of connections with both students and families. In fact, teachers comment that the ways in which they associate with families is a distinct feature of the school. However, conversation is primarily informative, not deeply engaging and not cognitively challenging. The classes I observed online included minimal discourse and students never used the audio feature in the class software. They responded in the chat box using minimal language. They were not required to spend more than a few

minutes on any question and responses were aimed at recall and explanations.

Vocabulary development was nominal and no time was taken to evaluate and internalize concepts.

### *Content Communication*

Participants at several of the schools did report examples of lessons or practices that aimed at both student-student and teacher-student interactions in cognitively challenging discourse both online and in class. At Fully Online V.S. one teacher indicated that she planned opportunities for her students to engage with each other a few times per year. “There are times that when I’ve tried it and it has been unsuccessful but there are times when it has been very successful. What I found is...I usually do 1-2 group projects per year, per class

One that we’re working on now is a debate where students will work together to find information about a chem. subject and then they’ll go versus one another, pro side versus con side. And they’re very excited about because they get to argue in class and, you know, something that’s a little bit different because, you know, just reading and doing work sheet and that kind of stuff...so it’s a little bit different.”

MS Virtual 2 aides develop some additional lessons that are either meant to reinforce online content to meet specific local state requirements. In these lessons students often work in cooperative formats, although it isn’t clear to what extent discourse is intended, however, the students who spoke to me were ambivalent about their participation: “No. That’s cool. So we might get together and do some work cuz we’ve got to do it together anyway. So we’ve got to work together to do this work, but

when it comes to the work on the computer with the [national vendor] I'd rather be by myself and you do yours by your self. You do your work I do mine."

MS Virtual 1 teachers reported many more examples of attempts at involving students in challenging discourse. For example, "A lot of time we use blogs so I will put a question up on the blog and they'll go on and they'll respond to the question. And then so they'll initially respond to mine and then what they do is they'll go back and they'll look at their classmate's responses. And then they'll respond to their classmates. So they'll be like, all right I really like this idea, but I disagree about this point because of this. And so that's where they can kind of bounce ideas off each other and see kind of different perspectives." Teachers also mentioned that online communication tools allow many more students, who might be less inclined, to participate. They are also more democratic because introverted, reserved or reflective students had more time to join the conversation and were not as easily overwhelmed by those students who easily responded in class. One teacher commented, "A lot of it too aside from Google Docs, there's one way that we try to do it that's more formative is, one good way is through online chats that we have. So instead of doing like class discussions where it's usually dominated by three or four of the kids in the classroom, ours is more structured where it's kind of, you know, Socratic, but it's online."

Informal communication is salient and necessary for myriad tasks, both educational and social. Students need to socialize, make friends and work through the mechanics of attending an online school. However, if students cooperate primarily for efficiency they are not garnering the potential benefits of cognitively challenging communication. The leader of Blended V.S. acknowledged that while students at the

school did interact often, those interactions were not always meaningful. This is something that he and his staff are working to improve; “Honestly, it’s something that after we have walked through, it’s something that’s a focus for us right now. That there is...it’s not so much that they’re not collaborating, they are, but is it meaningful? Is it critical thinking? Is it deep enough towards actually being meaningful?”

Participation and immersion, even in content that students enjoy, do not automatically result in higher-level skill acquisition and deeper understandings. In order for that to occur production must be stressed, meaning students must be required to become participants in producing knowledge. That is, it is not enough for students to participate with each other, they must be involved in extended, challenging dialogue that requires them to create, present or complete something as a result of their engagement. “Learning to produce the knowledge or outcomes an interest-driven group is devoted to leads to higher-order and meta-level thinking skills” (Gee & Hayes, 2011).

Students in the classes that I observed suppressed complex insight in favor of quick responses that were readily accepted. Most of the software and pedagogy at the school in this study do not facilitate collaborative student discourse. Blended V.S. is an exception, however critical engagement was idiosyncratic. In fact, students repeatedly disclosed that they enrolled in an online school in part because they did not want interactions with other students. Thus, the work of helping students overcome the systematization of their curriculum as well as their distrust of interactions with peers is a task that online and blended teachers, mentors and aids will need to resolve if students are to secure the advantages that online technology affords.

*More Diverse and Aspirant Peers*

One of the potentially important aspects of full participation in an online context is that students who are not constrained by their physical boundaries should be able to associate with more aspirant peers and/or with students from varied economic, racial and ethnic backgrounds. Online learning ought to be able to provide heterogeneity in ways that neighborhoods often do not.

Learning Centers V.S. is a statewide school and if communication were prioritized heterogeneity might be achieved and students might be able to participate in more inclusive exchanges with their peers. However, since communication is not included in assignments, online work remains a solitary endeavor. Students that come to learning centers do have increased opportunities for social interactions and academic exchanges both with coaches, specialists and other students. However, all of these students are from neighboring communities by design. In other words, only the students that live in the area come to learning centers, so the potential to associate with a diverse student population is decreased. Furthermore, only a small percentage of students assigned to learning centers actually regularly frequent them, so the chances of meeting diverse and aspiring students are negligible.

Eighty-five percent of Blended V.S. students are required to come from the neighborhood. It is likely that students who choose a technologically rich school are different in some ways from average students in neighboring schools; so in this way, it is possible that students attending Blended V.S. may associate with more determined peers. Students at this school must be willing to comply with procedures, expectations and school methodology and culture in order to remain at the school. It is, therefore, likely

that students who remain, while they affiliate with a racially, ethnically and economically homogenous student body, may in fact be educated with more aspirant peers. Also, students at Blended V.S. spend their days working side by side, in groups and in classrooms. They eat lunch together and participate in many after school activities together. College is a schoolwide goal for *all* Blended V.S. students. School leaders and teachers incessantly point students in that direction and provide and share myriad tools for them to accomplish this goal. In this way, students at Blended V.S. are being socialized differently from their neighborhood peers. These advantages however are not a result of the technology; they emerge from the school's mission and culture.

Students at Fresh Start V.S. complete online curriculum from a national vendor and receive instruction from online teachers located in other states. They do not participate in online discourse and only occasionally contact their instructors. They communicate with classroom support staff who are responsible for limited direct instruction and individual tutoring and with peers from the same metropolitan area, demographics and who are in similar life situations. It is unclear that they are associating beyond their community or with more determined peers, but the fact that they are attending school with other students who, although they had previously dropped out of school are giving it one final chance, may mean that their school peer group is at least equally determined.

Finally, Fully Online V.S. is not designed to facilitate engagement, which occurs by happenstance. There are special events that families may choose to attend where students might meet other students. The administrator at Fully Online V.S. stated: "They interact either through some of the activities that our outreach people do - fieldtrips,

events, for example, we have a starter school picnic every year that is very well attended. Kids and many people travel from all over the state to attend that. So they do in events, they do at graduation; they do at various field trips that we conduct throughout the state.” However, students that cannot travel to these events obviously miss the chance to engage with other students, and more importantly, this kind of social networking is difficult for high school students to induce on their own at a brief event. Teachers at Fully Online V.S. could point to one or two instances in which students successfully met other students at one of these events, but these instances, while fortuitous, are uncommon.

### *Conclusion*

Technology provides the potential to increase access for under-served students in distinct ways that yield promises neighborhood schools often find difficult to fulfill. Online schools can use these advantages to provide students with access to exceptional virtual experiences that allow them to rise above the limited aspects of their neighborhood schools. Students in online schools can use technology to become collaborators in their learning rather passive recipients of rudimentary and remedial curriculum. Through technology students can participate in the kind of inclusive and challenging conversation that will help to build their vocabulary and develop their thinking. And rather than be limited to homogeneous neighborhoods, technology can catapult students into diverse online communities of learners that will expand their positions.

In reality, online schools are often structured to prohibit the very features that technology is heralded to nurture. The schools in this study value these features in varying degrees. Exceptional virtual experiences were rare in some schools, inconsistent in others and generally not systematically organized. Curriculum is consistently regarded

as something to get through rather than a meaningful tool through which students learn to act and think in ways that are relevant for their lives and that help them develop their identity as learners. Finally, communication of any sort was most developed in blended schools or in the face-to-face components of online schools. In this way, technology did not serve to expose students to increasingly diverse peers; it was insignificant. Rather than advance the possibilities of technology, these online schools designed programs that prescribed a textbook-like program and prevented students from benefitting from the very elements that technology can promote.

## Chapter 6

### **Systems that Defend Their Needs**

In this section I examine the ways in which my sample of schools attend to student needs through the systems or design that they create for their schools. While the last section analyzed the resources that these schools opted to provide given their design, this section examines the elements that comprise school design and policies. While school systems can include many components, I focus on those activities that online schools can be most adept at addressing: flexibility, just in time scaffolding, community building, reflective and social spaces and places for physical and emotional safety. Some of these activities are addressed in pedagogy, others through school policies and practices and others are embedded in curriculum.

#### *Flexibility*

Even while having access to curriculum 24 hours a day 7 days a week from anywhere students have internet access is a hallmark of online learning, there is great variation in the ways that online schools allow for flexibility. Schools differ in how they provide human support for students, the ways students are permitted to complete their work and rules governing how students behave. State policies through their encouragement and funding also provide context for the ways in which schools are permitted to be flexible.

Learning Centers V.S.'s administrators are committed to providing programs that enroll all students, especially those students who need more *school* support in order to be successful. This means that Learning Centers V.S. works to involve parents, but must support students regardless of familial participation. One administrator explained that not all online schools in his state are willing to assume that responsibility. Some schools

profess that they will enroll any student but they develop policies that: “require a commitment from the parents to be home with their kids 6 hours a day. So that in itself, as an enrollment tact, says that if you have a working mom you are not going to be successful on our program. We call it cherry picking in our state because there are some schools - I know of two - that started out serving everybody but when the accountability pressures were pretty intense they intentionally shifted students that were low performing and were at-risk out...to make room for a higher end student.”

Another way that online schools limit enrollment to a more selective population was explained by the Learning Centers V.S. administrator in this way:

“I will give you one example of one program that is primarily in a district – it’s a very large metro [nearby city] district - that has probably 150 online fulltime students. And as part of their enrollment requirement they have set up – it’s been that way for at least 5 years – in order to be a student in this program transferring from your district you have to have at least a B average. You should have no suspensions and you have to have fewer than 1-2 unexcused absences. So these 3 criteria in and of themselves have created a gulf between kids that are already doing well in their system and really want to have convenience and the kids for whom the traditional bricks and mortar building is not working as evidenced by lack of attendance. So they have life events that prevent them from being successful at school and those students are not allowed to attend there.”

According to administrators, Learning Centers V.S. is also one of the only schools that enrolls students over 21 years of age when state funding for them stops – “I think this year we are going to graduate 30-40 who are over 21.” They enroll these students in part because they are parents of students in the same school and so they can study along with their children – “We have teachers go to them in their homes and so we teach them as well. And so we have a lot of child/parent graduates.”

Finally, Learning Centers V.S. is willing to take students after the state’s single count day. A single count day system is one in which attendance is taken on a single day,

usually in October, and the school district is subsequently funded by the state for that enrollment regardless of how many students transfer in or out of the district after the date. It is very common for districts to withdraw, expel or transfer students immediately following the mandated count day. Schools accepting students after count day do so without receiving state funding for those students. “[This state] has about 170 charter schools; I would say that 150 really don’t take kids after count. I think we brought in 300 kids, 250 kids around January and even right now we will take a kid if situations were extreme.” It is true that students enrolled in January often compensate for students who have withdrawn. That is, schools will enroll students because they are already being funded for students that have left the school. So it is unclear how much this flexibility costs Learning Centers V.S., but it is also true that many schools will not consider mid-semester enrollments regardless of the circumstance or financial incentive.

Because Learning Centers V.S. is recognized for enrolling all students who apply, it has become one of the schools to which under-served students are referred. An open door policy at the school means that Learning Centers V.S. must find ways to support a large percentage of students who have not been successful elsewhere. At the same time, state policy that permits student redistribution because schools are able to create exclusionary practices must be examined. Learning Centers V.S. receives the same amount of per student funding as other online schools in the state, yet it provides additional support for students who may not be prepared to learn independently while other schools are permitted to deny admittance to those students. As an administrator expressed: “If your program requires kids to be able to do X, Y or Z, we would not expect it at a bricks and mortar building. We would not expect a bricks and mortar school

to tell kindergartners coming in, well you are not ready to read yet so we can't let you come in the door. Or you don't have this GPA – we are not going to let you go to high school. We have to be able to provide online opportunities for every kid and not everybody likes to hear that.”

In addition to creating a culture of serving all students, Learning Centers V.S. has integrated many forms of flexibility in order to address the needs of their students. Students have access to their teachers and mentors for a minimum of 12 hours per day. Staff is scheduled in shifts to ensure that someone is always available to answer questions and tutor students. In addition, staff told me that they will regularly make appointments to work with students outside of their scheduled time if students have trouble with the 9:00 AM-9:00 PM option. Students can come to a center, call their teachers or mentors, meet at other more convenient locations, text, Skype or chat. Providing many options for communication removes some of the barriers to helping students get the support they need.

However, providing many possibilities for participation does not ensure that all students will take advantage of these options. Learning Centers V.S. has struggled with its participation rate and has experimented “all over the place” to involve, attract or just lasso its students. Flexibility is the biggest draw for the students but it can also leave them floundering when they are not prepared to make compromises on its trade-offs. That is, students must weigh the benefits of flexibility with an increased need to manage and monitor the demands of coursework and deadlines.

In response to students who became easily mired in assignments that piled quickly when they failed to work daily, who became overwhelmed by their workload or who

simply refused to work administrators at Learning Centers V.S. decided to constrain flexibility. They began to require students to choose one of three options for daily log in, which they call Block A, B or C. Each block corresponds to a time slot: 9:00-1:00, 1:00-5:00 and 5:00-9:00. Students may choose in which block they want to work, but once they do, they are required to be logged in and working during those times. Flexibility is given within parameters in this new approach and the staff finds that it is easier to develop interventions if there are guidelines for how much students should be completing and when they should be working. This way, “If a student doesn’t get on for two days...the coaches are supposed to set up a meeting with the academic advisers and the director and the parents. They kind of have a meeting and talk about why you’re not getting on, what we can do to help you get on and set up a plan in place.” Without the mandated blocks for participation it was harder to enforce how often and when students logged into classes. One teacher explained how block scheduling makes everyone more accountable: “And then a coach will call up at 10:00 and say, ‘You’re supposed to have logged on at 9:00; where are you?’ ‘You’re supposed to have logged 10 minutes ago; where are you?’ and that is...it seems to be increasing accountability.” This is not to say that everyone is happy with the system. Teachers report pushback from students.

However, I spoke with several students who preferred the demands of block scheduling.

Student #1

R: I wasn’t doing anything. I was like, I would do a lot of work in a month and then stop doing work for like 3 months. So this year recently they changed the rules.

I: Yes, they made it blocks

R: That’s when I really started to pick it up, like when we had...

I: Did they make you come in or did you say, “I’m gonna come in?”

R: They schedule a day to come in so I came in once a day.

I: Once a day or once a week?

R: I mean once a week and then I do mostly everything at home

I: But coming once a week has made you more accountable, so you stick to it?

R: Yes

Student #2

R: That's how I've been working for... since they did the shifts. Now I have 9:00-2:00. That's really what has been working for me because I'm the tech person – give me 1, 2, 3 and do it, you know? You can't be like, do everything you need during the day. Since they are more strict about it...

I: It's made a difference?

R: It's helped me

I: It's given you some structure?

R: Yes

Student #3

R: But for online schools to work they really do need to be more strict

I: So what are the things that kept you from working before? You were just at home and that were not...

R: I was not focused

I: And your parents didn't make you do it? They didn't like – well, what are they gonna do – you're an adult. So, I'm sure it was easy to be distracted.

R: Yeah

I: So you're saying that if the school said right from the beginning – they really gave you a chance to work from home – but if you didn't, we're gonna make you come in – that would have mattered?

R: Yeah

Blended V.S. also values flexibility in various ways. Students have some flexibility in the amount of time they spend on course content. If they are able to complete assignments faster they are permitted to and likewise, if they need extra time that is built into the design as well. Of course students at this school attend classes in a traditional building, they do not have access to their laptops when they leave the building and many do not have internet connectivity at home, so some of that flexibility is limited. However, Blended V.S. has created a schedule that addresses at least some student needs for time and access to their work.

Blended V.S. extended the school day to allow students to stay after school as

long as 6:00 every day. Teachers and students volunteer to tutor, teach extra-curricular activities and are just present so that students can stay if they choose. In addition, Saturday school is held most weeks and many students<sup>8</sup> take advantage of that time to catch up on schoolwork and obtain extra tutoring. Most teachers are also available during these times. The school also provides flexibility during the week by scheduling Wednesday as a time for students to do their online work and be tutored in the areas in which they are struggling.

Blended V.S. is located in a neighborhood that demands unique problem solving to safeguard students and technology. Administrators used to allow students to take laptops, iPads and other technology home. However during their first year they were faced with students being robbed on their way home, gangs robbing the school and individuals pawning equipment to such an extent that they had to modify school policy. At the same time, Blended V.S. realized that typical system policies that ended the school day at 3:00, kept teachers from working extended hours/days and school schedules that didn't permit extra time for students to complete their assignments would frustrate or eliminate their students' chances of being successful. Thus, Blended V.S. worked with teachers to develop plans that would provide student supports, keep expensive equipment safe and affordable. While students who do not own computers, mobile technology or have internet connection also do not have the flexibility to learn anytime or anywhere, Blended V.S. has made an effort to remove some of the systemic barriers that would have undermined students.

Fully Online V.S. is completely online and in its state, online schools must

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<sup>8</sup> In a interview with one of the teachers she stated that roughly one quarter of the sophomore class (her responsibility) come every Saturday.

provide each student with a computer and internet access. Since students are at home they must have access to technology as a prerequisite to attending school. I am not sure to what extent crime and poverty impact Fully Online V.S.'s state-funded equipment – whether computers are pawned or stolen or how often – however, unlike Blended V.S., it is not possible to contain equipment at a school building. Therefore, access to technology is not hampered by a student's financial circumstances.

Students are also permitted to participate in activities in their home districts (LEAs) even while they are enrolled in online schools. “We've had kids play local school districts' sports teams and, like I said, participate in the local district plays...I know of about 3-4 who got plays – the one orchestra student and then I heard of a few who've done sports. One boy, he graduated, but he played football for his home school district's team.” Developing cooperative (or legislatively mandated) relationships between online and district schools is one way to design systems that allow students to fashion the best programs for themselves.

Students at Fully Online V.S. access their courses remotely when it is convenient for them, however, teachers work a standard 9-5 schedule. The school is small, which allows teachers to provide personal attention. The superintendent stated, “...We have a Response to Intervention process here so that kids who are not necessarily in Special Ed. can receive some of that attention as they try to progress through courses. We're small enough so that we have smaller courses...kids can get extra attention from not only the classroom teacher, but some of them are intervention specialists. So they're not in huge classrooms with hundreds of kids. I just observed a class this morning – it had 9 kids in it.” Response to Intervention (RTI) includes constant analysis of student assessment and

work data to determine next steps. Teachers prescribe an intervention and then collect data to determine if there has been improvement. While there are different models, RTI is a constant cycle of identifying students who need support, diagnosing learning or behavior needs, designing interventions and testing outcomes for improvement (VanDerHeyden, 2011). Fully Online V.S. uses the Response to Intervention process to address student needs for those students who can consistently perform within the school's structure.

