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TRANSFORMING SCHOOLS: FROM TRADITIONAL TO PERSONALIZED

By

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A DISSERTATION

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Abstract

This grounded theory study developed a theory on how personalized learning was implemented in public schools throughout the United States. The study identified change agents who were instrumental in developing and implementing personalized learning services in public schools and described best practices for transitioning from a traditional approach to a personalized approach to education. The interviews were coded using NVivo and other initial coding methods to identify themes and categories that built a grounded theory. Themes that evolved from the study included (1) a definition of personalized learning, (2) a description of personalized learning services, (3) personalized learning results, (4) barriers, and (5) leadership. The grounded theory, Personalized Learning Integration Systems Approach, exhibited six additional sub-themes that revealed a framework for integrating personalized learning services. This framework includes: (1) strategic planning, (2) modeling, (3) collaboration, (4) communication, (5) organizational culture, and (6) flexibility. Together, these six themes make up the Personalized Learning Integration Systems Approach and create a roadmap for future change agents interested in integrating personalized learning services.
Dedication
This is dedicated to the light of my life, my daughter Leighton.
“Go forth and set the world on fire.” - St. Ignatius Loyola.
Acknowledgments

I would like to express my deepest gratitude to my mom and dad for their endless support, enthusiasm, encouragement, and wisdom. Thank you for imparting a drive and work ethic that continues to carry me through my most challenging ventures.

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CHAPTER ONE

Personalization means to make individual, as it relates to one’s own character, conduct, and motives. The private sector has appealed to consumers by offering a variety of personalized services, whether it is Netflix, Pandora, Build-A-Bear or customizing a pair of Nikes. The public sector soon followed suit, and serving individuals based on their unique needs became a priority to many service industries.

In education, researchers and reformers have tried to address the very issue of serving “customers” in a way that fits more of their needs for decades. David Snedden, a prominent educator of the Progressive Era, pushed for reform efforts that promoted social efficiency (Labaree, 2010). John Dewey, an American philosopher and educational reformer, believed schools should be developed to be the foundation for democracy, while George W. Bush wanted schools to be centered on personal liberty and social equality (Labaree, 2010). These approaches, however, do not look at the individual learning needs of students. Instead, the approaches focus on an end goal, but do not center on how to help students accomplish those learning goals, whether it be social efficiency, becoming a democratic citizen, or having a sense of liberty and equality.

Raising academic achievement and improving learning for all students has become imperative. Despite the fact that graduation rates have been a national priority for decades, dropout rates remain relatively high. As stated in *A Nation Accountable* (US DOE, 2008), a follow-up report to *A Nation at Risk* (US DOE, 1983), “If we were 'at risk' in 1983, we are at even greater risk now. The rising demands of our global economy, together with demographic shifts, require that we educate more students to higher levels
than ever before. Yet, our education system is not keeping pace with these growing demands,” (p. 1).

*A Nation at Risk*, published in 1983, examined the quality of public education in the United States (US). The report stated that the educational foundations of society were being eroded by mediocrity (US DOE, 1983). For example, verbal scores on the Scholastic Aptitude Test (SAT) fell over fifty points from 1963 to 1980. Math scores dropped by nearly forty points. At the time of the report, fourteen percent of all seventeen-year-olds were functionally illiterate. Functional illiteracy among minority youth was as high as forty percent (US DOE, 1983). *A Nation at Risk* (US DOE, 1983) also served as a call to action for politicians and educational leaders to find solutions to the mediocrity. Twenty-five years later, however, *A Nation Accountable* (US DOE, 2008) looked at improvements, or lack thereof, and reported that out of every twenty children born in 1983, six did not graduate from high school “on time” by their estimated graduation year of 2001. Reading scores since *A Nation at Risk* (US DOE, 1983) was published also did not show improvement. *A Nation Accountable* (US DOE, 2008) noted the following results: “Reading scores of twenty students born in 1983, who turned seventeen in 2000, were the same as those of a similar group of students who turned seventeen in 1984” (p. 4). According to *A Nation Accountable* (US DOE, 2008) twenty-five years after the Department of Education’s (DOE) call to action, no significant gains were made.