Finally, Fresh Start V.S. also has a vision of flexibility that is uniquely designed. I have already explained the ways that Fresh Start V.S. addresses myriad barriers to student participation by providing, daycare, transportation and food. The program is designed to be hybrid so that students work in classrooms for part of the day and on their own for 2 hours a day. Students are closely monitored to ensure compliance, so while assistance is provided for any barrier, they are expected to attend. There is, however, some flexibility. Students choose which daily timeslot is most convenient: 9-noon, 1-4 or if neither will work, Fresh Start V.S. will provide an evening slot. The additional 2 hours of work that needs to be completed independently can be finished at the school, within the community college or anywhere else that is convenient for the student. "Even if they don't stay for the double session, you'll see them hanging out over here. They'll come early. They go to the library. They'll come in after school." The administrator says that students comment that they have some structure, which they need, but they also have some leeway to develop more independence, which given their age, is fundamental. "Some students are actually like - This is perfect. I still need that structure, but I'm still trying to become more independent and I need that, you know, to build that muscle

within the technology, and you know, flexibility.”

Fresh Start V.S. is designed to address the needs of students who have dropped out of high school, are between 17-21 years old and do not need more than 6 credits to graduate. The school’s contract with the chartering school requires that it ensures a student’s graduation within a 3-4 semester window.

In all four schools, flexibility is configured to fit the school’s mission. Schools are genuinely amenable to working with students’ schedules and time constraints. Course content however must be completed, even if the time that it takes a student to finish might vary. Flexibility is a central reason for students choosing online schools, but schools have not seriously leveraged the flexibility that can be possible within the curriculum. Content is predetermined for students and they are made to fit within its limitations. Although there are some early signs that schools might be willing to work with students when it comes to developing high school elective courses, class work is still prescribed.

#### *Just-in-time scaffolding*

Education theorist Lev Vygotsky surmised that students could learn more when they received adult assistance with tasks that were just out of their reach to solve on their own. (Dabbagh, 2003) Just-in-time scaffolding means that learners receive information or support to complete a problem, or a stage of a problem, just when they need that help not at some other time like in the directions or at the start of the chapter. It also means that teachers must be able to gradually reduce their support so that students gain confidence and eventually take control of their own learning. In a traditional classroom this process requires teachers to design a layered experience where novice learners are supported and

more expert students can proceed without hindrance. However, in an online class students can be scaffolded by a teacher/adult, peers or by computer software (Dabbagh, 2003).

One pedagogical shift that compliments just-in-time scaffolding is the *flipped classroom*. In the bricks and mortar version of the *flipped classroom*, technology is used to invert traditional teaching methods so that instruction is delivered as homework through recorded lectures for example, and class time is used to help individual students, for engaging activities that allow students to interact with and advance the concepts they learned online and to provide varied instructional supports just in time. The teacher is no longer in front of the class, but rather a guide that circulates to address individual needs. According to Bill Tucker of Education Sector, teachers who use this practice assert that they have time to address individual students needs everyday, and that rather than having the more competent and confident students engaged and answering questions, this system affords the struggling student more opportunity for personalized attention (2012). There is growing evidence that this approach to teaching positively impacts achievement results. For example, budget strapped Byron High School in Minnesota recently turned to flipped classrooms as a way to meet the demands of new state math requirements. They report that scores on the state comprehensive math assessment went from 29.9% mastery in 2006 to 73.8% mastery in 2011 and that ACT scores rose from a composite score of 21.2 in 2006 to 24.5 in 2011 (Fulton, 2012).

This inversion of pedagogical practice takes place in various ways and to varying degrees in all four schools. In Learning Centers V.S. those students who work independently and completely online get very little instructional support beyond what the software or their parents provide. Of course students can call or otherwise contact

teachers anytime during a minimum 12-hour window and receive tutoring just as they need it. A teacher at Learning Centers V.S. explained the process in this way:

“Sometimes students get on and they don’t understand the content, so they shut down and quit. They don’t want to work. So that would be an academic intervention that they would need. They need tutoring. They need help to get past what they don’t understand. So we have academic interventions in place and that’s where I come in as a specialist. This morning I worked with a young lady, a teen mom who had to go to work. She was leaving at 10:15 for work and was having a really hard time with a geometry quiz; she couldn’t pass it. So she Skyped me while she was putting on her make up and we ran over the concepts and by the time that her make up was finished she handed her quiz in and she was ready to go to work.”

To what extent students who work independently use their teachers/academic specialists or coaches in this way was not apparent to me. Some certainly do, but I could not say whether a few, many or most students do. On the other hand, students who come to the learning centers receive this kind of support often. The problem is that only some students come to the centers often. At one center the director stated that teachers, either online or in person, and coaches are readily available for students who come to the centers. Some students come to a site because they need tutoring, but other students opt to work at a facility for other reasons, including external motivation. Regardless of why students come, once they do, they can ask questions or receive other kinds of academic support all day.

Blended V.S. has *flipped* their classrooms as a rule. While teachers provide a few minutes of direct instruction at the beginning of class, they spend the remainder of their class time working individually with students, as they need it. All students begin and end with the same lessons, but over time they become separated and vary in what they need in order to complete the tasks. Teachers spend class time moving from student to student providing tutoring, encouragement, assessment and so forth. Although the standard

version of the *flipped classroom* assigns students introductory lectures for homework, students at Blended V.S. are not assigned homework that requires technology. However, they often spend the first part of their class time engaged in web based introductions to the content that they will be asked to complete later in the lesson.

Fresh Start V.S. has also *flipped* its classroom in its own way. When students come to class they receive one 45-minute session of direct instruction; in the remaining 2 hours aides circulate to provide assistance, as students need it. Students complete 2 hours of independent work nightly, so some of the time in class is spent reviewing their independent work. However, teachers also provide direction and tutoring on content that students are completing in class. There are generally 25 students in each room and 2 aides, so the ratio does not permit absolute or unlimited one on one support, but questions can be answered and learning can remain more fluid.

Fully Online V.S. teachers spend some of their time fielding question via email and phone calls. However, the synchronous classes that I observed were traditional lecture formats. Teachers prepared PowerPoint slides and students listened. Participation was minimal; students responded to questions in their *chat* feature, but did not speak. In one class the teacher included some independent work that required students to define or summarize terms. At the end of class their notes were combined so that other students could have complete notes from which to review while only being required to complete one section. In other words, there was some interaction designed into the class, however, the class followed a traditional lecture model.

The extensive use of technology in online and blended learning is forcing shifts in instructional paradigms. It is not possible, even if it is desired, to use only direct

instruction with students who have access to course content 24 hours a day because it is likely that students will not be in the same place in the curriculum. Direct instruction to students who may be working weeks apart in the course content would not be useful.

There is a growing momentum to use technology as a tool to facilitate a different kind of teaching – one that flips *homework* and *schoolwork* so that instruction happens at home thus affording time in “class” to personalize attention, include richer problem solving, active learning and analysis. All 4 online schools systematically developed an approach to instruction that incorporates some aspects of the *flipped class* design. There are a few questions that remain unanswered for me however. Flipped classes are a 2-part endeavor. On the one hand students must be instructed with a video or similar technological feature as an introduction to the course content. All schools provided some introduction, but these varied and were not often video lectures or teacher created instructional material. The second part is that the work of “class” time is meant to not only review and explain the content, although this is an important component. Class time is meant to be freed for higher-level interaction with the content i.e. analysis, expanded problem solving and application. It is not clear to me that this component is developed in class designs with any regularity. I did observe teachers who were intentional in their refusal to accept memorization of facts and pushed for deeper understandings, more often however, teachers simply explained, clarified or otherwise made clear the course provider’s content. So, while just in time scaffolding improved student understanding, it is likely that the most significant advantage that technology could provide is being left untapped.

### *Community building*

Scholars contend that developing a sense of belonging to their school is an important component to academic success for students. In fact, feeling marginalized and disconnected from their school community is one of the reasons students give for dropping out of school (Goodenow & Grady, 1993). Faircloth and Hamm studied the effects of four specific components of belonging – student/teacher relationships, peer relationships, extracurricular activities and perceived discrimination - to determine to what extent students, who varied ethnically and racially, valued belonging as a motivator to their academic success. The result of their study confirmed that students are better motivated to succeed when they feel connected to their schools.<sup>9</sup> Faircloth and Hamm make the critical point that, “The strategies adopted by school personnel to tap into belonging to animate student motivation and achievement should capitalize on the multiple avenues through which students can be connected to schools...”(p 306, 2005).

Throughout my interviews and observations I considered ways in which each of the four schools endeavored to build community in each of these 4 domains: student teacher relationships, peer relationships, extracurricular activities and perceived discrimination. I will address *perceived discrimination* in the subsequent section on Cultural Responsiveness.

Teachers, mentors, aides, coaches and administrators at three schools stress student/teacher relationship building as fundamental to the mission of their school.

At Fresh Start V.S. there is a formal community building course students are obliged to

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<sup>9</sup> The measures of connectivity vary across ethnic and racial groups: for white and Latino students all 4 domains were pertinent indicators of belonging while for African American and Asian students peer relationships at school were not significant.

take, which requires participation in activities throughout the semester. “We have short 20-25 minute activities where they are learning about themselves and building a closer environment – learning how to respect differences, cultural, any type of diversity.”

Blended V.S. provides a summer orientation for freshmen and new students that includes community building activities and Fully Online V.S. also has developed an online introductory course that not only initiates students to technology requirements, but also helps teachers get to know their students. However, as useful as introductory lessons and exercises can be to launch community building, they are insufficient to developing relationships that will undergird the whole school year and provide effective support for academic success.

The key to building a strong community according to stakeholders is the ongoing relationships that are forged between staff and students. One teacher at Blended V.S. stated, “I think forming those relationships is key. I really, really, do. I think forming those relationships is absolutely key to a functioning classroom – and then that leads to more learning taking place...” Students agreed with this idea, “To me, it seems like the more a teacher knows about you, it will give students confidence to actually get the work done.”

Some teachers use class surveys or assignments designed to provide information about student interests; others structure their classes to allow for student interaction and discussion in small groups; others become more involved with students during after-school activities. In general, teachers use multiple approaches to develop these relationships depending on their individual students and they concede that while some relationships develop quickly in the first few weeks of school, others may take a lot

longer.

Students who were interviewed consistently underscored the role their teachers played in their motivation to succeed:

Student #1

I: Do you think the teachers getting to know you makes a difference in your success?

R: yes, I can say yes because – like it’s better – no one is sitting alone and just keeping everything inside you and stuff. But my teachers, I tell them everything like, I feel like my teachers, they’re like best friends to me. They’re not really teachers, they’re like best friends that push me to keep on going in my life...”

Student #2

I: So do you think that the relationships that you’ve had with some of the counselors or teachers here have made a difference in your being successful?

R: Yes. They’re all super nice and they always encourage me to do better, like come to school and get this done. And that’s why I’m graduating on time.

Student #3

I: Do your teachers get to know you here? Do you feel like your teachers get to know you?

R: Yes

I: How do they do that?

R: They just, for some, they’re very welcoming and they interact with you. They ask you how your day was; they ask you what’s going on in your life – if you want to talk about it with them.

I: Do you think that is important?

R: Yes

I: Why?

R: Because you trust them and I feel like it’s not just giving you education – it’s like really wanting something better for you.

At Blended V.S. and Fresh Start V.S. and Learning Centers V.S. respondents’

reoccurring comments affirmed each school’s focus on developing these relationships

and on their perceived benefit. The principal at Blended V.S. stated, “... I think that our

students feel a very strong sense of belonging here and a very big sense of community

within their school and their teachers and environment.” Most students stated that they

came to school because of the relationships they had with their teachers. “We get bus

passes and we get support from the teachers. That's mainly the thing that I like the most because once you keep having enough encouragement from the teachers you would want to come back more -- keep continuously to come to the school. And you know, that is something that I'm big on with having that communication, even if it's just a small one. It really doesn't matter as long as you have that support and the resources from your teachers then it keeps you coming back."

Students asserted that their relationships with their teachers and school staff fortified their sense of belonging to a school/class community and freed them to ask questions, get help from teachers and peers, feel responsible to adults whom they perceived to believe in and care about them and do the hard work of school.

Yet, while each of these three schools prioritize community building and spend a great deal of time fostering educator/student relationships, students who do not have face-to-face associations do not appear to actually benefit from this focus. As one teacher at Learning Centers V.S. stated: "So there can be community building, but it's very limited. I think for the students who come to the site on a regular basis and interact with other students plus come on a regular basis -- they form friendships and connections. But if a student who always works from home, who never comes to the site -- they really are going to be separated from the rest of the students."

Fully Online V.S. organizes fieldtrips, picnics, open houses and lessons to provide opportunities for online students to engage with their teachers. However these are poorly attended and teachers generally participate only when the activity is relatively close to their home. In a statewide school where students and teachers may live hundreds of miles apart, that may not be very often. Teachers do connect with some of their

students, but these are limited to students who will participate. Those students who are reluctant to talk on the phone, email their questions or participate in synchronous classes cannot be engaged; teachers are limited to only those students who are already motivated. Technology does permit community building through chats, synchronous classes, Skype sessions and so forth, but only when students are willing to log in. Students who opt out are not often reached. One teacher stated that in her advanced courses like Chemistry, where students are relatively more sophisticated "...the sense of community is pretty strong," however, it is less apparent that there is motivation to foster a sense of community for those students who are not already doing well. Building community with students who are not physically or even virtually consistently present is difficult, although these students are arguably the ones who might benefit the most from engaging with the school community. As one Learning Centers V.S. teacher stated, "That is also difficult if we don't see the students, if they're working from home and they are working, even if they are not working, but working from home, it's tough to form that kind of community." While technology was used to enhance the relationships developed in person through forums, blogs and chats, it does not appear to be used very often to generate and establish community.

#### *Peer to peer*

In a study aimed at discerning how online communities were developed to support students taking online classes, Ruth Brown found that relationships followed a three-step process: the first step was simply making friends with others with whom students felt comfortable communicating, the next stage occurred when students felt accepted into a group after participating in "a long, thoughtful, threaded discussion on a subject of

importance after which participants felt both personal satisfaction and kinship;” the final stage included camaraderie, or participation that included personal communication (pg. 18, 2001). At none of the four schools were these steps supported or prioritized in the school *online* design process. Any friendships that developed online were serendipitous and not intended consequences. Some teachers included opportunities for long and thoughtful communication on relative and important subjects, but as I have already stated, these were irregular and restricted to only some teachers. A few students sought out friendships on their own by engaging with other students at occasional face-to-face events or after synchronous classes. Other students came to online schools because they were focused on completing academic content and finishing high school; they were not interested in meeting other students. Thus while they were willing to complete group assignments they preferred to work alone. “They got programs. They got after school hip-hop dance programs. All the programs and stuff and I’m not really into it, but they do have programs. Like I see it, but I wanna focus on the [academic] programs.”

On the other hand, students who either opted or were required to meet face-to-face were buoyed by peer-to-peer relationships and also learned from their classmates either as a class or assignment requirement, in formal tutoring or socially. One student commented: “Like a lot of group activities, a lot of teamwork actually because you get to work with people that you wouldn’t work with, because you probably used to just work with your friends. But they groups [you] and you do activities sometimes mixed with different people. You do things with different other people or see yourself collaborating with others to help them. It builds us closer when we are around each other a lot and do a lot more things; we know a lot more about each other.”

*Extracurricular*

Extracurricular activities are restricted to the two MW schools. The state in which Fully Online V.S. operates requires local schools to allow online students to participate in extracurricular activities in their home districts, however, based on my conversations with educators, only a few students take advantage of this. Learning Centers V.S. does not provide organized activities beyond required classes, however, if students want to participate in extracurricular activities, state law does permit them to take part in the activities at their local school. Learning Centers V.S. does provide spaces at the learning centers for activities such as video and board games, watching television, pool or futsal and so forth. These are meant to create an inviting space for teenagers to ‘hang out,’ but they are not required and do not provide a structured environment for interaction and community building.

At MS Virtual 1 however, there are many extracurricular options for students including drama, dancing, honor society, sports and so forth. One teacher told me that if there is interest in an activity, teachers would make it happen. “There’s a few kids who take the bus or train and they don’t want to do that on their own so they wait till 5:00 till a staff member goes with them or something. And then there are a bunch of clubs – sports. I mean really, if a kid shows interest in something, we’ll make a club or a sport for it.” Participation at after school events is high. Nearly all of the students that were interviewed participate in some form of after school program. Students genuinely liked being at school:

Student #1

I: Did you take...did you participate in those after school things?

R: Yes, when I was here I won’t even go home. I would go home about 6 o’clock everyday.

I: Still?

R: Yes, I stay here like all the time.

Student #2

I: You're always here late. So what are the kind of things that you do?

R: I did choir. I did dance, contemporary dancing.

I: Like hip-hop?

R: Some hip-hop, some ballet, some other stuff I don't really know.

I: So who taught it?

R: It was an after school program, I actually...it was called After School Matters. I got school program, ballet I think so. It was pretty great. I didn't finish it because I had debate.

I: You're in debate team?

R: Yes, I was on the debate team. On my sports I did basketball, baseball. I did weight lifting programs; I did everything.

I: What ever they have? Okay, you're involved in all of that.

R: Yes.

Fresh Start V.S. provides myriad extracurricular activities as well; teachers are willing to develop classes based on student interest. Because the students at MS Virtual 2 are older than those at MS Virtual 1, have additional life responsibilities and are only at school for part of the day, the activities they choose differ in some ways. Students at MS Virtual 2 do not have sports teams or competing groups like Glee. They do provide many options including: "...we have right now a poetry group that actually is used for a more clinical standpoint. And they actually can, you know, swear and you know rhyme or whatever, we have that and that's overseen by the clinician, the counselor. We have *capoeira*, which is a Brazilian martial arts thing...and we do credit recovery as well, after school the kids don't have to pay for that in case they have not graduated a class or something. They typically don't have to pay for it. The only time they might have to pay for it is if it's during the summer time, but typically we have a teacher that runs credit recovery until 5:00 o'clock every Monday, Tuesday, Wednesday, Thursday."

Again extracurricular activities were confined to the face-to-face components of

online schools. At schools where students were required to attend for at least part of the day, there were diverse and abundant options. In fact, teachers stated that if students expressed an interest, they found a way to provide it. However, while there are many online options for extracurricular activities (Key Club, chess competitions, MMORPG or other online games) schools did not generally subscribe to these. It is possible that the students who enroll in fully online programs are less likely to initiate an interest in extracurricular activities, but the limited online options did not inspire participation either.

### *Reflective Spaces*

The asynchronous nature of online learning is ideal for promoting spaces that require reflection and collaboration (Garrison, 2003). Discourse and deliberation are not constrained by a 50-minute class period or by personalities who can dominate or be intimidated to participate. As I have already stated, it is possible, in fact, online learning is an ideal space, to develop ideas and allow fermentation of and prolonged exposure to concepts, which can promote deeper understanding. These collaborative and reflective spaces are not meant as “infotainment” – not a place to connect for its own sake. Online learning should not simply be about accessing information and using chat rooms. (Garrison, 2003). Rather individual learners should interact for a purpose – because reflection and discourse are paramount to developing a deeper understanding of the content.

In order for that to take place in an online class or school educators must provide structure and guidance that will require, encourage and support these interactions (Garrison, 2003). Educators will need to value the benefits attributed to reflection and

collaboration over the efficiency of information recall. Helping students to think deeply about content and helping students to deliberate and collaborate in this process requires more than patrolling and cajoling students to complete automated lessons, particularly when these lessons do not require critical thinking.

With the purchased and prescribed curriculum at Learning Centers V.S., Fully Online V.S. and Fresh Start V.S., students read the content and answer multiple-choice questions for most of their lessons. Fresh Start V.S.'s face-to-face component is partially direct instruction, which does not lend itself to reflection and collaboration. There is some space in the curriculum for adding reflective and collaborative content, but I did not see evidence that this occurred.

Blended V.S.'s teachers report that they sometimes create these spaces online. For example, one teacher told me that when in-class conversation needs additional time, he creates an online space for these conversations to continue. Another teacher stated:

“So instead of doing like class discussions where it’s usually dominated by 3-4 of the kids in the classroom, our are more structured where it’s kind of, you know, Socratic, but it’s online. So the goal is participation too. So that’s a good way that you can provide the more of like dialogue with students too and we will do that normally to check for understanding.”