It is imperative that improvements are made, as poorly educated individuals and dropout rates have a negative impact on communities and individuals, including loss of productive workers and higher costs associated with increased incarceration, health care,
and social services (US DOE, 2008). A special report by Harlow (2003) titled, *Education and Correctional Populations*, stated that in 2001, four out of every ten young adults lacking a high school diploma received some sort of public assistance that year. The same report also stated that a dropout is more than eight times as likely to be in jail or prison as a person with at least a high school diploma (Harlow, 2003). It is critical that students are constructively engaged during their time at school, are encouraged to graduate, and are able to accumulate skills that will make them productive members of society.

A lack of engagement has been cited by many students as a reason for low school performance or dropping out of school entirely. Students have reported feelings of anonymity, irrelevance, and disengagement in large numbers (Yonezawa, McClure & Jones, 2012a). Of the 300,000 high school students surveyed over three years, two out of three reported being bored at least once every day in class. These feelings correlated strongly with a failure to succeed academically (Yonezawa, et al., 2012a). To combat these statistics, *A Nation Accountable* (US DOE, 2008) suggested what many other educational leaders and reformers have recommended: structural reforms that go well beyond curriculum efforts to provide students with a better education.

**Background**

Unfortunately, the structure of many public schools in the U.S. follows the traditional, factory model of education created to serve a society that existed prior to the Industrial Revolution of the 20th Century. This system was created for an economy and society that only needed a small portion of individuals to be educated at the post-secondary educational level. Less technical skills in that era still allowed individuals to get well-paying jobs in industries like manufacturing and textile. Those jobs are
disappearing or have already disappeared because society has progressed into a Knowledge Age requiring more technological and higher order thinking skills (Rickabaugh, 2012). As a result of this transformation of educational needs, students are being educated with a model that no longer works for today’s technological age.

Factory models of education have been shown to inhibit changes within schools and, despite the strong evidence that shows this, students are still being educated according to factory models of education. Public schools were designed to offer standardized educational programs to large groups of students. In the mass-schooling models, the teachers are the experts who transmit expertise to large groups of students through lectures, recitations, drills and practicals (Collins & Halverson, 2009). The 21st Century is considered a ‘Knowledge Age,’ where society is connected to information through work, global markets, tele-linked citizens and blended cultural traditions (Trilling & Fadel, 2009). With this revolution into the Knowledge Age, many change initiatives have been implemented with the intention of providing students with skills needed in today’s economy and individualizing the process. Many of these initiatives, however, have merely been efforts to overcome the design problems of a traditional system and have not focused on transitioning out of a factory (or industrial) model of education (Rickabaugh, 2012). Initiatives like supplemental instruction, RTI (Response to Intervention) and other programs that focus on remediation cost millions of dollars annually. The U.S. DOE’s website shows that the range for awards to RTI initiatives was between $100,000 and $1,200,000 in 2006. These amounts were funded again each year for five years (US DOE, 2006). Some students repeated an entire grade level when they did not meet expected performance standards. Students who repeated grades continued to
have low achievement levels and were more likely to drop out of school (Owings & Kaplan, 2001). Remedial programs intended to increase student retention also increases the costs of education. Social promotion (i.e., allowing students to advance a grade when they have not met performance standards) does not improve learning or achievement (Scheurich, Skrla, & Johnson 2000). Alternatives to retention and social promotion may be attained by rethinking the system we have in place and replacing it with a system that matches students’ needs (Owings & Kaplan, 2001; Rickabaugh, 2012). Meeting student needs and creating environments with alternatives are achieved through personalizing the learning environment (Owings & Kaplan, 2001).

Dr. David Hargreaves, a leader in advocating for personalized learning, defined personalized learning as meeting more of the educational needs of more students more fully than ever before (Hargreaves, 2009). Keefe & Jenkins (2002) further elaborated on the concept by describing personalized learning as, “The effort on the part of a school to organize the learning environment to take into account individual student characteristics and needs and to make use of flexible instructional practice” (p. 441). Hargreaves believed that education can be compared to a multitude of other products and services and that mass customization is possible (Hargreaves, 2004a).