And the reading teacher added:

“A lot of time we use blogs so I will put a question up on the blog and they’ll go on and they’ll respond to the question. And then - so they’ll initially respond to mine and then what they so is they’ll go back and they’ll look at their classmates’ responses. And then they’ll respond to their classmates. So they’ll be like, alright I really like this idea, but I disagree about this point because of this. And so that’s where they can kind of bounce ideas off each other and see kind of different perspectives.”

Even at Blended V.S. teachers varied in their commitment to these reflective spaces and in their ability to create them. The principal told me, “...Honestly, it’s

something that's a focus for us right now – that there is – it's not so much that they're not collaborating. They are. But is it meaningful? Is it critical thinking? Is it deep enough towards actually being meaningful?" Even with the need to improve the quality of these reflective spaces, Blended V.S. appears to value and work toward designing their courses to incorporate them.

As with other aspects of pedagogy, online learning does not hinder, but is actually a perfect place to incorporate spaces for reflection and collaboration. There is potential in online learning to move beyond replicating face-to-face pedagogy in favor of fully utilizing the advantages of asynchronous platforms. As Garrison insists:

“Unreflective adoption of past practices will not help us understand the multiplicative properties of communicative freedom, information access, and individual control of time and space for the purpose of creating an expanded cognitive presence and effective higher-order learning experiences and outcomes. It is not a question of simply doing things more efficiently. We must begin to understand the cognitive presence implications of asynchronous online learning and how we, as educators, design and model reflective and collaborative inquiry in creating an asynchronous learning environment” (2003).

Yet, regardless of its potential, schools must value reflection and collaboration for all of their students, especially their under-served students for whom traditional education rarely affords these privileges. If reflective spaces are left to individual teachers to develop at will rather than designed system-wide there is a risk that implementation will be haphazard and only some students will benefit.

### *Safe Spaces*

When stakeholders are surveyed about the reasons to choose online schools, one of the reasons they often state is *safety* (Tucker, 2007). Bullying, school violence, neighborhood violence and biased school policies contribute to parental and student fear of school.

Administrators at all of the participating schools address safety in different ways based on their varied models and on the needs of their students. Safety at fully online programs and in programs where students opt to only participate online means creating a safe space for ideas and learning where cyber-bullying is not accepted and where students are free to participate and ask questions without worry.

However for students coming to a site, safety is a primary concern, a topic teachers and administrators broached often. At MS Virtual 1 I was told that the city neighborhood where the school building is located is one of the “worst neighborhoods in [the city].” Teachers told me they were afraid to let students walk to the train alone and often drove them if it was after school hours. Blended V.S. shares its building with two other schools – one per floor. I was told that the principal of one of the other schools in the building was recently mugged in the morning on his walk from the train to the school. Teachers, regardless of their racial or ethnic background, did not stay in the building except at times when most teachers and security personnel were present. They told me stories of drive-by shootings near the school and students whose friends had been wounded. Yet, given all of the violence that exists all around the school, very little is permitted to penetrate school walls. The director insists that gang or other violence must remain outside of the school building in every way. Teachers said that if there is even a rumor of violence, students report it and the principal acts promptly to address it. “I mean the students have a very strong loyalty to our school and our staff. They call it the [school] family. This is their environment; they feel very connected to this school, to this place, to their teacher, to other students here. So I really feel like any student would protect their teachers, each other, the majority of their classmates. So I feel safe knowing

that within the neighborhood and yeah, I've never felt unsafe really." The school is calm between classes and I observed very little violence between students in classes, hallways or conversation<sup>10</sup>. Teachers also are calm, even when they discipline students or deny them a request. I did overhear students swearing, but even when the words were seriously offensive, the exchange was not threatening.

The principal credits the school's tranquility to his presence. He maintains a desk in the hallway and spends most of his day either working at the desk or walking the halls.

"...and the fact that our kids are comfortable coming to me. I'm never in here [in his office] – there's a table out there- that's the real office that I sit at all day long, that they're comfortable coming to anybody to talk to. [They] may not come to talk about personal problems but they know that what[ever] they do, that person is there."

While community building permeates the school's philosophy, student behavior that risks school safety is swiftly and in many cases permanently controlled. During one of my observations I was seated in the hall waiting to attend a class. A student walked out of class and the security staff asked the student to wait at the end of the hallway.

Intermittently, teachers stopped to speak to the student and ask how they could help him return to class. They asked what was wrong; they asked if they could do something; they explained that his refusal to participate was not a unique event and he was going to be in trouble. They pleaded. He refused. The security staff spoke with the student. He refused.

The principal was called and he raised his voice, demanded the student conform his

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<sup>10</sup> I attended this school many times a month for more than 6 months and each time the school was calm, even during class changes. In other research that I am conducting in a similar urban setting hallway fights are common. Last year, as a first time visitor, I broke up a fight in two separate buildings because I happened to be the only adult in the vicinity.

behavior, but when the student refused the principal removed him from school. Several of the students told me that there is little tolerance for violent, aggressive or delinquent behavior. Students who refused to conform to school rules were removed, either suspended, expelled or returned to local districts.

I: So, how often to you think fighting goes on here?

R: Not that much and I actually really don't see anymore because they got rid of mostly all of them – they people who fought; they're gone. So, there's hardly been any fights.

Disciplinary incidents are rare at Blended V.S., however, everyone appears to understand that the ship is tightly run and they prefer it that way.

Learning Centers V.S. selected malls for its learning sites because they are more easily accessible, open late and are generally safe spaces. In addition, each space is designed to encourage students to want to stay. Staff is friendly, and although they expect students to work and are swift to remind students that they need to work, they are also quick to joke, provide snacks and myriad assistance. According to a site director:

“Every Wednesday, she has site duty, which she serves at the mall and she will have anywhere between 10 and 15 students come and just work in their classes. So she could have the study group going every Wednesday night. So it's a time and a place for these students so that they can come and interact and socialize with other students in a safe environment. Now, they might not all be working in the same class but they're all there and they have the coach support immediately if needed.”

At the same time, many of the students who enroll in Learning Centers V.S. have had negative experiences with schools or other government agencies in the past. Part of Learning Centers V.S.'s task is to help these students, some of whom are undocumented, feel that the school is a safe environment for them – not only physically, but emotionally as well. An administrator stated that one of the hurdles that the school faces is helping students open up about issues in their lives that are potential barriers to their success. He

stated, “So there are barriers. Mostly fear [because they’ve] never talked to anybody before.”

Fresh Start V.S. is also tasked with providing a safe space for students who have already given up on schooling at least once. The principal stated:

“... it just doesn’t come just because you talk to them about it. A lot of students they have their guards up, coming to the school already hyper aroused already. And like this you know, because they are used to you know in the other schools and how it went. So one thing I say you know, all those people with those you know mean looks you know and that grimness on their face I say you can drop that at the door. I say it because everyone is going to be safe here. I say it first and foremost.”

When I asked him how does it happen that students learn to feel safe if it isn’t because you talk about it? He said that it takes developing a vested interest in who each student is, showing them an alternative to what they’ve known and spending time showing them that you consistently care about them. He said the school works to make sure that students also know all the services available to them and that they are taking advantage of them so that “... they feel that when they come here, they’re safe. They don’t have to worry about anything but their focus which is graduating from high schools and being successful...”

### Conclusion

Online school models vary, but there are specific design features that technology advocates contend online schools should include in order to provide schoolwide support for students. These systemic design features include flexibility, just in time scaffolding, community building and reflective and social and safe spaces. Each of the schools in this study addresses these design features differently and these differences set the boundaries for and in what ways students can learn.

Each school modified the flexibility that online learning fundamentally provides.

In some cases these changes were disciplinary in nature – so students would have boundaries on the requirement to participate. In other cases schools adjusted to address students' competing need to be safe in their neighborhoods and work with technology to complete schoolwork. Other times flexibility was bounded in the ways schools scheduled teachers or provided access to tutoring. Hence, while marketing purports that online schooling is anytime, anywhere, the reality is that support for students is limited by many factors, some of these still provide substantially more than local schools and others are very similar.

The ways in which schools provide academic support can lead to a deeper, advanced and more complex understandings or it can simply help students answer multiple choice questions better. Flipped classrooms are ideal for online settings, and teachers at Blended V.S. are trying to gain the full advantage that flipping allows. But at the other schools most of student learning is focused on completing the tasks required by course software.

Building community is a goal for each school. However, most of the schools limit community building to their face-to-face interactions with students. In the case of Fully Online V.S. and Learning Centers V.S. these interactions are quite limited. There are many ways that virtual communities function outside of schools to promote mutual interests, collaboration and even friendship. Online schools can diminish the disadvantages of distance by forming online communities of learners that allow for both social and reflective practices. For now, most of the schools in this study are relying on in person social interactions to engage students.

## Chapter 7

### Excellent Teaching

In the preceding two chapters I examined resources that leaders in different online schools choose to offer students and the elements that make up school designs, specifically those that online learning can uniquely shape. In this chapter, I consider aspects of teaching, which technology advocates claim online learning is especially able to influence. Once again, curriculum is examined for its role in instruction. In some schools most of the “teaching” occurs via the online curriculum, therefore, it will be necessary to assess the elements of excellent teaching through the curriculum itself.

Researchers and practitioners alike contest what it means to be an excellent teacher. These varying points of view often result in disparate conceptualization of pedagogy. Some researchers like Linda Darling-Hammond, have argued that teachers need to not only understand how to think like a teacher, but also how to act upon what they know, in myriad classroom incidents that often occur simultaneously. As a result they need to require much more than memorization from their students; they need to require that students understand the *why* and *how* in addition to the *what* of class content (Hammerness, Darling-Hammond, Bransford, et al, 2005). Further, Darling-Hammond and Ball contend that it is critical for teachers to know and understand their students well. The way that students think, their ideas, what they value and their perspectives should inform curricular goals, most especially when the worlds of teachers and students are poles apart (1998). Getting to know students well means that class sizes must be small enough for teachers to develop a personal connection with students.

Martin Haberman outlined good teaching in his classic article decrying what he called the *pedagogy of poverty* in favor of good teaching. He asserts that good teaching can be observed by specific student not teacher behavior and several examples (1991).

Good teaching is going on when:

- students are involved in issues that they care deeply about
- students are involved with issues relating to difference in people
- students are being helped to understand bigger concepts/ideas not just isolated facts and details
- students are involved in planning their activities
- students are involved in issues of fairness, equity, justice

Researchers outside of education have also become deeply vocal about teaching. Economists, Terry Moe and John Chubb, for example have written copiously about school choice and recently wrote a book titled *Liberating Learning* in which they argue that technology can be a substitute for teachers. They state that public schools are being “hobbled” by the cost of funding teachers. Technology ought to be used to reduce the ratio of teachers to students by at least half. They argue that some cyber charters employ as few as 1.2 teachers per hundred students while public schools employ approximately 6.8 teachers per hundred and they consider this an opportunity for positive change (p.157, 2009). In the scenario that they describe it is difficult to imagine a way for teachers to be able to cultivate a personal connection with each student if they must educate twice the number of students. The key consideration in the schools that Moe and Chubb envision is productivity. Unlike Darling-Hammond’s prescription for teacher effectiveness, Moe and Chubb do not agree that close relationships are important to good teaching . Instead they hypothesize that in ideal schools the “demand for teachers will be smaller” (2009) because the work of a teacher can be performed by computer-based software.

In addition to the myriad conclusions offered by researchers, practitioners bring their own beliefs about teaching to the profession. Teachers have their own ideas about what they ought to be doing and achieving and these ideas “have been constructed from a wide variety of (re)sources over time and through social experience rather than having ‘appeared’ somehow as the internalisation of some universal truth” (Moore, 2004).

Finally, policy makers bring their own conclusions about teaching to their positions. Many have opted for solutions that attempt to control for teacher differences by instituting teacher-proof, scripted curriculum that assumes that content can be repeated verbatim more effectively to teach students. Proponents of scripted curriculum maintain that results can be objectively measured and these results demonstrate literacy gains (Milosovic, 2007).

The factors that contribute to our understanding of teaching are complicated by ideology, context and experience and the work of analyzing good teaching is multifaceted, contested and requires much more attention than it would be possible to provide in a single chapter of this study. Consequently, it is not the intention of this study to critically assess these arguments or conclusively determine all of the attributes of excellent teaching. Instead I have only asked what can online learning do to impact excellent teaching? In other words, I analyze four ways that research suggests online learning is uniquely positioned to improve teaching by providing tools that teachers can capitalize on to: reduce student boredom; facilitate collaborative knowledge building; promote sophisticated problem-solving and develop students’ technology skills.

*Reduce Boredom*

Students stop engaging in or drop out of school for many reasons including boredom. Studies show that students who are bored in school are more likely to stop paying attention, become demoralized and drop out of school (Larson & Richards, 1991). Technology has been heralded as a potential antidote for the uninspiring, remedial and tedious curriculum often prescribed for under-served students. This happens in large part, according to James Gee, because designers require participants to perform long before they have competency, which is exactly the opposite of the way teachers often design their classes. In other words, technology woos students into participation and through participation students develop competency. Schools often require students to develop competency through reading texts before they are permitted to perform in the context they are learning (2005). Yet, studies have documented that online courses are often text-based leading to boredom and reducing the likelihood that students will understand the course content (Monahan, McArdle, & Bertolotto, 2008). Given that technology has great potential for transforming the ways in which students learn, why would online courses be restricted to formats that contribute to disengagement?

In some cases teachers have been required or have aspired to develop their own courses. They have been challenged, however, because they often lack technological expertise or simply do not have the resources or time it takes to review and revise their courses (Smith, 2007). Instead online schools most often opt for curriculum that is developed by publishing companies or other content vendors. According to researchers however:

“The reality is that pre-packaged self instructional course materials inherently carry a behavioral orientation to learning. Although attempts are made to make

the materials flexible and interactive, they remain a prescriptive and private learning process...they are not appropriate for achieving understanding of complex and ill-structured subject areas... Little opportunity exists for the negotiation of learning goals, collaborative learning decisions or for learners to assume responsibility for constructing meaning for themselves, based upon their previous knowledge structures”(Garrison, 1993).

Thus tension exists between technology’s potential and the reality of current content providers being used by many online schools. The schools in this study recognized and addressed this tension in varying ways – some accepted, some embraced, some tried to modify and others rejected the available off-the-shelf curriculum. In each case, the extent to which technology was used to enrich classes and reduce boredom for students was left to teachers.

#### *Learning Centers Virtual School*

As I have already mentioned administrators at Learning Centers V.S. strongly adhere to what they call a prescriptive curriculum. Their content provider was originally a small company that was purchased by Pearson Education and subsequently embedded into Pearson’s existing educational content. When a student is unsuccessful mastering a concept, administrators at Learning Centers V.S. praise the software’s ability to re-teach concepts using various modalities. Yet, many of the comments made by coaches and students offer a different picture.

“Social studies are the hardest to help students with because it is multiple choice so it is about teaching note taking skills and memorization – the other subjects I can teach concepts, but social studies the students just have to know facts.”

I asked another coach about the ability of online learning to individualize and provide unique programs for each student. He said:

“I do agree that it has a potential to do that, I’m not sure that it’s happening as much as it could. Most online schools, this one included, uses a – what do you call it? – prescription, basically a textbook and that textbook tells the student

what to learn and so it's tougher to individualize when you have that kind of thing. When an individualization is happening, it is at home. It is with the timing of it so that students, if the student has, the young lady has a baby, we can give her time off and it's not going to hurt her lessons. So in that way, we can individualize. But what needs to be learned – it's a little tougher.”

I met with a teacher who confided that she was worried that the content the students were expected to master was watered down and would not prepare them for post-secondary studies. In one of my visits to a learning site the director of the site came over to me to offer an introduction and additional information about the learning site. I asked the director to tell me if my understanding of the school's expectations was accurate:

I stated: “The message here is that staff need to develop a relationship with students and convince them that a high school diploma is important – then if students buy into that notion they are told that they just need to complete all the curriculum, which I'll call “cod liver oil,” because it appears to be a necessary evil or just a means to an end. Is that right? “ The director nods. I ask, “Do you think that the curriculum could be more than just that? That is could actually be a motivator?” The director indicates that it depends on the coaches. Some coaches who have been at Learning Centers V.S. for 5 years have seen change after change after change – that nothing stays the same – maybe for them it can be more like “cod liver oil.” However, the director stated that there are a few new staff that “get their kudos” from helping kids and these new staff do try to motivate students with their own writing.

Teachers did provide examples of how they expand student learning with individual students. “ I've taken students to the Chamber [Senate and House Chambers] to see what goes on. We took students interested in photography and headed north with the coach and myself and taught them how to use the camera. So we do things; it's tougher to do on a group setting with these guys, but it can be very easy to do on individual basis.” In addition, teachers felt that the school offered them the ability to develop elective courses that were more in line with what students desired. Core courses have to be followed precisely, however, “...our electives can be very specific to their

personal interests whether it's P.E. credit where the students want to focus on skiing, or golf or lifting weights or becoming a physical trainer. We have that flexibility in our program and it really increases the buy-in with each student individually, so it's very important."

The computerized curriculum at Learning Centers V.S. reflects the criticism that Garrison articulated: there is an attempt to make it interactive and to provide instruction using multiple intelligences. Yet, the process of learning is primarily rote and mechanical i.e. taking notes and memorizing and the focus is recall and comprehension. Some teachers, as the director stated, do try to expand learning, but these experiences are uncommon and limited to teachers who are motivated to elaborate and enlarge the learning experience that is expected of students. In general, teachers and coaches provide individualized and small group tutoring to students who request it or are willing to come to the sites and they provide on-going motivation for all students to complete the courses as they are. Opportunities for critical thinking, prolonged engagement with topics of interest, complexity and so forth are limited.

#### *Fully Online Virtual School*

Fully Online V.S., like the two other schools in the study with canned curriculum, purchases its content from vendors. However, rather than owe allegiance to one provider, Fully Online V.S. provides an assortment of programs, including hard copies of novels to supplement their online content. The focus at Fully Online V.S. is to adhere to the Response to Intervention (RTI) program.

Teachers at Fully Online V.S. make an effort to connect the canned curriculum to student interests because they have noticed that their students may be more inclined to

turn in their assignments and they themselves have better synchronous class sessions when they can do this. As one teacher indicated:

Well I would say that a lot of the teachers and administrators have, you know, the same kind of philosophy: that if you can tie it into something that has some interest to the students. I take some kids and I think the school takes some kids from some of the IEPs and then like the transition [program] that are provided and apply that to maybe other students and trying to find out what makes the students go, what is the student interested in? But I think it's kind of – even there are general approaches of our school to get to know the students, kind of tailor things to what they're interests are and then hopefully as a group we're able to reach those students and they're able to have more success.”

While there is an attempt to connect to student interests and a focus on providing interventions that can address student learning needs, none of the conversations that I had or observations that I made indicated that Fully Online V.S. uses technology in an innovative way meant specifically to reduce boredom and engage students in the production of knowledge. Students at Fully Online V.S. are supported as they make their way through curriculum, yet most of the content is advanced through reading and answering questions meant to ascertain recall and comprehension.

#### *Blended V.S.*

Blended V.S., as I have previously described, made substantive changes to their curriculum after their first few years. They launched their school using canned Apex curriculum, however, they realized that there was very little room to alter, expand, re-teach or adjust the content in this expensive software. The principal stated:

And we just felt that that we weren't self pacing and individualizing the instruction the way we should be because of the rigid Apex curriculum because it had to be modified, it didn't self modify. So what we did was we went to a foundation called CK12 and it's called Flex Books and it's just basically creating your textbook, but it already comes with a Math and Science curriculum. Anybody can use it, you go online and use it, but then we also decided to ...because it's where our students are, that we would kind of re-invent ourselves towards response intervention using RTI as more along the line

of, people can't really figure out what it is that blended learning is, and it isn't just fun computer toys and things like that. When really blended teaching isn't just fun computer toys and things like that. When really, blended teaching is supposed to be what exactly what RTI is -- and it's intervention and individualized and it's differentiated.

Therefore, Blended V.S. opted to re-direct its budget and energy in an hybrid curriculum that is partially purchased and partially teacher-developed. As one teacher explained:

“I pull from a lot of resources and so do a lot of them. My Flex Book, I use the major outline, a skeleton from Flex Books, for my Biology and my Chemistry content and I go in and modify – take things that I don't want, add things in I do want. Add in videos, add in links to websites or animations or whatever to kind of make it so it's more of an interactive – not so much I-am-reading-the-text-book-and-taking-notes-on-it type thing. Like a more exciting, hopefully stimulating...”

This teacher said that she also adds in Vokeys, or text-readers, in order to accommodate the students who are not reading sufficiently. And that instruction consists of “...consistently analyzing data. Being like, well these kids are understanding this skill and these kids are not, and so I know who to touch base with the next day to kind of walk them through the stuff they might not have been understanding...” Further, she explains that there are multiple ways to support students' learning styles:

“So, I'm in there editing the textbooks as we go so that they kind of better understand the book as they are looking at it. And then there's the video set that basically say a lot of the same stuff that the text does. So for the people who learn best by hearing it - there is the videos and there is me during a lecture; people who learn best by doing it with hands on - we have our online labs; we [also] have our wet labs, we still do wet labs<sup>11</sup> here, so we just provide lots of different ways to learn.”

The Reading teacher also includes myriad technology-rich experiences in his class. For example, he created a reader's theatre type of experience using Audacity, a free recording software, and a sound cloud portal for housing the MP3 files. He explained that

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<sup>11</sup> Wet Labs are laboratories that contain biological or chemical solutions and equipment typical of high school Biology and Chemistry classes

working in small groups, students recorded their short play's reading passages as many as 7-8 times until they were satisfied with their fluency, diction and animation. They then posted the recorded files so that classmates could listen and post commentary and critique. This constitutes an authentic purpose for doing the work. The ability to record multiple versions and have repeated attempts at reading provides students, particularly poor readers, with an incentive to practice and participate.

In addition, this teacher stated that technology allows him to adjust the criterion so that faster students can move ahead while he works with struggling students. Some of the technology has scaffolding built in i.e. different levels of independent reading texts and his mixed ability groups allow for students to maximize their strengths. Yet – he contends that as a reading teacher, he would trade all of his class iPads for a library and a librarian who is able to choose stock: “I'd trade the iPads for that librarian in an instance.” When I asked him why, given that the iPad is capable of providing many titles for students to read. He explained that, “the iPad is not something they can take with them. If they can't read at home, they are not getting the practice they need.” He stated that his students might have an hour a week of in-class sustained silent reading practice after all the other things they needed to do and this simply is not enough to help develop solid reading skills, particularly in students who are already behind.

In addition to his frustration with lack of sufficient practice time for reading he voiced some deeper misgivings about the potential misuse of technology:

Yeah, it may be that, but I think people are looking for the substitute to: how do you substitute for a good teacher in a well equipped classroom, who knows the subject matter and can relate to the students and knows how to plan a lesson on a daily basis and look at the data that's produced and re-teach and really challenge students and make sure that the rigor is there? It's a lot harder to do that than it is to say, 'we'll just buy a bunch of laptops and purchase some license to

something and sit down, sit students who are you know, here, or they are four years behind you know...then you know is that a new kind of pedagogy to poverty. And what are the students in the middle, upper clip, middle class students experiencing? I'm sure it's nothing like sitting in front of a computer for seven hours.

The principal express similar concerns about the potential problems associated with online learning.

“I mean, one of the issues definitely becomes, in terms of technology, in the classroom [between] teacher and students -- definitely teachers should know what learning looks like and just because they're in front of a computer and they're Googling something or they're completing some achieved 3,000 assignments, it doesn't necessarily mean that any learning's gonna happen. Just because they're completing some sequence in an online curriculum – there may not be any actual learning. So if you're teaching with a social constructivist standpoint, the rigor should be such to where there should always be some kind of push back from students; there should always -- at some point -- their heads should always be hurting and there should always be some straw which support you there to help them through it in their own development. Or the text is at their instructional level, they got some things that they need to figure out and it should be uncomfortable.”

At Blended V.S. curriculum is the least prescriptive of the four schools in the study and individual staff are pushing back against the complacency and passivity that is possible when students are assigned to digital content. The staff has taken on curriculum design and production in order to allow for customization of courses that adjust to students' needs. And there are examples in most of the classes that I attended that reveal engagement and belie complacency.

#### *Fresh Start Virtual School*

Fresh Start V.S. purchases a national vendor's packaged curriculum. Courses are predominantly the company's content taught by the company's online teachers. The classroom aides are local and their primary function is tutoring when students need help with the content and an hour of daily direct instruction of the content. It is difficult to

analyze the curriculum because it is proprietary and access is limited to K-12 interests.

However, from my conversations it appears that there are differences in expectations and design between courses. For example one student stated:

“In the science class, you had to read through science too, but it was different [from] the literature. They want us to write research papers. They’re not so many paragraphs like that, but with science you just read a chapter, take your quizzes and [be done] with the chapter. So, it ain’t no hard work. It’s like read, take the quiz.

Interviewer: Take notes?

Interviewee: Read, take the quiz.”

Some courses are more mechanical and driven by knowledge recall and other courses, like literature, require students to read novels or plays and to provide written responses. However, it is worrisome that the student states that even these “are not so many paragraphs,” which calls into question whether students are being adequately prepared for the rigor of post-secondary education.

Tracking in an online school is related to the degree of individualization provided. It is different from traditional school tracking in that students are at home and not visibly separated from peers. They are not hampered by class schedules that might close off more advanced options in other courses if they have to select one remedial class. However, the negative effects of tracking can also be experienced by online school students if they are required to master lower level content before they are allowed to participate in more critical or complex activities. However, in blended online programs where students have to attend on site classes, it is unclear how tracking is any different.

Fresh Start V.S. strongly supports a tracking system that assesses students prior to beginning school and assigns them to a classroom based on the results of these assessments. There are 3 classrooms and students are delegated to a specific room based

on their assessment scores. In addition, students are enrolled in courses based on on-going assessments. “I definitely feel that our curriculum is tailored to each individual student’s need. When they come in, they take an entrance exam that also explores their answer of their reading and math scores. And then we also do a transcript evaluation that tells us exactly what types of forces they need to be able to graduate in the least amount of time as possible.”

I asked how the director felt about the homogeneous assignment of students to classrooms. He said, “I think that it’s actually pretty incredible in terms of how teachers are able to differentiate their lessons and really tailor and be creative with the way that they design their instruction to work with those students.” Unlike a traditional classroom where students are expected to interact and where the class content is identical for everyone, students at Fresh Start V.S. are in a class with students with whom they may have little or no academic interaction and who may all be enrolled in different courses. Hence the traditional conceptualization of tracking does not apply. In these courses students are working at skill levels that have been determined to be appropriate for their proficiency.

Of course I do not know whether lower level courses focus on remediation and rote definition and recall, whether all courses focus on these lower level thinking skills with minor changes in vocabulary and timing or whether upper level courses include more complexity. I also do not know the quality of the onset assessments: do they simply determine where a student should be placed in the vendor’s curriculum, are they closely aligned to state standards or designed to align to national norms? I also do not know the curricular implications for students who test poorly.

Instruction at Fresh Start V.S. is primarily focused tutoring, however, teachers have flexibility in the ways they structure the daily direct instruction as well as a course that is unique to their state's requirements. While almost all of the content for the curriculum comes directly from the vendor, the ways in which the students are supported through the content is a local decision. Most of the supplemental instruction is direct instruction and tutoring, but teachers are free to include whichever instructional methods they believe will benefit students in mastering the canned content. Fresh Start V.S. contends that, "...we also do direct instruction here on-site to be able to provide additional support and fill any additional gaps."

### *Conclusion*

Research into the possibilities of technology point to its potential for reducing student boredom, which is in part a function of uninspiring and disengaging curriculum that does not challenge students' higher order and complex thinking. Research also indicates that canned or prescriptive curriculum is unlikely to be able to address this, in fact, some researchers suggest that it is inappropriate for achieving these learning goals. Yet, three of the four online schools use prescriptive curriculum almost exclusively. While they attempt to connect or support students in myriad ways, much of this results in coaxing students to comply with coursework that is dull and tedious. Blended V.S. has recognized the need to develop their own content to address specific needs of their students and also have staff that question the potential passivity and complacency that online courseware can demand. Some teachers battle the limitations of their resources and of technology while simultaneously using technology's assets to design content that engages and advances their students. However, even at this school, the potential for technology to

demand active, critical learning that requires students become producers, and not only consumers, of knowledge is still in development.

*Facilitating collaborative knowledge building*

Recent technology has been developed to allow for multiple methods of collaboration not only by permitting knowledge sharing, but also by permitting co-construction of knowledge in public or social spaces. Commonly referred to as Web 2.0 these new tools include social software that makes it easier for many individuals to communicate, collaborate and interact online (Cress & Kimmerle, 2008). Examples of these tools include blogs, file-sharing spaces and wikis. These spaces encourage participation by permitting commentary, but also by authorizing users to alter the contents of the documents. Google documents, for example, allows the creator of the document to grant specific permissions to users, including the ability to add to or remove from the document online. Furthermore these technologies have developed sufficiently to make them simple to use.

There are many benefits to online collaboration that enables students to work collectively to produce knowledge. First, the process requires students to articulate what they know and make it visible to others; this process of formulating and communicating knowledge facilitates deeper understanding in students (Cress & Kimmerle, 2008). As others provide insight, commentary and critique students quickly learn to develop clarity in their thinking and written expression. At the same time, the contributions of others require students to alter their original ideas in order to integrate new information.

Students take on a cycle of externalizing what they know and internalizing what others contribute in an iterative process that shapes and reshapes not only what the student learns but the collective knowledge of those participating in the process.

The following is an example of how one teacher at Blended V.S. uses Google documents.

While it is still primarily being used to facilitate collaboration between teacher and student, however, this same process can easily be redirected for peer work with more challenging potential.

“So it’s something that I did, I started using Google Docs if we were doing like a writing assignment or even for simple bell ringers. Where they would come in, they would access that document and we share it between myself and that student. So that was an easy way for them to go to the place that they knew and they could do work and it was really easy for me to add comments, which is something that, you know, you might take for granted, but it’s difficult to do in the blended classroom because you have to download the assignments; you have to make your comments; you have to upload them and then expect the students to download those comments and then read them, which it’s difficult enough handing them a paper back with comments on it and having to read that.

So it’s really easy with the Google Docs because that they were able to go in and you can’t avoid the comments because they add to it each day, it’s not like they are getting rid of it. And so they can see like my—me highlighting in yellow and saying you know you need to add this or highlighting anything for like grammatical mistakes that I tell them to go back and create.”

One of the problems with canned or prescriptive curriculum is that it is developed primarily around content recall, definition and assimilation. It is possible to easily evaluate and assess the content that is co-created in social spaces but it is not possible to automate this process. Therefore, the only way that students enrolled in the online schools that use prescriptive curriculum can collaborate on knowledge production is if their teachers value the process and determine to include opportunities beyond that which is required by the course content.

Many of the Blended V.S. teachers that I interviewed regularly use blogs and Google documents in their classes. Sometimes they are used in classroom management, but often they are used for assignments that ask more from students than a response to content. However, I did not see very much evidence of these kinds of opportunities at the other schools. A great deal of time is spent coaxing and tutoring students to complete all of the requirements of the prescribed curriculum. In order for collaborative knowledge building to be integrated into the curriculum there would need to be a pedagogical shift in either the school staff or the designers <sup>12</sup>of prescriptive content. In the absence of this shift, the potential for technology to allow for knowledge production and collaboration on any scale mostly goes unmet.

#### *Promotes Sophisticated Problem-Solving*

“The limitations implicit in online development platforms constrain the nature of the instruction that can be developed and delivered using those platforms. Popular platforms do not support alternative forms of knowledge representation by learners, authentic forms of assessments, or the use of distributed tools to scaffold different forms of reasoning. Because these platforms replicate face-to-face instruction, they rarely support any form of problem-solving, which is the most authentic form of learning in everyday and professional contexts” (Jonassen, 2002).

According to Jonassen and others, online learning platforms were designed to mirror instructional practices being used in face-to-face classrooms as well as epistemological assumptions about learning. They function by permitting teachers or content developers to design a series of readings or lectures or videos about specific

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<sup>12</sup> Designers, employed by publishing companies, create curriculum and because of the nature of online learning they also integrate instruction within the content. In a traditional classroom, teachers provide instruction and textbooks or other resources are used as teachers choose or the district mandates. Designers unlike traditional textbook publishers are responsible for curriculum and instruction and their pedagogical stance matters not only in the product but in the way students learn from the product. Vendors are responsible for marketing and selling the product.

content. Students read or watch these and teachers then answer student questions, tutor individuals and cajole others. Later they test for retention using multiple choice or other short answer questions (p. 76-77). Students do not engage in creating knowledge only in acquiring it – thus the system is reproductive in nature. The objective in this kind of learning is not to have students generate their own knowledge but simply to parrot existing information. Consequently, while online technology professes innovation, this teaching and learning modality prevents deeper learning that is possible through problem solving.

Why should problem solving be an intricate part of the design of innovative online learning spaces? Because researchers now understand that people learn through their experiences, which they store in their memories until these can be recalled and used through mental simulations, in order to solve problems (Gee, 2008). Furthermore, learning is critical to survival and people, outside of school, learn *in order to* solve problems. Learning in the context of ‘real-world’ is activity-based, not content-based, and is situated within the context of the problems that people come up against or incur (Jonassen, 2002). Thus learning and problem solving are intertwined.

While the school leaders in the study generally agree that problem solving is an important skill for students to have, there does not appear to be any schoolwide effort to develop these skills. At Blended V.S. there is the most effort by teachers to develop autonomy in their students, which can include problem solving. This is because many of the teachers have individually determined that they want to prod students in that direction either through their academic content or through their class procedures. But the effort is inconsistent and not foundational and the examples are not sufficiently grounded in the

principles of problems based learning.

Consider this conversation with one of the teachers at Learning Centers V.S. in which she expresses frustration at her students' inability to problem solve. However, the ways in which both she and the school are addressing the problem does not appear to be adequate for developing the skills she wants students to have.

R: But the one thing I have noticed about them, is if they don't all know the answer, they don't continue to look. Like there isn't a whole like...

I: Problem solving.

R: Yeah they don't do that. They don't say, well I can't find it in this piece of material, but maybe it's in something we did yesterday or maybe it's in something we did for homework or something like that. If it's not on the sheet in front of them or the assignment in front them, they quit.

I: So problem solving is a learned skill right, so that, it hasn't been part of their background. So is problem solving something that this school in particular is wanting kids to know how to do as their instruction...?

R: Yes. We are trying our best to get kids really analyzing things and trying to do those higher level thinking skills because obviously it's—I mean it's not good enough if they are leaving here just being able to spit back facts. Like that's not really an education - that's congratulations you can name that a nucleus is the brain of the cell

I: How do you go about trying to increase those skills?

R: As of right now we are just—we focus on like skills like one tier at a time basically. Like we are going up the Bloom's Taxonomy as they get from freshman and then moving on to sophomore so they are with higher level thinking skills hopefully to the point where they can do most of them, a lot of analysis, a lot of that application and stuff like that their senior year."

However, attrition is a significant component of online learning; students do not often stay enrolled in an online school for all four years. So, while there is an understanding that students need to be able to problem solve, there is not a formal approach that gets students to problem solve right now. Rather, there is a vague idea that increasing the complexity of discussion or questions will result in students' ability to transfer those concepts to tangible problems.

Designers, cognitive theorists, education experts and others have studied and

written about the ways in which learning has already been changed by innovations in technology, except that these changes are currently occurring outside of school. Online schools can take advantage of this growing body of research to develop truly innovative ways to engage students in meaningful learning. Instead most of the evidence is that little is changing in the ways in which we think about teaching and learning and technology is simply being used as another method for delivering content – well organized and more interactive content, perhaps – but a reductive and disconnected content whose purpose is recall.

#### *Help Students to Develop New Tech Skills*

Participation in any online school requires students to spend several hours a day working on a computer. For students who do not have their own computers this amounts to a significant amount of practice. Even when the curriculum is rudimentary students have to develop basic skills in: keyboarding, Internet searches, word processing, printing, emailing, Skype and trouble-shooting. Most of the students enrolled at Blended V.S.-2 and Learning Centers V.S. do not have their own computers at home. Thus, even if they did not do more than click their way through their courses and pass the content assessments with the minimal scores, they would be developing more proficiency with basic computer technology than in their local schools where access to daily computer time was prohibitive.

However, a recurring theme throughout this study is that the only way that students will develop new and sophisticated technology skills is if they are encouraged and expected to use a variety of tech tools. Since the prescriptive curriculum includes minimal use of technology, teachers will need to create experiences that encourage,

require and assist students to experiment with tech tools. Teachers will need to develop meaningful ways to enrich students' experiences to include development of sophisticated skills. Just because students are enrolled in an online school does not mean that they are developing sophisticated skills. It is possible to provide an entire online curriculum that does no more than ask students to click through content, answer multiple choice questions and write an occasional essay using a simple word processing program.

Students at Blended V.S. are required, in many different classes, to develop competency with many tech tools. The school invested in an array of technology that teachers requested and were expected to fully utilize. I asked the principal about student involvement with technology:

“Why do you think they enjoy what’s going on in the classroom here? I think it’s a combination of the teachers and I think it’s those relationships that they have with the teachers and I think the material is more engaging, with a combination of differentiation so it’s actually at their level and so they’re feeling successful. And then also just being able to do different things with the technology; it’s just fun stuff, like they’re being able to create presentations. I know a class - they made movies, they’ve made movies through there and they enjoy it. It’s fun.”

In addition to enjoying and learning to use the many tools available to them in each of their classes, students also learned autonomy as they became more adept at locating information and answers to their own questions. One student stated, “So, it’s like there’s evidence here that shows like, Okay, well, technology helps. First and foremost I believe it makes the teachers more at ease with their job and it helps the kids to understand it because you don’t have to always raise your hand. “Can you help me with this?” You could just Google it and it pops right up.”

At Fresh Start V.S. students use a national vendor's curriculum, however, there are a few opportunities for classroom teachers to expand students' experience with technology. The state in which this school is located requires a unit on that state's history. Below the teacher explains how students used media and web clips to create a presentation; how they solved problems as they encountered them and how they provided her with solutions and potential that she had not considered. She states she was going to assign an essay on the Prohibition era but students were able to use technology to make their projects more interesting. Just by having access to options they are able to find their own ways to improve in ways the teacher had not considered.

So some students just upload, they use this website to take their text and create like an image that looked like an old newspaper, and then other students actually did like news recordings. And there was this really good one where they like, they pretended to be at the time and then they were like, now we are going to cut to a student who had been working undercover. So they had this video where the camera was down and you could see him talking or you could hear him talking but you couldn't see the face. And he was like I have been working undercover for blah, blah, blah, and it was pretty cool just--.

And that's the cool thing is because, I mean just doing that project I learned about new websites that I can use, and that came from the students just by, you know just by the access to it. Yeah they are going to spend time on Twitter and Facebook but they are also going to find ways to do things and solve problems that we haven't figured out yet.

And just being around the computers, those seniors after four years not only have they mastered like basic things like Microsoft Office programs that honestly they probably would not have at another school... But then they have also been introduced to, yeah they are good with PowerPoint; there are some websites they use, Slide Rocket, but then also Prezi.