Schools that subscribe to mass customization and individualization of the learning process are better able to connect with students by finding ways to engage them, keep their attention, and help them to capitalize on their strengths as learners (Yonezawa, McClure, & Jones, 2012b). Successful schools take students who have already failed a class, or classes, and match them with strategies to prevent future failures. It is critically important that educators find ways to meet these students “where they are” and provide
them with services that match their needs. Personalization provides a process for students to learn at their own pace, develop their critical thinking skills and lower the remediation costs of programs.

Personalized learning has been encouraged by US Secretary of Education, Arne Duncan. Secretary Duncan announced a district-level competition in May 2012 called “Race to the Top.” This competition provided an opportunity for districts to compete for nearly $400 million by submitting a proposal that demonstrated their commitment to personalized, student-centered education (US DOE, 2012). Secretary Duncan has further admitted that the DOE has long been a part of the problem when it comes to student learning and success. He believes that the DOE has been a compliant-driven bureaucracy and, in order for the United States’ educational system to turn around, Secretary Duncan suggested that the DOE needs to “become an engine” of innovation (Dubner, 2011).

The U.S. is not the only country to attempt to integrate personalized learning with a widespread national scope. In 2005, England’s Prime Minister Tony Blair reported to Parliament that reforms to the educational system must build on current freedoms allowed in schools, but those freedoms must be extended radically (Department for Education and Skills, 2005). One of the initiatives to extend this freedom was to begin personalization programs in schools throughout the United Kingdom (UK). This personalization began with decentralization and allowing schools to make their own choices. Each school was allowed to self-govern, and the schools were given the freedom to work with community partners. Blair recommended that schools should be able to control their own assets, staffing, and links with external stakeholders, if they so choose...
The personalized learning initiatives that were set forth as part of Blair's report were:

- support programs for students who were identified as potentially needing remediation;
- provide all students access to subject areas or activities where they have an interest or aptitude;
- provide schools with support and guidance on tailoring instruction;
- ensure that schools have expert advice on how to support students facing specific challenges; and,
- expand curriculum choices.

The personalized learning approach used in the UK reflected new initiatives to transform schools that provided alternatives to the traditional model of education in the U.S. Secretary Duncan stated that “if Americans are to remain economically competitive as a country, and if U.S. children are to compete in a global economy, society has to dramatically improve the quality of public education” (USDOE, 2010b). One of the ways he suggested quality improvement could happen is through a more personalized approach, much like the programs in the UK. He stated that all students want to be treated as individuals. In the factory model of education, everyone was treated the same. Effective teachers, however, are the ones that understand the learning needs of their students and are able to capitalize on the strengths students already possess, which results in the students being able to achieve more (Dubner, 2011).

For decades, the public perception of American education has been dismal. Attempts at school improvement have been tried in a variety of formats: curriculum,
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instructional methods, classroom designs, schedules, modules, pods, standards, assessments, and teacher training are among the many examples of reform efforts. Rarely, though, has a transformational change to improve an educational system been attempted through a system-wide approach. This study took a look at the needs of young people, to understand how they learn, to develop strategies to improve teaching, and to explore personalized approaches to applying this knowledge in order to create a better system of education.

**Purpose of the Study**

The purpose of this grounded theory study was to develop an understanding of how personalized learning was implemented within public schools in the US. For the purpose of this study, personalized learning is generally defined as restructuring of school organization, curriculum, and assessment to fit student needs. It also encompasses utilizing student voice, individualization, and technology to drive the process. Findings from this study will be beneficial in contributing to the body of knowledge regarding personalized instruction and learning and in helping to establish a guide for schools to assist with a transition from traditional approaches of instruction to personalized approaches.