Video games, movies, animation, collaboration with many people, knowledge production, networking, designing, blogging and myriad other possibilities exist to engage students in situated and meaningful problem based learning. Online schools are perfectly positioned to be able to do this since all of their students have access to

ubiquitous technology. There is evidence that some schools are leaking out of the stifling pedagogy of knowledge acquisition and allowing students to participate in the production of knowledge using a variety of tech tools. But these are the exceptions. Most online schools continue to mandate that students spend most of their time reading and responding to text based content.

### *Conclusion*

Opinions about the qualities of good teaching permeate research, practice and policy and vary by ideology and experience. These qualities are hotly debated in the political arena and result in policies that simultaneously value and undermine teachers. Rather than address and develop an argument for a definition of excellent online teaching, I offered four areas of teaching in which online technology could make a significant contribution to student learning and evaluated schools based on their use of these.

Technology has the potential to reduce the tedium that students indicate as one reason for dropping out of school. It can provide new ways of learning that easily allow students to participate in exciting creation of knowledge rather than the more common passive acquiescence required for recall and comprehension. Technology has developed to include myriad tools for use in knowledge building, and the Internet makes collaboration intuitive. Students in learning communities or with similar interests can work together across space to produce original work and knowledge. Similarly, technology can assist students working on complex problems in many ways that both engage and entice students to persist. Research into game design has demonstrated that students are willing to spend countless hours on solving difficult problems depending on

the ways in which these are designed. Finally, students can develop valuable technology skills as an added value when these are incorporated and necessary in their education.

These potential benefits, as with all others in this study, can only occur if they are intentional design elements. Educators must value these contributions and must insist, as a school not only as individual teachers, that they are critical to the curriculum. This requires leadership and understanding of the inherent limitations of canned curriculum. It requires knowledge of the behavioral orientations, lack of complexity and private nature of prescriptive curriculum and it requires that these factors are construed as problematic, especially to under-served students who may be more likely to be limited to these orientations for all of their learning.

The schools in this study that purchase prescriptive curriculum all relied on teachers to compensate for any shortcoming that they considered important. Thus, only teachers that wanted to try something different, were concerned with the limitations of curriculum content or were experimental by nature expanded their course content. However, teachers are limited by their own technology skills, by time and by their understanding of the needs of under-served students. When they encouraged students to find solutions to problems, they were surprised by students' creativity and willingness to develop new skills. Teachers agreed that students seemed to like the lessons that they created beyond the regular content, but this did not always spur them to develop more original content.

Blended V.S. rejected the schoolwide curriculum they had originally purchased and decided as a school to modify online textbooks and create their own curriculum. Individual teachers design technology rich lessons that provide ways for students to learn

more advanced technology skills. Students make movies, write music, publish work to interactive sites, use Smart Boards, and collaborate on plays and other projects online. The extent to which they work on problem solving, collaboration and technology varies by teacher, but these are concepts valued by, encouraged and fostered by the principal. In fact, the principal pushes teachers towards student engagement with complexity and away from passive compliance.

Using the potential advantages of technology is not an inherent characteristic of prescriptive, canned curriculum. In fact, it is contrary to the ways in which these programs are designed. Relying on individual teachers to supplement the structural design flaws of the curriculum results in hit or miss improvements. Leaders that understand the need for complexity, critical thinking, problem solving, collaboration and knowledge building beyond acquisition are more prepared to take full advantage of the potential of technology.

## Chapter 8

### **Cultural Responsiveness**

#### *What does it mean to be Culturally Responsive?*

In chapter five I examined the choices that online school leaders have made in providing resources to their under-served students. In chapter six I examined online school systems designs that can uniquely support students and in the previous chapter I addressed ways in which online technology can assist teachers as they educate students. I conclude with a chapter on cultural relevancy and the way that it should permeate all elements of educating kids, from the ways in which we allocate resources, implement systems-wide designs and ultimately teach them. Since these elements are sometimes manifest through the curriculum, I examine it as necessary.

Culturally Responsive teaching does not require particular instructional strategies. It is not pedagogically specific; it is rather concerned with the way in which educators think of their students because beliefs translate into practice. Researchers have tested and continue to examine and document the effects of teacher expectations on the performance of students. Rubie-Davies, Hattie and Hamilton cite thirty years of research on teacher expectations to assert that, "... years of research into teacher expectation effects has provided clear evidence that expectations do exist in regular classroom situations and that they can positively and/or negatively influence student performance and achievement"(2006). Jussim and Harbour reviewed and summarized pertinent research on teacher expectations and reaffirm that self-fulfilling prophecies, or teacher expectations, are indeed real even if results are complex and not straightforward (2005).

In the book, *White Teachers/Diverse Classrooms*, authors provide practical solutions and guidance for classroom teachers and other educators who teach students ethnically and racially different from themselves (Landsman & Lewis, 2011). In a chapter titled, “Yes, But How Do We Do It?” Gloria Ladson-Billings writes that the primary problem teachers face is in their reasoning that *what* teachers do is the most important concern in a classroom of diverse students. Ladson-Billings argues, “...the problem is rooted in how we think – about the social contexts, about the students, about the curriculum, and about instruction. Instead of the specific lessons and activities that we select to fill the day, we must begin to understand the ways our theories and philosophies are made to manifest in the pedagogical practices and rationales we exhibit in the classroom.”

Why is cultural responsiveness a foundational component to what under-served students need? Because the ways in which educators perceive their students are reflected in school and classroom practices. If educators adhere to deficit thinking they devalue students’ cultural, familial and community backgrounds and the potential contribution these can make to students’ learning. If teachers’ underlying responses to their culturally diverse students are fear, ignorance or disrespect they cannot expect to engage students in school. If teachers lack knowledge of their students’ real histories and contemporary sociopolitical issues they cannot develop content that is meaningful to students. As part of their research Alim and Baugh interviewed rap artist Wu-Tang Clan’s protégé, Bankie Sanatana who stated that omitting truths about the contributions of black scientists, researchers and engineers to world history leaves students with nothing in the curriculum about themselves. “Other ethnic groups, they don’t learn about themselves, you know

what I mean? So you learn about this other group of people so much and they don't give you nothing about yourself so you will stay in and stay in and stay in it, until you veer off from it, you know what I mean" (p. 18, 2007)?

Teachers may try each new school year to wipe their slates clean of preconceived ideas about their students; they may want to be optimistic about what their students will be able to do. Teachers may begin their careers, school year or days with good intentions, but these are insufficient and are often whittled away by the demands of their students, particularly students whose backgrounds make them dependent primarily on schools for their education. For many teachers who enter classrooms armed only with their idealism, their students can quickly become identified as the problem – the motivation problem, the management problem, the behavior problem.

Teachers' expectations impact their pedagogy and student outcomes often confirm their expectations. Jason Irizarry documented a multi-year project called Project FUERTE in which he led students through participatory action research that culminated in a book. Students researched and wrote chapters of the book. One student, Carmen Ortiz, wrote the chapter titled, *Don't Believe the Hype: Challenging Deficit Perspectives from the Inside*. She relates, "Instead of looking at how the system affects what we do in school and how we perform, many teachers, administrators, and staff view students as the problem. Many of the kids start to believe this hype, based on false stereotypes, as well, thinking that they are not smart when they really are" (Irizarry, 2011). Thus, the ways in which students are perceived becomes a self-fulfilling prophetic proclamation. Further, these preconceptions define educational options and work to impede rather than enable student achievement. "Whether teachers think of their students as needy and deficient or

capable and resilient can spell the difference between pedagogy grounded in compensatory perspectives and those grounded in critical and liberatory ones” (Ladson-Billings, 2011).

### ***Problems with culturally responsive practices***

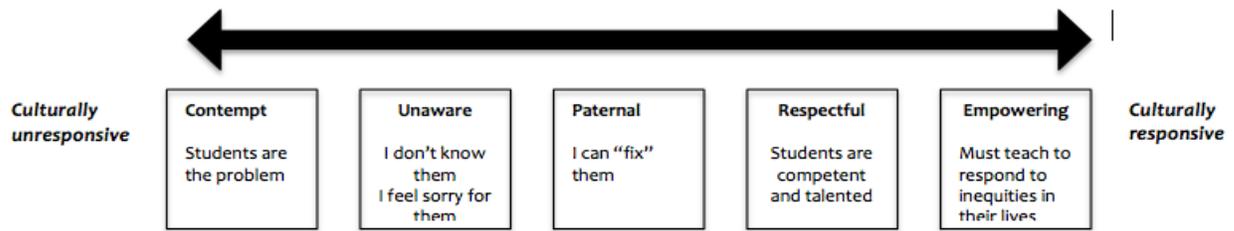
#### *Measurement*

Unfortunately there is no widely accepted instrument for measuring the level of cultural responsiveness in a classroom and school environment. Oginga Siwatu created an instrument in 2007 that was tested on pre-service teachers to determine their sense of self-efficacy and outcome expectation. However, survey questions were limited to aspects of cultural relevancy that are connected with teacher cultural competency, using cultural competency to develop more culturally compatible lessons, providing multiple paths to successful learning and increasing skills and knowledge acquisition so students can succeed academically within mainstream standards. Some survey oversights, however, are significant. Ladson-Billings’ maintains that one of the three pillars in her work is that culturally relevant pedagogy requires students to “develop a broader sociopolitical consciousness that allows them to critique the cultural norms, values, mores, and institutions that produce and maintain social inequities” (1995). This aspect of cultural relevancy is missing from the Siwatu survey.

This instrument also relies on survey responses from teachers. It does not include observation protocols or a mixed-methods approach to understanding the effect that educators’ perceptions and self-efficacy have on student achievement.

In order to draw conclusions about the schools, teachers and educators I observed, I used a continuum to conceptualize the attitudes and opinions that were manifest in responses. See figure 2 *Continuum*.

Figure 2 Continuum



The continuum ranges from a position that conceptualizes under-served students as the problem and therefore attributes the students' lack of academic success to factors that their hard work alone can correct. Farther along the continuum respondents conceded that they didn't know their students' cultural background and they felt sorry for their perceived struggles. It wasn't clear how their condolences were helpful for students, but this was an improvement over blaming the students. The next value is representative of the kind of paternalistic rhetoric that many new charter schools such as KIPP incorporate in their design (Whitman, 2008). Teachers approach their work with missionary zeal in an effort to cure the students of their background and ineffective upbringing. Teachers are willing to work very hard because they believe that student success is entirely their responsibility. The subsequent value on the continuum reflects an understanding that under-served students are talented and resilient even if they are dependent on their schools for their education. Teachers affirm that there is nothing wrong with their students, therefore, they get busy helping to facilitate the development of their students' thinking. The final value reflects an understanding that, for most under-served students, society is not on a level playing field but rather exists on a tilted power structure that often creates hostile conditions for some students. Teachers that demonstrate this understanding situate their students in historical and broader social contexts and

consequently are compelled to empower their students to battle inequality (Ladson-Billings, 2011).

It is important to understand that individuals are not consistently positioned on any specific value on the continuum. Some teachers and leaders vacillate between values depending on the context or they take stances that are between the values represented on the continuum. What is essential in measuring or drawing conclusions about the ways participants perceive their students is to recognize that educators are consistently closer to the left or the right zones of the continuum, never in both simultaneously. I did not interview any educator who simultaneously responded with empowering and dismissive perspectives.

### ***Perception of students***

While none of the participants at Learning Centers V.S. were consistent in all of their responses, most of the responses varied between the sentiments on the left end of the continuum. This is not to say that educators were not committed to improving academic achievement, however, responses revealed that educators are more likely to see their students as deficient, from substandard cultural and familial backgrounds and unlikely to be receptive to learning.

Learning Centers Virtual is located in a state that is between 20%-30%<sup>13</sup> Latino (U.S. Department of Commerce, 2013) and in some of the learning centers the Latino student enrollment is more than 90%, so I was a little surprised that several participants told me that they did not know anything about the culture of their Latino students. In a chapter titled, *How Can You Teach Us If You Don't Really Know Us?*, Jasmine Medina, a high school student who contributes to the author's research, explains the ways in which

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<sup>13</sup> Giving the precise percentage would compromise confidentiality

her teachers' stereotypical and misinformed thinking impacts her school experiences: "Many of my teachers want to put labels on me and fit me into nice, neat categories that allow them not to think too much about who I am and what I can be, just where I belong – or where they think I belong." She suggests that the only way that teachers can be effective with all students is to invest time in honestly getting to know students – "They can come to our communities, not as tourists taking pictures but as people who really want to learn about us and with us" (Irizarry, 2011).

In an effort to provide more insight into Latino culture Learning Centers V.S. hired an individual to speak to staff at one of the learning centers where the student population is almost exclusively Latino. This is how one coach explained this professional development experience to me:

"Yeah, we try to understand what the culture is that surrounds the students as we approach the student, but boy I find it really, really difficult because I'm not in that culture generally. So it's harder for me to really get a handle on it. We have a gentlemen in [a nearby city] who has worked with us to talk to us about the Latino culture and he's just been amazing in explaining why certain things are going on with our kids, and what we might try to do to change that. But it's still very difficult. It's a culture that doesn't value education; it's tough to get the kids through. And that is not just about the Latino culture, it's just a culture within any home. If a parent does not value education, it's hard to get the kids on."

My conversations with a Learning Centers V.S. administrator similarly reflected a conviction that their students come from backgrounds that devalue education and as a result parents are unlikely to support school-based initiatives that might lead to increased achievement for their children:

"Our parents—it's interesting, the parents that communicate to us so far have been the parents of students that are on the gifted and talented end that really come to us for the concurrent enrollment opportunities... Unfortunately most of our parents and most of our students that are at-risk that are parents, they are just not interested in the education."

In each of these examples, educators cling to deficit perceptions of their students. They readily admit to not understanding or having adequate knowledge about students' cultural and sociopolitical backgrounds, sufficiently to warrant hiring an 'expert' to provide context. Yet, they *maintain* viewpoints based on their limited experience and stereotypes, which have long been discredited (Nieto, 1994; Moll et al 1992; Valencia, 2002). Hence, while educators at Learning Centers V.S. have good intentions and buttress their commitment with extensive budget, labor and flexibility supports, their paternalistic approach is only marginally successful. At many of the learning centers only 40-50% of students participate and the graduation rate for the school is far from reflective of the energy educators expend. As H. Richard Milner perceptively stated: "Unfortunately, stereotypical beliefs and thinking may force teachers to think about their culturally diverse students through deficit lenses – whether consciously, subconsciously or unconsciously – and these counterproductive thoughts can contaminate teaching and learning, even when teachers have good intentions" (2011).

Fully Online V.S.'s design is more restrictive and limited to students who are able and willing to participate remotely and independently. The most recurrent perspective on students is illustrated in the following comment:

"I told one of our students, we got six people here who are here 10 after 8 in the morning; who are here to help you. You have to come to school; your school district isn't going to continue to pay your tuition for you to attend school here if you don't attend; so we're gonna have to make some decisions here – [I] basically, lay down the law... if they can't get an education here or refuse to get an education here or they refuse to come to school, then I'm gonna remand them back to their school district where they need a more structured environment."

In other words, educators are clear that the school's structure can/will only accommodate students who are able to perform within its design: "So I don't feel like we're doing

any...we're not doing a disservice for them. We're offering them an opportunity. In some cases it works and in some cases it doesn't..."

Educators related that students are often anonymous and unless they have a name that can be associated with a specific cultural background, teachers are often in the dark about who their students are unless they specifically search through the student's record. When asked about ways in which students' ethnic, racial or socio-economic backgrounds related to instructional practices one teacher stated that:

"I don't really think about that as much over time because we do have a diverse group of students who are from all over different backgrounds and I know that I do have those types of students, you know, that maybe the racial factor is an issue for them or the socio-economic factor, but I try to, and especially because they're faceless in my classroom, I don't always know and so I treat everyone, I know it sounds funny, but I treat them equally and instill fairness while trying to get to them individually..."

In an effort to instruct students individually, some teachers become color-blind and fail to acknowledge racial and cultural differences among their students, therefore, their practices reflect a failure to understand the impact of systemic factors on students' success. Justin Grinage writes about his experience as an African American teacher working in a suburban school. He states that while there is nothing inherently wrong with trying to teach students individually, indeed it is one of the advantages of teaching and learning online, failing to acknowledge students' racial or ethnic heritage can be harmful. He contends that if a student of color, for example, does not fit into the system, race, racism or other systemic factors are not examined or considered ..." since color blindness dictates that race is not a significant factor in teaching and learning – but to [the students'] inability to succeed in school" (2011). The pervading belief is that students at Fully Online V.S. do not fail because the design of the school is not sufficiently

supportive or because they have attended schools where low expectations and remediation tracks have insured their academic underachievement or myriad other systemic factors. Students at Fully Online V.S. are remanded or removed because they are unable to succeed.

On the other hand, the message repeatedly communicated by educators at Fresh Start V.S. is that their students are competent and talented. Even though all of his students had already dropped out of other schools – in some cases multiple schools – Fresh Start V.S.’s leader was undaunted in his conviction that each of his students would be successful. He said:

“Some schools did not want them because they were at the age of 19, 20... they feel all that coming through the door, you know: ‘I wasn’t wanted.’ And that’s why, [he said pointing to a poster] you see at the bottom of that decree: I am loved. You know, you are someone, you are valued, you are, you know, someone special... they come in beaten, you know, heads down. And you know, we rebuild them and see them transformed.”

This conviction that *there is nothing wrong with these students* is infused everywhere in the school and is reflected in comments made by students and staff. I received pushback from students at this school when they asked the title of my research. One student said, “I ain’t at-risk.” Regardless of the conditions that led to past underachievement, students at Fresh Start V.S. were instilled with a sense of competency. It is not a coincidence that the graduation rate at this school was 94% in 2011.

Finally, Blended V.S. was the only school that hinted at the potential for reaching the highest level of cultural relevancy. Although there was variability in responses made by teachers, they were consistently reflective of a strong belief in their students’ capabilities. No one lamented that students’ families did not value education or that students were not prepared for school. Implicit in the kinds of supports that school staff

established for students was an understanding of the challenges that students faced as a result of poverty, crime, low expectations and under-resourced schools..

In this school it also became apparent that both race and ethnicity are culturally construed. Students who told me that their teachers were just like them ignored their teachers' phenotypical characteristics:

“Even some of the teachers you have, you forget that they're a different race or a different ethnic group because they're kind of hip and by hip it's like they behave in a way that's like in a way that we can relate to

Interviewer: ...and so ultimately maybe that matters more?

Interviewee: Yes, that matters a lot.”

Another student argued that,

“Most of our teachers came from some of the same areas but just different parts of the city and have even grown up here so they went through the same things as the kids, so they know how it is for us.”

This is definitely not the case. Teachers at Blended V.S. are 95% white and come from suburban backgrounds. Their upbringing includes families with college-educated parents and siblings. Some of the teachers are not even from the Midwest. Yet, the fact that this student was confident that his teachers came from similar cultural backgrounds confirms that racial and cultural characteristics are culturally construed and individuals can identify with racial and ethnic groups regardless of their phenotype. These examples are strong indicators that educators at Blended V.S. are being culturally responsive.

Educators at Blended V.S. do not assume a colorblind attitude that presupposes racial and ethnic differences are irrelevant. Instead they tackle these issues head on while maintaining confidence in their students' abilities. In addition to conceptualizing their students as capable and talented, they encourage students away from passive compliance and towards a critical understanding of the curriculum and sociopolitical forces that

impact their lives. One teacher, for example, taught his students to focus on the perspectives of different groups when learning about historical events:

“Well for example I mean last week we talked about the New Deal and so we studied FDR’s new deal and response to the Great Depression and what that looks like and how he was elected. And then we took it from another perspective and they were like, oh this is so cool. And then we looked at it from the perspective how did African Americans, how were African Americans specifically affected by the new deal. And so there was a much less ecstatic response. And so then we had a long chat about what do you think? What’s the new deal, is it still a positive thing for African Americans as a whole? Do you think, I mean it helps somewhat, does that make it okay even though that in general Caucasians were more... received more aid. So we had a discussion on that.”

The staff at Blended V.S. is working towards cultural relevancy, but consistency is difficult and not all teachers engage students with the same level of cultural understanding. And even the teachers who are more aware and understand the need for cultural relevancy are not consistent in their practice. The principal expressed his concern for students and the way in which he continuously drives teachers to interrogate their practice to make sure that students are doing more than simply completing assignments. “...I think that right now, we’re struggling with the difference between engagement and compliance, like our students are online, they’re working, but are they actually engaged in learning or engaged because they’re complying; so that’s been a big focus and that’s by the last couple of weeks. I’ve been all over people about it...” Nonetheless, there is ongoing progress towards cultural relevancy and students respond with a strong commitment to their school and to learning.

In his reminiscence of his first year as an African American teacher in a primarily white suburb, Justin Grinage recounts that just a few insensitive and racist comments

affected the way he approached his job for the remainder of the year. He reflected that if just a few comments impacted his whole school year imagine just how much more students are affected by “daily assumptions and perceived biases.” Cultural responsiveness, rather than requiring specific instructional techniques, insists on an ongoing evaluation of commonly held beliefs and assumptions about students, their families, their communities and cultural backgrounds. The ways in which students are conceptualized impacts the design of supports, pedagogy and ultimately the world of opportunities envisioned and available to students. Students consciously, subconsciously and unconsciously respond to the ways in which they are perceived by those in whom they are required to trust for their education. As Sonya Nieto articulated, “In the final analysis, students are asking us to look critically not only at structural conditions, but also at individual attitudes and behaviors. This implies that we need to undertake a total transformation not only of our schools, but also of our hearts and minds” (1994).

While I did not propose to define or analyze all the qualities of good teaching that are debated among researchers, policy makers and practitioners, I do assert that there are forms of teaching that stand in opposition to a pedagogy based on deficit thinking and these matter to the ways in which students engage and succeed in school. The four schools in this study vary in every design attribute common to online schools: face-to-face time, curriculum design and quantity and kinds of supports offered. School staff also varied in the ways in which they perceived students and their families. While there may be other causal factors, how students are perceived correlates with achievement results. In Learning Centers V.S. and Fully Online V.S. graduation rates were less than 30% in 2011; At Blended V.S. and 2 they were 87% and 94% respectively. I also found a

correlation between the ways in which leaders spoke of their students and the ways in which teachers depicted students – leaders hire teachers and mentors who think similarly to them. In this way school culture is established and maintained. Thus, change requires the whole school, not only individual teachers to be the “unit of change” (Haberman, 1991).

## Chapter 9

### *Conclusion*

K-12 enrollment in fully online schools has increased by 15% since this study began just eighteen months ago. An additional two states have developed policies, increased budgets and secured legislation to permit the spread of fully online schools, thus taking the total number of states providing this online option to 31 (Watson et al, 2012). All 50 states provide some online choice and half of all K-12 schools in the nation report at least one student enrolled in an online course (Watson et al, 2011).

This growth has included not only the original advanced and motivated online learners who were targeted in the early developmental stages of online schools, but also students who have not been successful or have already dropped out of bricks and mortar schools. These more marginalized students have strained the design of the original online schools, which required students to be independent and well supervised at home. Under-served students are less likely to be motivated or able to learn independently and they are more likely to live in familial situations that cannot provide constant monitoring or tutoring.

This study sought answers to several questions about the extent to which online schools are currently enrolling under-served students and the ways in which they are supporting these students. At the same time the theoretical foundation undergirding the study established that under-served students are conceptualized in different ways and these ideological stances direct pedagogical practices and educational reform. The most prevalent stance is commonly referred to as deficit thinking, which concludes that poor student achievement is a direct result of students' personal backgrounds rendering certain

cultural, ethnic and racial backgrounds implicitly devalued and juxtaposed with those students who enter school prepared for normative school behaviors.

Solutions and advocacy proposed by deficit models assume that if the problem originates with the student, solutions must also. These solutions invariably aim to remedy students' shortcomings. At the same time deficit conceptualizations reduce education to a technical problem that warrants technical solutions in curriculum, instruction and resources. Leaders in this study who adhered predominantly to deficit models proposed solutions to students' academic achievement and personal problems that relied on prescriptive online curriculum and extensive mentoring aimed at supplanting parenting and requiring compliance to rules and curriculum content.

Systemic and asset-based conceptualizations of under-served students, however, recognize that there are many systemic and institutional factors that interfere with students' ability to succeed. These factors include classroom norms that exclude students' histories and contributions and under value their ethnic and racial backgrounds; school procedures that disproportionately discipline and refer under-served students to special education, both of which further reduce the time students have in class; and pedagogy that assumes common knowledge without requiring a critical analysis of inequalities. In addition, this systemic and asset-based way of seeing students accepts that discrimination, racism, lower expectations and a variety of local, state and federal mandates also contribute to student defeat. As a result, proponents of these systemic and asset-based conceptualizations submit that education cannot be the only solution to the more complex problems of racism and poverty. At the same time, education is a crucial component of systemic reform and has the potential to teach students to critically assess

and, more importantly, to address sociopolitical inequity in their lives. Solutions proposed by people who subscribe to a systemic and asset-based perception of under-served students target institutional structures, policies and processes. In addition, students—their backgrounds, families and cultures—are accepted, valued and incorporated in a critical perspective of curriculum and pedagogy.

Teacher and leadership preparation programs are one part of the institutional core that requires attention. Many demands, i.e. federal, state and local policies, technical and practical subjects and theoretical and epistemological content tax teacher and leadership preparation programs. However, these programs must be centered on creating more just and equitable schools for marginalized students and the cornerstone of this focus requires ongoing reflection, analysis and evaluation of the ways in which future educators and leaders conceptualize students. This must be an explicit process that cannot be left to individual resourcefulness.

In this study what under-served students need is defined as four separate but interdependent components: adequate resources, fair systems, excellent teaching and culturally responsive practices. Each of these components is limited by ways in which online learning can specifically approach them. Proponents of online learning have suggested that technology can be designed to address the needs of under-served students in unique and transformative ways. The reoccurring theme, however, is that technology's potential is barely reflected in online schools. Practitioners are still using online technology to deliver an education system firmly rooted in conventional school practices. In most of the virtual schools in this study the potential of online technology is still untapped.

*Resources*

The educators and leaders who participated in this study appear dedicated to their profession and students. Most of them work long hours and contribute as fully as their program designs permit. In some cases, they spent inordinate amounts of time and resources to support their students in the ways they determined to be necessary or most effective. Some of them risked their careers to battle politically and publicly for changes they deemed critical to their schools such as removing for-profit management companies.

However, proponents of online learning and technology integration refer to technology's ability to remove barriers to *full* participation by providing access to quality experiences. This is to say that access to content alone is insufficient. Solving the problem of access to basic curriculum is a technical problem that has been relatively straightforward to address. Providing experiences that enhance educational opportunities for students least likely to acquire them on their own is a problem that these schools have been so far unable to solve.

To put it simply, the question is what are students doing with the technology for which online schools provide access? Online schools need to look beyond 24 hour a day access to content and concentrate on systematically designing programs that provide experiences to marginalized students that parallel the kind of experiences in which their more affluent peers regularly participate both in and out of school. Technology has developed to enable: interactive data visualization tools, digital video tools, widespread development of communities of interest, simulations and games. With technology, students can create and produce, not simply consume, learning. They can tour and catch a glimpse of places beyond their neighborhoods like museums and college campuses –

simulate and solve problems. Online schools can be the perfect place to merge the technological developments happening in the business and entertainment worlds with education. Technology can go beyond the basic use of ‘tools’ to an integration that is relevant and meaningful to students and can take their learning beyond the confines of traditional class work. In order to do this it must be based on authentic and complex tasks that challenge students and help them to think critically while simultaneously introducing students to content and ways of learning that can influence them.

The schools in this study, however, made only irregular and infrequent use of these possibilities. Most the content was prescriptive, focused on recall, and reduced to digital textbooks. Students who have been disconnected from schooling and who fail to identify with both normative behaviors and curriculum that pervade schools cannot be expected to engage just because that same content is now available online.

It may be too much to expect textbook companies to envision how education can be transformed by these technological developments—after all they have been unable to design content for bricks and mortars schools any better (Sleeter & Grant; 2010, Stern & Roseman, 2004). We cannot rely on the same systems for school and pedagogical developments unless we want to replicate what is already available in bricks and mortar classrooms that students are choosing not to attend. The advantages of technology will continue to be squandered.

One important function of technological progress is enhanced capabilities for communication. Whereas students had been limited in their communication by their school buildings and neighborhoods, technology provides capabilities to engage in communication with a wide audience. Students can create or join communities of interest

that are local, regional, statewide, national or international. They are not limited to linear telephone conversations, but can converse in myriad ways by working in interactive learning environments, playing games that provide and require extensive feedback, using publication websites that make available an authentic audience for various projects (Collins & Halverson, 2009). Technology can allow students to participate in conversations that can be stimulating in spaces that can develop into supportive communities.

However, as Foley and Ferri caution: "...although technology is typically associated with access and integration, technology can also isolate people, creating unique forms of social exclusion" (2012). Isolation can occur because students are literally working alone in homes across the state with few opportunities to interact with peers or even teachers. It can occur because some communication designs "privileges particular ways of being, which are grounded in normative, social, culture and economic practices, further reified in the design, manufacture, marketing and implementation of technology" (Foley & Ferri, 2012). For example, researchers found that normative behaviors can increase the interactivity of an online community or cause people to stop participating. These behaviors include repetitive messages, language use, message length, frequency and timing of communication, proper ways to welcome participants, context clues to make up for lack of social cues (Ren, Harper, Drenner, et al, 2012). This means that communities determine what normative behaviors are and then pressure participants to ensure compliance. When people, knowingly or unknowingly, do not communicate within established rules, the moderators can deny their comments and/or their access. In this way, online schools can also design communication outlets to require normative

behaviors that, if unknown or unaccepted by under-served students, can reduce their ability or desire to participate. Researchers Alim and Baugh note that there is a mismatch between the ways that black students speak at home, in their communities and with peers and what is expected of them in school. And, more importantly, this mismatch "...is one cause of schools' failure to reach these pupils" (2007). In other words, students can feel isolated if the design of the communication options makes assumptions about what is normative, like spelling, sentence structure, vocabulary and slang, and limits students to only one way of speaking or interacting. In an environment that is dependent on text for communication, and language variance is made obvious, it can be easy to be or feel excluded.

Each of the schools in this study encourages some interaction with students, but most do not value inclusive communication that requires students to interact in cognitively challenging ways specific to the potential that technology affords. It is ironic that Blended V.S. has made the greatest strides in communicating technologically given that all of their students attend school together in a building. Given the general lack of experience establishing communities of practice and other more engaging virtual space, it makes sense that a class that is already working as a community would initiate taking that community online. Curriculum in online schools can be integral to engaging students in forms of communication that not only enhances their education but also prepares them for advancements already occurring in the world around them. By limiting students to working in isolation or with minimal contact, schools risk alienating students and contributing to their missed opportunities.

*Fair Systems*

The blended models in this study provide many more options for supporting students, even while their effectiveness is relative and depends on a variety of factors. Technology does afford options for scaffolding, however, with students who have not been engaged in traditional schools or permitted and expected to manage their own learning, blended options may be requisite.

Online learning can also influence community building, safe reflective spaces and just in time scaffolding. All of the schools that include a face-to-face option in their design dedicate significant time and attention to building community, however, little is done *online* to develop this same kind of community. Tools are available to promote community and reflection online and research supports and encourages the development of these spaces for quality learning, yet schools do not appear to value the potential and little is being done to realize it.

Just in time scaffolding is particularly suited for online learning because it allows for individualization in ways that are difficult in a traditional classroom where having more than 30 students working on different stages or with different assignments is harder to manage. Students can tackle introductions to content on their own and then receive tutoring, enrichment and more complexity from teachers and peers.

Each school in this study has developed a design that includes some aspect of a flipped classroom and offers limited just in time scaffolding. Rather than use class time for introduction to topics and independent time for practice, online content provides an introduction and time with a teacher is spent on clarifying and tutoring. Still, an important result of flipping instruction is that time is freed for increased depth and complexity.

Technology should not only allow students to get help understanding prescriptive course content better, but it should allow teachers to enrich content and expand problems for students. This more sophisticated expectation of scaffolding and flipping is inconsistent in the schools that have teachers trying it and it is absent in the other schools.

### *Excellent Teaching*

For the purposes of this study excellent teaching is defined by the specific ways that advocates say that technology can assist teachers as they: reduce boredom for their students; facilitate collaborative knowledge building; promote sophisticated problem-solving and develop expectations that their students will develop new tech skills. In online learning these components are intertwined with curriculum because instruction is embedded in the curriculum and the effect of teachers varies according to the design of the school. For example, in fully online schools it is possible for a student who is completing assignments to rarely have contact with his/her teacher. On the other hand, in schools that mandate face-to-face time, teachers can play a significant role in each of these components whether because they supplement content or because they create it.

Thus if the content that vendors create simply recreates textbooks, even with some interactive additions, the potential of these important components cannot be realized unless teachers make enhancements. In some of the schools teachers did make an effort to include aspects of these components, but this varied and was not a priority. As with other examples throughout the study, even when technology is perfectly suited to transform learning from a primarily passive endeavor into an interesting, collaborative and challenging one, schools fall short of delivering on this potential.

### *Cultural Responsiveness*

Scholar Lisa Delpit recounts the following story: "...I asked another group of students to tell me about their teachers. They started telling me about Mr. Stieber and how great he was. I asked if Mr. Stieber was black or white. Well, they said, he's really black, but he looks white. One student said, to chuckles and general agreement, 'He's white on the outside and black on the inside – he's a reverse Oreo!' They continued with all kinds of accolades: 'He's cool.' 'He's great.' 'He's real.'" (p.117, 2012).

Being culturally responsive is not dictated by one's skin color. It does not require teachers to take on the appearance of their students i.e. *act black*. It does mean that educators must be honest and respectful; they must be concerned with their students' assets; they must learn about and engage with curriculum that includes the contributions of minority people and they must be willing to honestly examine school policies and their own role in these policies in order to help shape what gets taught. This is as true for online educators as it is for teachers in traditional schools.

### ***Policy Implications***

#### *Transparency*

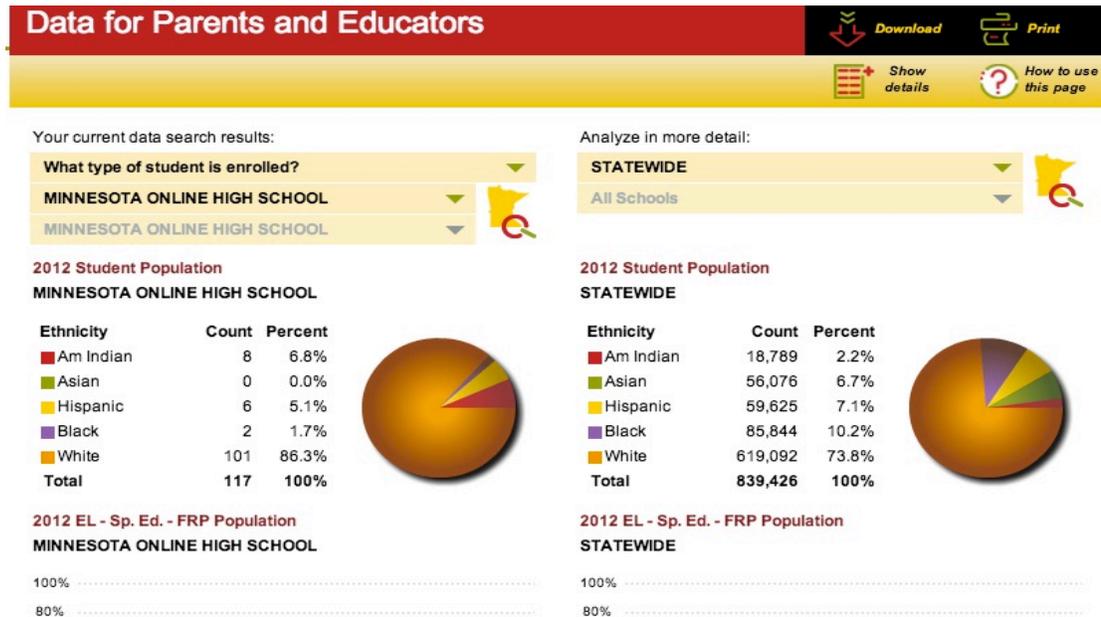
As with traditional schools, state policies shape, expand and limit the potential of online schools. States determine whether to fund fully online schools or only supplemental programs; they determine funding formulas, oversight and the level of transparency that will be required. Some states have discouraged or prohibited for-profits from shaping the nature of online learning and other states have welcomed them. Florida opted to fund one state online school to provide nearly all of the online options for the state and beyond. Other states have permitted dozens of schools to open and vie for students. Decisions about how to govern online schools have been influenced by various independent

organizations like iNACOL and The Walton Family Foundation as well as state agencies that have been created to audit, research and provide direction. I make several policy implications based on the results of this study.

The process of compiling state data on fulltime online programs for this study was arduous in part because there is little consistency in how information is collected, what information is collected and how it is distributed for use. Some states require all online schools to enter enrollment data in one state maintained database. Other states do not collect data from online schools; they refer these schools to other agencies that are not required to submit to the state. Still other states only allow districts to provide online options and these data are combined with other district data making it impossible to determine how many students are attending the online schools and how many are in the traditional school.

Furthermore, state websites vary widely in user-friendliness. Minnesota's website is easy to navigate and all the information pertaining to online schools is centrally located, intuitive and effortless to find. Reports are provided graphically and include all information relative to student enrollment available in one place. See figure 3 *Minnesota*

Figure 3 – Minnesota Example



On the other hand, some states include information in one location, but it is presented as downloadable spreadsheets that include all of the state's hundreds of districts. In one state I was referred to the spreadsheets, but it took separate requests before I was given the school identification numbers for all of the online schools – information that I would not have been able to collect on my own. Once I had those I had to search through complex spreadsheets to find the data. It was cumbersome and required creating smaller versions of the original spreadsheets so that I could make sense of data that spread across thousands of fields. As a researcher I am accustomed to working with spreadsheets and was able to eventually find what I needed, however, it is unlikely that parents would be able to navigate these data. In other states, demographic data were located in separate places i.e. race and ethnicity in one place and special needs designations in other places and still free and reduced lunch had to be obtained through special request. In some states I had to fill out data request forms in order to secure all of

the data I needed. While this is a common procedure for some kinds of data, the data that I sought is readily available for traditional schools. The additional steps proved time consuming sometimes taking months. In Michigan the process was so cumbersome that I had to ask for instructions and later tech support and was still unable to obtain the correct information for all the schools. None of the enrollment data was readily available at the website and I was sent a link to the database only after emailing various state employees.

The federal government has taken the lead in creating policies that require states to build capacity in their districts to enact data-driven accountability measures and report those back to the state for public release. These policies have demanded that both districts and states improve their data systems. It is in the interest of policy makers that states also accurately obtain and report enrollment data from their online schools, programs and course providers. Now that states are closer to having searchable data management systems that can collect myriad data it is time for the federal government to mandate that these more complete data be collected, especially since the federal government is spending millions of dollars to fund the expansion of online learning.

Also while states have unique website needs, there should be minimum standards for accessibility and clarity. Parents and educators rely on department of education websites for information about their schools, surrounding districts, learning standards and general state-level announcements. If data about virtual schools are missing or difficult to locate, there is little accountability to parents and relevant stakeholders. When parents are seeking information about schooling options for their children, comparisons between virtual schools can be nearly impossible without clear and easy to navigate websites. But, there are many good examples for states to emulate and criteria should be

straightforward. Federal government intervention may not be warranted here; the Council of Chief State School Officers may be sufficient to rally an effort to improve state websites.

In addition to facilitating the collection of enrollment and other data from online schools, policy makers need to be concerned with the lack of transparency that for-profit online schools, or schools managed by for-profit companies, garner. It was my intention to include the southeast region in this study, however, I was unable to secure participation from any school in the southeast states that have online schools, even after completing many lengthy required proposals and waiting two-four months for a response. I asked a board member of a prominent national online school about this and she said candidly stated that my topic was controversial and online schools are being publicly contested, so it was not in the interest of the schools to give me access to their programs.

In traditional schools it is possible for visitors to walk into the school's office, request a tour and ask to see textbooks. Budgets and other financial reports are available online and many meetings are open to the public. In fact, local newspapers and television stations regularly attend board meetings and report administrative decisions and changes in school practices. In an online school, it is not possible for visitors to drop in or even to request access to teachers or curriculum. It is even difficult for potential students to "see" the school before enrolling and even once enrolled curriculum is often proprietary and students must sign statements that they will not disclose it.

Policy makers need to ensure that all schools collecting public funds follow the same rules for transparency, including the for-profit management companies that are currently able to avoid public scrutiny. Traditional public schools are required to make

their budgets, including staff salaries, open to the public. For-profit management companies on the other hand are private and are not required to publicize these data. In addition to making it difficult to ascertain exact development and operations costs for legislators, parents and stakeholders cannot determine whether online schools are being wise or efficient with tax dollars.

### *Funding*

States vary in how they fund their online schools. Most states use a per pupil formula that is often the same as that of traditional schools. There are a few questions that state policy makers ought to ask: Given that resources and funding are limited, should states fund school options that are simply alternatives for students who are already successful in traditional school options? Alternatively, if some online schools provide myriad costly resources and support for large numbers of under-served students, should their funding formulas be the same as that of schools that mostly enroll students who are independent, have strong family support and do not need costly support systems?

Enrollment is also directly connected to funding, therefore states should be more concerned with how online schools appear selective in how they enroll students?

According to superintendents interviewed for this study, traditional schools sometimes use online schools to place students who are less likely to pass state exams, and some online schools establish enrollment criteria that make it impossible for some students to attend. Both extremes – either using online schools as harbors for students who are not successful in traditional schools or creating online schools that only successful and independent students can attend – have funding, ethical and design implications.

Another aspect of funding that is of concern in some states pertains to the way that attendance is calculated by the state and the potential negative incentive this creates. In some states attendance is determined strictly by student login; that is, students are considered active if they log into the school web site, regardless of whether they complete any assignments, take any tests or participate in any other way. This creates a negative incentive for schools to maintain students who do not participate or engage. Online school administrators who support current laws often state that traditional schools also receive funding for students who do not participate. However, legislators need to decide if they agree that students who wake up, dress, travel to school and sit in classrooms require the same resources as those who log into school and log back out. In order for states to make sound decisions about student participation, however, they will need to determine what measures they will require of online schools beyond student logins. Florida, for example, only receives funding for students who pass their courses and in other states students cannot dip below a specified percent of completion.

Lastly, states should be able to define the role of charter school authorizers in order to garner support for accountability measures. Some states do hold authorizers responsible for specific components of the online schools they endorse. Ohio authorizers must moderate and evaluate the schools they approve, however, there is room for improvement in the ways authorizers are held accountable for the online schools from which they receive payment.

### *Supports*

Educating students online requires professional development beyond traditional teacher preparation. Some states currently require online teachers to obtain additional

certification. One possible approach is to require teachers to complete additional coursework and an internship or practicum as basic preparation to teach online. These additional programs must go beyond simply orienting teachers to using specific software, which is a common preparation in many online schools.

In order for resources, designs and teaching to benefit from the advantages that technology has to offer, educators must be made aware and develop fluency with technological tools and pedagogical stances that allow for its integration. Some teachers have personal interests that foster their expertise with technology, but these random examples cannot be the way that online schools develop. Furthermore, it is not enough to simply instruct teachers on the mechanics of tech tools, teachers need to understand why and how their use is requisite to maximizing the potential of online learning.

Finally, most of the supports offered by the schools in this study are face-to-face in nature. While there are many online options and a need to expand these options for students, it may be that under-served students need a blended model of online learning. The fully online models or components of models simply could not provide sufficient assistance to students who needed more than content tutoring.

### ***Additional Research***

Empirical studies examining the effects of virtual schooling on student learning are needed. Studies specifically designed to show the impact of different models of online learning and different kinds of supports for groups of under-served students are critical. And a better understanding of the students enrolled in online schools is a key to understanding what kinds of supports these students may need.

In addition, understanding, measuring and educating about the ways students are conceptualized is critical. Cultural relevancy has been discussed for decades, but how

culturally responsive leadership, teaching and pedagogy should or can work in an online environment is still not well understood.

At the same time, access to requisite information will be fundamental to research studies and that data is currently difficult to acquire. This is partly because states vary in their ability to collect sufficient data and partly because providers are left to determine access at their discretion. In order for future studies to answer these questions policymakers will need to advocate for transparency in these public schools.

It appears that in an effort to focus on content needed for state test preparation, purchased curricula have become narrow and reductive. Additional research is necessary to confirm this. Access to public school curriculum will be required, but as I have stated, in the current environment, access is often difficult to obtain because private management companies claim proprietary rights that public schools cannot and do not make their curriculum readily available. State intervention may be necessary.

Finally, the Institutional Review Board (IRB) Process that inadvertently contributes to the lack of information available about online schools. There is a general lack of understanding about these schools and what kind of policies and procedures should be in place. Some of the initial expectations for observing online classes were impossible to meet, such as requiring consent from all parents and students who could potentially attend an online class. The number of students who are able to attend an online class may be many times that of those who actually do attend and traditional classroom observation protocol is not obligated to meet these requirements.

The on-going excitement over online and blended learning is unlikely to abate (Cuban, 2013). There is a convergence of interests within political, economic and social

spheres to use technology to address student achievement, especially for under-served students. Online learning has certainly evolved since it began with dial-up technology decades ago. The schools in this study are quite different now from the ways they began just a few years ago. Schools have made changes in governance, curriculum, enrollment and teaching strategies. And they continue to evolve. Many of the individuals involved with online learning are innovative and they continue pushing their schools forward. Yet, if online learning is to develop in ways that advocates proclaim it can, then decision-makers will need to insist that evidence be produced to support its expansion and educators will need to be trained to use it effectively. Short of this, online learning remains just a long list of possibilities.

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## Appendix A

### Supporting Low Performing Students in Virtual Schools Interview Protocol – Leaders

Time of Interview:                      Date:                      Place:                      Interviewer:  
Interviewee:                      Position of Interviewee:

#### Context -

1. Can you tell me a little about your school – when it started, who started it and why, how it is managed?
2. Do you have students enrolled that you consider at-risk? What do you mean by at-risk?

#### Resources -

1. Can you tell me about the courses that you offer at-risk students? Is there a particular sequence of courses that at-risk students generally take?
2. What else does your school provide these students?
3. How do you market to students? How would an at-risk student typically hear about your school?

#### Systems --

4. In what ways do at-risk students at your school collaborate? Interact?
5. How do you prepare at-risk students to learn online?
6. What do parents/students tell you about they are enrolling and the barriers they faced in traditional schools?
7. In what ways do you address those?

#### Teachers --

8. How do you recruit teachers? What do you look for in teachers who will teach your at-risk students?
9. Research states that teachers matter in the success of all students, but especially at-risk students. In what ways do your teachers impact the learning and success of at-risk students enrolled your school?

Cultural Relevancy --

10. We know that students at-risk of not being successful in traditional schools often are disengaged from the school process and community. In what ways does your school engage students?
11. Some people argue that technology allows students to learn in an environment where race, ethnic background, socioeconomic status are irrelevant. Others disagree and argue that these personal characteristics are always visible. In what ways does your school address diversity?

Supporting Low Performing Students in Virtual Schools  
Interview Protocol – Teachers

Time of Interview:                      Date:                      Place:                      Interviewer:  
Interviewee:                      Position of Interviewee:

Context -

1. Can you tell me a little about your background – how long have you been teaching? In what settings have you previously taught? What is your experience teaching at-risk students?
2. How long have you been teaching at this school? How did you hear about this school and what made you want to teach here?
3. How many students are enrolled in your class(es)? How many of these students are regularly logging in and completing assigned work?

Resources -

1. Can you tell me about the resources that are available in your class/school to support your at-risk students? How do students learn about these?
2. Do you personally provide other resources/supports besides those provided by the school?
3. Advocates of on-line schools often cite the ability to meet individual needs as one of its greatest assets. In what ways do you meet the individual needs of your at-risk students? In what ways does the school?

Systems --

1. In what ways do the at-risk students in your class collaborate? Interact?
2. How do you prepare at-risk students to learn online?
3. How do you engage parents as a support?
4. In what ways do you build community within your class?
5. In what ways do you provide feedback to your at-risk students? How often do your at-risk students receive feedback?

Teachers --

1. How do you get to know your students? Does knowing them impact their achievement? If so, how? If not, why not?

2. Research states that teachers matter in the success of all students, but especially at-risk students. In what ways do you impact the learning and success of at-risk students enrolled your class(es)? Are there things that get in your way of being able to do that?

Cultural Relevancy --

1. We know that students at-risk of not being successful in traditional schools often are disengaged from the school process and community. In what ways do you engage students? How are these ways different from the ways traditional schools have sought to engage students?
2. Are students' ethnic, racial and socioeconomic backgrounds relevant to your instructional practices? If so, in what ways?
3. Do you participate in out-of-school activities that support your at-risk students or their communities? If so, which ones? How do these support your students?
4. Some people argue that technology allows students to learn in an environment where race, ethnic background, socioeconomic status are irrelevant. Others disagree and argue that these personal characteristics are always visible. Do you address diversity? If so, in what ways?

Supporting Low Performing Students in Virtual Schools  
Interview Protocol – Students

Time of Interview:                      Date:                      Place:                      Interviewer:  
Interviewee:                      Position of Interviewee:

Context -

3. Can you tell me a little about your background – how long have you been a student at this school? Where did you attend school before? Why did you want to make a change?
4. How did you hear about this school and what made you want to attend?
5. Do you intend to graduate from this school or are you here for a shorter period of time?

Resources -

13. Can you tell me about the resources that are available in you in your class/school that provide support for you as a student? How do students learn about these?
14. Do your teachers sometimes personally provide other resources/supports besides those provided by the school?
15. Advocates of on-line schools often cite the ability to meet individual needs as one of its greatest assets. In what ways do your teachers or school staff meet your individual needs? In what ways does the school?

Systems --

16. In what ways do the students in your class collaborate? Interact?
17. How were you prepared to learn online?
18. How does the school or your teacher assist your parent(s) or guardian in supporting you?
19. In what ways does your teacher build community within your class?
20. In what ways do your teacher provide feedback to you? How do you know how you are doing in class and with your work? How often does your teacher provide feedback?

Teachers --

21. How do your teachers get to know you? Does this make a difference in how you have been doing in school? If so, how? If not, why not?

22. Research states that teachers matter in the success of all students. In what ways do your teachers impact your learning and success? Are there things that get in the way of being them able to do that?

Cultural Relevancy --

23. We know that students at-risk of not being successful in traditional schools often are disengaged from the school process and community. In what ways do your teachers engage students? How are these ways different from the ways your previous schools have tried to engage students? Are these ways important to you?
24. Are students' ethnic, racial and socioeconomic backgrounds relevant in your classes? If so, in what ways? Are these important to you as a student?
25. Is it important to you that your teachers or school staff participate in out of school activities in your community? Is it important to you that your teachers know your community?
26. Some people argue that technology allows students to learn in an environment where race, ethnic background, socioeconomic status are irrelevant. Others disagree and argue that these personal characteristics are always visible. How is diversity addressed in your school? Are these ways important to you?

## Classroom Observation Protocol Themes

### Resources:

- What kinds of resources are available to at-risk students (are these generally available)?
- How do students find out about these? Do they take advantage of them? In what ways?
- Is content differentiated? Is this done technologically or do instructional practices permit for individualization?

### Classroom Systems:

- In what ways do students collaborate or interact?
- Are there support systems developed in the classroom?
- Is there community building in the classroom?
- How and how often do students receive feedback?

### Teachers:

- In what ways do teachers interact with students?
- Do they appear to know their students well? How is this evident?
- Do teachers address diversity? In what ways?

### Cultural Relevancy:

- In what ways do students demonstrate engagement?
- Are ethnic, racial or socioeconomic topics addressed in class? In what ways?
- Does the teacher make content culturally relevant? In what ways?

## Observation Protocol for taking Notes

School:  
Teacher:  
Date:

Subject:  
Number of Students: M\_\_ F\_\_  
Grade:

<i>Theme</i>	<i>Description</i>	<i>Reflection</i>
<b>Resources</b>		
Technical?		
Access to experiences?		
How are resources used?		
<b>Systems</b>		
Student interaction?		
Classroom supports?		
Classroom Community building?		
<b>Teachers</b>		
Rewards/praises students?		
Feedback provided?		
Individualization of instruction?		
Discipline?		
Examples of		
<b>Cultural Relevancy</b>		
Evidence of engagement?		
Culturally relevant pedagogy?		
Is diversity addressed?		
Is content culturally relevant?		

## Appendix B

## Online Schools by State

*Alabama –no full-time option**Alaska*

## Percent of students in each group

SCHOOL	Total enrollment	White	Black	AK Native	Asia	Multi	P. Isle	Native	Hispanic	Free Reduced Lunch	Special Needs
The Delta School Alaska Virtual Academy K-8	61	39.00	6.50	14.70	5.00	13.00	5.00	0	3.00	13.00	
State of Alaska	129,047	53.0	3.00	23.00	8.00	7.00	w/A	w/Asia n	6.00	43.60	13.80

*Arizona – no response for data**Arkansas*

## Percent of students in each group

SCHOOL	Total enrollment	White	Black	Multi	Asian	Native	Hispanic	Free Reduced Lunch	Special Needs
Arkansas Virtual Academy K-8	500	86.20	7.80	7.80	0.00	1.00	3.80	0.00	10.20
State of Arkansas Data	468,066	65.00	21.30	2.00	1.00	0.07	9.00	60.00	n/a

*California – unable to acquire at this date*

*Colorado*

SCHOOL	Percent of students in each group						Free	Special
	Total enrollment	White	Black	Asian	Native	Hispanic	Reduced Lunch	Needs
Academy Online HS	32.00	72.73	0.00	9.09	9.09	9.09	27.00	9.09
Edison Academy	73.00	83.33	0.00	0.00	0.00	16.67	0.00	12.50
Achieve K12	193.00	81.25	0.00	0.00	2.08	16.67	14.00	2.08
GOAL Boulder	2188.00	44.72	4.88	1.63	1.63	47.15	77.00	10.57
Universal Hope Online Learning	125.00	80.00	0.80	3.20	0.00	12.80	13.00	<=16.00
Branson School Online	2851.00	25.20	23.26	n/a	1.40	47.19	53.21	7.62
Insight School of CO	391.00	84.44	1.56	n/a	0.78	13.23	16.00	1.95
CO Calvert Academy	1527.00	75.26	4.74	0.53	4.74	14.74	5.00	6.27
Jeffco's 21 <sup>st</sup> Century CO Connection	180.00	76.70	2.70	3.30	0.00	13.30	n/a	8.50
Kaplan Academy of CO	230.00	100.00	0.00	0.00	0.00	0.00	9.00	<=16.00
CO Virtual Academy	1372.00	80.68	5.61	0.65	1.57	11.49	43.00	9.14
Karvel Online Education	298.00	75.51	6.12	1.02	1.02	16.33	n/a	n/a
College Pathways Monte Vista Online	5013.00	82.73	3.18	1.50	1.87	10.46	23.00	10.35
Crowley County Online	168.00	86.96	2.61	0.00	2.61	7.83	32.00	8.60
PSD Global Online	424.00	86.00	1.10	0.90	0.90	6.80	4.00	<=16.00
DPS Online HS	110.00	63.93	0.00	0.00	0.00	36.07	33.00	<=16.00
Provost Online Academy	229.00	67.79	1.34	0.67	2.68	27.52	51.00	<=16.00
eDCSD	170.00	92.86	0.00	0.00	0.00	7.14	39.00	<=16.00
Vilas Online	97.00	40.63	25.00	0.00	3.13	31.25	29.00	<=16.00
Falcon Virtual	391.00	59.30	8.70	1.20	0.50	27.60	40.00	13.90
	233.00	86.41	2.91	4.85	0.97	4.85	10.00	<=16.00
	229.00	67.79	1.34	0.67	2.68	27.52	51.00	8.05
	362.00	76.50	1.90	2.40	0.80	12.70	5.00	13.40

Academy								
S. W. CO								
eSchool	51.00	64.70	0.00	0.00	15.60	17.6	0.00	<=16.00
Thompson Online	34.00	70.60	0.00	0.00	0.00	14.70	32.00	<=16.00
<i>State of Colorado</i>								
<i>State of Colorado Data</i>	854,265	56.00	4.80	3.10	0.80	31.90	40.30	n/a

**Connecticut – no full-time options**

**Delaware – no full-time options**

**Florida**

**Percent of students in each group**

SCHOOL	Total enrollment	White	Black	Asian	Native	Hispanic	Free Reduced Lunch	Special Needs
FLVS – K-8								
FLVS - HS								
Virtual Charter School								

*State of Florida Data*

**Georgia**

**Percent of students in each group**

SCHOOL	Total enrollment	White	Black	Asian	Multi	Native	Hispanic	Free Reduced Lunch	Special Needs
GA Cyber Academy		64.00	31.00	3.00	0.00	1.00	1.00	57.00	8.30
GA Connections Academy									
Gwinnett County Online Campus									
<i>State of Georgia Data</i>	1,673,740	44.00	37.00	3.00	3.00	0.00	12.00	57.00	10.40

***Hawaii*****Percent of students in each group**

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Black</b>	<b>Asian</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Lunch</b>	<b>Special Needs</b>
Myron B. Thompson Academy Hawaii Tech Academy								

*State of Hawaii  
Data*

***Idaho*****Percent of students in each group**

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Black</b>	<b>Multi</b>	<b>Asian</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Lunch</b>	<b>Special Needs</b>
Idaho Virtual Academy INSPIRE Connections iSucceed Virtual HS Richard McKenna Charter Another Choice VS Idaho Connects Kootenai Bridge Academy	2965.00 745.00 888.00 358.00 110.00 298.00 202.00	92.59 86.70 84.50 84.50 67.80 90.50 78.01	1.00 1.00 1.89 0.00 0.00 0.73 1.02	0.00 3.49 0.00 3.96 2.17 0.00 2.15	1.00 1.00 0.00 0.00 0.00 0.00 0.86	1.25 2.02 3.02 0.99 0.00 4.38 1.29	4.11 6.31 10.20 10.20 29.60 3.65 4.30	65.70 52.20 38.60 n/a 68.30 0.00 55.80	9.50 7.80 5.00 2.80 48.10 3.40 5.90

*State of Idaho  
Data*

281,590.00 78.01 1.02 1.66 1.32 1.34 16.25 ~47.70 10.00

**Illinois****Percent of students in each group**

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Black</b>	<b>Multi</b>	<b>Asian</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>
Chicago Virtual Charter School	590.00	16.20	50.80	9.80	6.60	0.10	15.40	61.00	8.20
Voise Academy	413.00	0.00	97.00	1.00	0.00	0.00	2.20	92.00	21.00
Youth Connections Charter School	~150.00	1.50	69.90	0.50	n/a	0.20	27.80	89.30	15.80
<i>State of Illinois Data</i>	<i>2 mil</i>	<i>51.00</i>	<i>18.00</i>	<i>2.80</i>	<i>4.10</i>	<i>0.30</i>	<i>23.00</i>	<i>48.00</i>	<i>14.00</i>
<i>Chicago Profile</i>	<i>403,770.00</i>	<i>9.00</i>	<i>43.00</i>	<i>1.20</i>	<i>3.20</i>	<i>0.40</i>	<i>44.00</i>	<i>86.00</i>	<i>13.10</i>

**Indiana****Percent of students in each group**

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Black</b>	<b>Multi</b>	<b>Asian</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>
Hoosiers Academies Virtual School	1853.00	81.90	9.90	4.20	0.80	0.20	3.00	25.70	14.00
Indiana Connections Academy	1675.00	82.00	6.50	4.50	0.70	0.04	5.80	53.30	11.90
<i>State of Indiana Data</i>	<i>1,120,563.00</i>	<i>72.50</i>	<i>12.20</i>	<i>4.30</i>	<i>1.70</i>	<i>0.30</i>	<i>8.90</i>	<i>48.20</i>	<i>14.60</i>

**Iowa -no full-time options**

**Kansas****Percent of students in each group**

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Black</b>	<b>Other</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>
Kansas Connections Academy	462.00	75.54	5.41	8.66	10.39	0.00	13.66
Insight School of Kansas	754.00	77.59	10.08	6.76	5.57	0.00	3.72
Learning <sup>2</sup> eSchool of Wichita	481.00	56.55	13.10	13.31	17.05	0.00	0.21
Pleasant View Academy High School	62.00	96.77	1.61	0.00	1.62	12.90	8.06
Pleasant View Academy Grade School	54.00	96.30	3.70	0.00	0.00	37.04	5.56
Heartland Virtual Academy	58.00	91.38	3.45	3.45	1.72	0.00	1.72
Andover eCademy	290.00	79.66	4.83	5.52	10.00	0.00	7.24
Smokey Valley Virtual Charter School	81.00	85.19	6.175	4.94	3.70	0.00	2.47
21 <sup>st</sup> Century Learning Academy Kiowa County	258.00	75.58	3.10	3.88	17.44	0.00	0.00
Academy You	32.00	65.63	9.38	15.63	9.38	0.00	0.00
Leavenworth Virtual School	112.00	75.89	3.57	11.61	8.93	0.00	0.00
Lawrence Charter Virtual School	1100.00	82.55	3.82	7.91	5.73	0.00	5.18
Lawrence Virtual High School	244.00	80.33	3.28	9.43	6.97	0.00	9.84
<i>State of Kansas</i>	<i>477,857.00</i>	<i>67.40</i>	<i>7.29</i>	<i>8.17</i>	<i>17.14</i>	<i>48.77</i>	<i>13.66<sup>^</sup></i>

**Kentucky - no full-time options****Louisiana****Percent of students in each group**

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Black</b>	<b>Multi</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>	<b>At-Risk</b>
LA Virtual	1246.00	81.20	15.70	0.00	1.00	1.40	n/a	n/a	48.31

Academy

LA

Connections

Academy	597.00	74.70	15.40	4.30	0.00	3.60	n/a	n/a	53.27
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*State of*

*Louisiana*

<i>Data</i>	703,390.00	47.80			52.20	non white	67.20	15.49	n/a
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***Maine - no full-time options***

***Maryland - no full-time options***

***Massachusetts***

**Percent of students in each group**

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Black</b>	<b>Multi</b>	<b>Native</b>	<b>Asian</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>
Massachusetts Virtual Academy	484.00	75.20	10.10	3.30	0.60	1.70	9.10	0.00	0.20

***State of***

***Massachusetts***

<i>Data</i>	93,369.00	67.00	8.30	2.55	0.20	5.70	16.10	35.20	17.00
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***Michigan – unable to obtain data***



**Minnesota**

**Virtual Academy  
(MNVA)**

1787.00 89.60 1.10 4.20 1.50 3.60 18.50 11.10

**STATE OF  
MINNESOTA**

*State of Minnesota*

*Data* 839,426.00 73.80 6.70 10.00 2.20 7.15 37.20 14.90

*Mississippi - no full-time options*

*Missouri - no full-time options*

*Montana - no full-time options*

*Nebraska - no full-time options*

**Nevada**

SCHOOL	Percent of students in each group								Free Reduce Lunch	Specia l Needs
	Total enrollmen t	Whit e	Blac k	Asia n	P. Isle i	Mult i	Nativ e	Hispani c		
Clark County School District					1.4					
Virtual H.S.	148.00	49.30	9.50	8.10	0	8.10	0.00	23.60	26.40	n/a
Silver State Charter H.S.	431.00	74.70	0.70	0.50	0	3.20	3.20	17.40	n/a	3.00
Odyssey Charter Middle/Ele m School	571.00	48.90	12.30	2.80	1.2	0	10.30	0.50	24.00	n/a 15.00
Odyssey Charter H.S.	1006.00	53.80	6.80	1.90	0.6	0	6.80	0.80	29.40	n/a 13.70
Nevada Connections Academy	1752.00	62.60	6.80	2.50	1.0	0	11.30	0.90	15.00	26.42 2.70
Nevada Virtual Academy	3573.00	68.20	12.30	3.80	2.1	0	0.00	1.70	11.90	20.90 3.70
Beacon Academy of Nevada Renaissance	651.00 closed	48.10	12.60	2.80	1.8	0	4.30	0.60	29.80	n/a 12.70

## Academy

<i>State of Nevada Data</i>	439,277.0				5.3					
	0	37.40	5.60	1.30	0	9.60	1.10	39.60	51.60	10.80

*New Hampshire*

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Multi</b>	<b>Asian</b>	<b>Black</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>
Great Bay eLearning Charter School high school	119.00	95.00	2.50	0.80	0.00	0.00	1.70	27.21	
Great Bay eLearning Charter School middle school	17.00	88.20	11.80	0.00	0.00	0.00	0.00	27.21	
Virtual Learning Academy HS	63.00	93.70	0.00	0.00	1.60	1.60	3.20	0.00	
<i>State of New Hampshire</i>	190,805.00	89.00	1.90	2.90	1.90	0.30	3.90	25.70	

*New Jersey - no full-time options**New Mexico - no full-time options**New York - no full-time options**North Carolina - no full-time options**North Dakota - no full-time options*



Digital Acad. Newark Digital Acad. OH Connections	287.00	90.30	0.00	4.90	4.10	0.00	0.00	56.80	14.90
Acad. Ohio Virtual Academy Quaker Digital Acad. SW Licking Digital Trece Digital Academy VCS Of Ohio W. C. Learning Acad.	2676.00	80.40	0.60	4.30	10.80	0.40	3.50	54.10	9.70
	9474.00	79.90	3.60	2.00	10.50	0.50	3.40	55.30	11.40
	459.00	91.00	0.00	3.80	3.30	0.00	0.00	62.00	9.60
	33.00	70.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2093.00	80.30	0.00	5.70	8.20	0.00	5.00	72.40	19.10
	1339.00	75.90	0.00	4.70	16.00	0.00	2.80	79.20	15.80
	125.00	85.20	0.00	0.00	0.00	0.00	0.00	65.40	8.50
<b><i>State of Ohio</i></b>	<b><i>1,749,248.00</i></b>	<b><i>74.00</i></b>	<b><i>1.70</i></b>	<b><i>4.20</i></b>	<b><i>16.50</i></b>	<b><i>0.10</i></b>	<b><i>3.50</i></b>	<b><i>45.10</i></b>	<b><i>14.80</i></b>

***Oklahoma***

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Asian</b>	<b>Multi</b>	<b>Black</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>
Oklahoma Virtual High School Oklahoma Virtual Academy Oklahoma Connections Academy									
<b><i>State of Oklahoma Data</i></b>	<b><i>666,150.00</i></b>	<b><i>53.00</i></b>	<b><i>2.00</i></b>	<b><i>5.00</i></b>	<b><i>10.00</i></b>	<b><i>17.00</i></b>	<b><i>13.00</i></b>		

*Oregon***Percent of students in each group**

<b>School</b>	<b>Total enrollment</b>	<b>White</b>	<b>Asian</b>	<b>Multi</b>	<b>Black</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>
Oregon Connections Academy	2857.00	80.60	1.80	6.30	1.30	1.90	8.20		
Oregon Virtual Academy	1333.00	86.00	2.30	1.60	1.70	3.20	5.40		
Baker Web Academy	259.00	88.80	1.20	2.70	0.00	0.08	6.60		
Clackamas Web Academy	450.00	84.20	3.60	2.40	0.40	1.60	7.80		
Estacada Web Academy	315.00	79.70	1.30	2.20	1.30	1.30	14.60		
Gresham-Barlow Web Academy	217.00	87.6	0.00	3.20	1.40	0.90	6.90		
Insight School of Oregon	n/a								
ORVED - East	n/a								
ORVED-west	n/a								
Paisley Charter School	n/a								
Sheridan AllPrep Academy	91.00	82.40	1.10	4.40	1.10	0.00	11.00		
Silvies River Web Academy	54.00	83.30	1.90	11.10	0.00	0.00	3.70		
<i>State of Oregon Data</i>	<i>561,328.00</i>	<i>66.31</i>	<i>4.64</i>	<i>4.10</i>	<i>2.60</i>	<i>1.85</i>	<i>20.51</i>	<i>49.92</i>	<i>13.20</i>

***Pennsylvania***

<b>School</b>	<b>Percent of students in each group</b>							<b>Free Reduced Lunch</b>	<b>Special Needs</b>
	<b>Total enrollment</b>	<b>White</b>	<b>Asian</b>	<b>Mult Racial</b>	<b>Black</b>	<b>Native American</b>	<b>Hispanic</b>		
21st Century Cyber CS Frontier Virtual Charter High School Pennsylvania Virtual CS	675.00	87.50		n/a	5.70	2.50	4.00	32.20	11.30
Agora Cyber CS	5855.00	66.10		3.50	22.80	0.00	6.20	63.60	18.50
ASPIRA Bilingual Cyber Charter School PA Learners Online Regional Cyber CS Pennsylvania Cyber CS	n/a								
Susq-Cyber CS Central PA Digital Learning Foundation CS Pennsylvania Distance Learning CS Commonwealth Connections Academy CS	463.00 9651.00 179.00 118.00 312.00 4422.00	78.80 85.00 100.0 0 100.0 76.60 72.00		4.30 3.60 0.00 0.00 0.00 4.00	13.80 8.30 0.00 0.00 18.90 15.70	0.00 0.00 0.00 0.00 0.00 0.00	3.00 1.90 0.00 0.00 4.40 6.00	63.20 33.40 55.70 47.20 39.40 48.10	18.60 11.10 19.70 27.70 17.60 18.00
<i>State of PA Data</i>	<i>12.7mil</i>	<i>83.80</i>	<i>2.70</i>	<i>1.90</i>	<i>10.00</i>	<i>0.02</i>	<i>5.70</i>	<i>42.90</i>	<i>15.20</i>

***Rhode Island - no full-time options***

***South Carolina*****Percent of students in each group**

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Asian</b>	<b>Black</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>
Palmetto South Carolina Connections Academy	455.00	351.00	12.00	74.00	11.00	7.00		
South Carolina Virtual Charter School	2637.00	2044.00	34.00	394.00	50.00	115.00		
South Carolina Calvert Academy	2804.00	2242.00	22.00	451.00	9.00	80.00		
Provost Academy South Carolina	282.00	181.00	7.00	88.00	1.00	5.00		
	1182.00	909.00	10.00	235.00	24.00	4.00		
<b><i>State of South Carolina data</i></b>	<b><i>727,130.00</i></b>	<b><i>53.20</i></b>	<b><i>1.90</i></b>	<b><i>37.70</i></b>	<b><i>0.50</i></b>	<b><i>6.70</i></b>	<b><i>56.70</i></b>	<b><i>13.80</i></b>

***South Dakota - no full-time options******Tennessee - no full-time options******Texas - no response for data requests***

*Utah***Percent of students in each group**

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Asian</b>	<b>Black</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>
Utah Virtual Academy	2000.00	95.50	1.00	1.90	0.70	5.00		
The Open High School of Utah	328.00	98.00	2.40	2.10	1.20	6.00		
Utah Connections Academy	279.00	92.40	5.30	3.50	3.90	6.00		
Aspire Online Charter School								
Ashley Valley Education Center - Uintah Online	83.00	98.70	0.00	1.20	0.00	1.20		
<i>State of Utah data</i>	<i>587,745.00</i>	<i>88.00</i>	<i>2.30</i>	<i>1.50</i>	<i>3.00</i>	<i>14.00</i>		<i>10.60</i>

*Vermont - no full-time options**Virginia - no full-time options*

*Washington*

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Asian</b>	<b>Multicultural</b>	<b>Black</b>	<b>Pacific</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Reduced Lunch</b>	<b>Special Needs</b>	
Columbia Tech High	190.00	74.90	10.10	5.70	0.80	0.40	0.00	8.10	3.70	0.00	
Columbia Virtual Academy - Colville	639.00	90.90	1.30	3.60	0.60	n/a	0.40	3.20	20.80	0.30	
Columbia Virtual Academy Kettie Falls	216.00	90.80	n/a	0.50	3.30	n/a	1.00	4.30	27.30	1.90	
Columbia Virtual Academy Orient	330.00	88.50	0.70	1.40	4.30	0.70	1.00	3.60	0.00	0.00	
Columbia Virtual Academy SCSD	169.00	80.80	0.60	10.20	0	n/a	n/a	8.50	26.00	0.00	
Columbia Virtual Academy Valley Insight	1275.00	88.80	1.50	2.70	0.40	0.20	0.20	6.20	1.50	4.50	
School of Washington iQ Academy	1804.00	74.60	2.80	2.10	5.40	1.10	2.80	11.10	0.10	8.50	
Washington Marysville On-line Virtual Education Program	479.00	80.90	1.50	3.90	3.70	0.20	1.00	8.70	25.10	4.80	
OASIS K-12	132.00	72.00	0.60	10.20	0	0.60	n/a	2.50	14.00	25.80	0.80
Olympia Regional Learning	245.00	92.80	4.00	0.00	1.60	4.00	0.00	1.60	14.30	1.20	
	352.00	95.40	0.30	1.60	0.00	0.30	1.30	1.30	19.00	2.60	

Academy (iConnect Academy) Vancouver Virtual Learning Academy Washingto n	147.00	73.40	3.80	2.50	2.50	1.30	n/a	16.50	46.30	4.10	
Academy of Arts & Technolog y and EV Online Learning Washingto n Virtual Academy - Steilacoo m	718.00	83.60	2.30	5.60	0.80	n/a	1.40	6.50	30.60	5.70	
Washingto n Virtual Academy - Omak HS Washingto n Virtual Academy - Omak MS Washingto n Virtual Academy - Omak ES	1455.00	85.70	6.10	0.80	3.10	0.10	0.60	3.60	21.50	8.20	
	224.00	76.40	0.40	7.60	1.30	0.40	0.40	13.50	8.50	10.70	
	684.00	76.80	2.00	4.90	2.20	0.20	2.20	11.70	6.90	10.70	
	618.00	71.90	3.00	8.40	3.40	0.40	2.00	10.80	7.40	8.70	
<i>State of Washington n data</i>	1,038,503.0	0	60.20	8.00	6.10	4.60	0.90	1.60	19.60	45.50	13.30

***West Virginia - no full-time options***

*Wisconsin*

<b>SCHOOL</b>	<b>Total enrollment</b>	<b>White</b>	<b>Asian</b>	<b>Multicultural</b>	<b>Black</b>	<b>Pacific</b>	<b>Native</b>	<b>Hispanic</b>	<b>Free Lunch</b>	<b>Special Needs</b>
Appleton eSchool	22.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	27.000	0.00
Wisconsin Connections Academy	617.00	88.50	1.50	0.00	5.20	0.00	0.80	4.10	26.30	0.80
Link2Learn Virtual Charter School	26.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	26.90	0.00
Island City Virtual Academy	8.00	62.50	0.00	0.00	0.00	0.00	0.00	37.50	37.50	0.00
Advanced Learning Academy of Wisconsin	40.00	80.00	0.00	7.50	0.00	0.00	2.50	10.00	65.00	10.00
Cre8 Gillett School of Creative Thought	40.00	95.00	0.00	0.00	0.00	0.00	2.50	2.50	62.50	2.50
JEDI Virtual High School	17.00	87.00	0.00	6.50	0.00	0.00	0.00	6.50	n/a	n/a
GOAL Charter School	36.00	91.70	0.00	0.00	0.00	0.00	2.80	5.60	61.10	11.10
Cameron Academy of Virtual Education (CAVE)	75.00	97.30	0.00	0.00	1.30	0.00	0.00	1.30	49.40	12.40
Insight School of Wisconsin	655.00	80.80	0.80	1.70	9.30	0.30	2.30	4.90	n/a	n/a
Hayward Center for Individualized Learning	102.00	92.20	4.90	2.90	0.00	0.00	0.00	0.00	19.60	4.90
HACIL 1 Rural Virtual Academy	28.00	96.00	0.00	0.00	0.00	0.00	4.00	0.00	n/a	n/a

Janesville Virtual Academy	23.00	73.90	0.00	4.30	13.0 0	0.00	0.00	8.70	52.20	8.70
21st Century eSchool	79.00	88.60	2.50	2.50	0.00	0.00	0.00	6.30	6.30	2.50
Kenosha eSchool	89.00	76.40	1.10	1.10	6.70	0.00	2.20	12.40	24.70	15.70
Milwaukee Community Cyber (MC2) High School	151.00	17.90	0.00	0.00	57.0 0	0.00	0.70	24.50	64.20	11.30
KM Global Charter School for Leadership and Innovation	30.00	86.70	3.30	0.00	0.00	0.00	0.00	10.00	10.00	6.70
Monroe Independent Virtual Charter High School	187.00	85.60	2.70	1.10	4.90	0.00	1.60	4.30	24.60	0.00
Kiel eSchool	3.00	100	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a
Monroe Virtual Middle School	35.00	71.40	0.00	2.90	11.4 0	0.00	14.30	0.00	28.60	0.00
Wisconsin Virtual Academy (WIVA)	1058.00	85.90	1.60	0.60	6.90	0.10	1.40	3.50	0.10	6.00
Wisconsin Virtual Learning (WVL)	611.00	80.00	1.80	5.40	4.90	0.20	0.30	7.40	12.30	9.50
George D. Warriner High School for Personalized Learning 9- 12	115.00	87.80	0.90	0.90	0.90	0.00	0.00	9.60	41.70	8.70
George D. Warriner Middle	27.00	77.80	0.00	0.00	3.70	0.00	3.70	14.80	37.0	29.60

School 6-8										
Waukesha										
School										
District	773.00	81.60	1.00	1.70	8.50	0.00	1.70	5.40	11.00	9.10

<i>State of</i>											
<i>Wisconsin</i>	870,470.0										
<i>data</i>		0	73.80	3.50	1.90	9.80	0.10	1.30	9.70	40.80	13.90

### Wyoming

#### Percent of students in each group

SCHOOL	Total enrollment	White	Asian	Multi	Black	Native	Hispanic	Free Reduced Lunch	Special Needs
Campbell County Virtual School (CCVS)	51.00	86.00	6.00	0.00	0.00	0.00	8.00	15.69	7.84
Wyoming Connections Academy	291.00	84.50	1.00	6.50	0.00	1.00	6.00	33.33	8.25
Wyoming "e" Academy of Virtual Education (WeAVE)	194.00	80.00	0.50	2.00	0.50	9.00	7.00	31.96	10.82
Wyoming Virtual Academy	1314.00	86.00	0.30	0.80	1.80	1.80	8.50	16.59	7.00
Evanston Virtual High School	56.00	82.00	1.70	0.00	0.00	0.00	16.00	26.79	1.79
<i>State of Wyoming data</i>	89,476.00	80.50	0.79	1.70	1.08	3.10	12.60	36.94	14.30