This grounded theory qualitative study has four objectives. First, to identify schools that have transitioned from a traditional to a personalized model of education. Second, to determine those aspects of personalized learning that have been implemented in each school. Third, to identify the factors that facilitated implementation of personalized learning. Last, to identify the barriers that impeded personalized learning delivery or service.
Additionally, current literature consists of case studies and descriptions of personalized learning, but there are no reports on how schools have successfully implemented this model of education. Grounded theory was chosen as the methodology, as it provides for an in-depth exploration of the process and leads to a deep understanding of the process of integrating personalized learning in urban public high schools. The theory developed through this study may be used by future school leaders seeking to transform their schools from a factory industrial model-based system toward and integrated personalized learning system.

**Research Question**

This study addresses the factors that contribute to successful implementation of personalized learning services. Among schools that have been identified as having successfully adopted personalized learning educational systems, what (1) did they use as their definition for personalized learning, (2) what aspects of personalized learning were integrated, (3) what processes facilitated the development of personalized learning, (4) were there barriers to the change, and (5) what were the results of the change with regard to student learning and retention outcomes?

**Significance of the Study**

Personalized learning has gained attention via national news stories. The New York Times has featured stories on the School of One, CBS aired a special on Kahn’s Academy, and a Google search of the term will bring up a wide array of newspaper articles on other schools and programs that have personalized the learning process (Medina, 1999) (CBS News, 2008). No studies have been found that focus on how
schools can make a transition from traditional models of instruction (or education) to personalized models of education.

The literature on personalized learning focuses on specific aspects of personalized learning that have been implemented in schools. It further showcases results of schools that have made transitions from traditional models to personalized learning models. The literature shows that programs that implement personalized learning are occurring more frequently, yet there is little information on how those programs are actually put into practice on a daily basis. To sustain personalized learning initiatives (or programs), school leaders need to understand how to implement systemic changes specific to personalized learning. Leaders also need to have a deep and rich understanding of the positive benefits of personalized instruction so that they can effectively advocate for implementation and create lasting change.

Further, through the identification and analysis of personalized learning services, school leaders can integrate best practices and incorporate a model of education that better serves all of the students more effectively. Additionally, understanding how change initiatives are successfully integrated in schools extends beyond the topic of personalized learning. The application of this knowledge can be applied to a variety of other school changes and changes within organizations other than schools.

Limitations

Limitations stem from the chosen methodology and the study population (Creswell, 2012). A limitation of this study is the length of time personalized learning was integrated within the school system, as personalized learning is a relatively new concept in American schools and has only been integrated for the past 3-5 years. Another
limitation was differentiation in personalized learning services that were offered at each school. Due to the nature of personalized learning, no two schools or districts were doing the exact same things with it came to personalized learning. The major limitation of the study is the relatively small participant population. Because of the fact that personalized learning has not been integrated into American schools for very many years, it was difficult to find a large number of participants to fit the study. Another limitation is the use of the interview method. There exists a possibility of observer bias. Another limitation is volunteer participation bias. Of forty-five potential participants contacted, only twenty responded and agreed to participate in the study. Further, the change agents selected for the study ranged from principals to personalized learning coordinators to superintendents. No teachers were incorporated in the study. Also, participants used were located in the Midwest and East Coast. No participants from the West Coast chose to participate. The individuals who decided to participate could have been categorically different from those who did not to participate. One of the limitations of grounded theory is that it requires data collection in an environment constructed by the researcher and participant (Creswell, 2012).

**Delimitations**

This study was delimited to schools that implemented personalized learning programs prior to the 2013-2014 school year. Also, participants in the study consisted of K-12 public school leaders who were instrumental in developing and implementing personalized learning services. Finally, ten participant groups representing twelve individuals were utilized in this study. These participants represented eight different school districts in the U.S.
Assumptions

The assumptions associated with this study were: (a) the sample studied was representative of schools integrating personalized learning, (b) responses received from the participating school leaders accurately reflected their professional opinions and experiences, (c) the participants in this study answered all of the interview questions openly and honestly.

Definition of Terms

This section provides the definition for the terms used that do not have a commonly known meaning or that have a possibility of being misunderstood (Roberts, 2010).

1:1 or l-to-l. A program adopted in a school or district in which each student is issued a laptop or tablet.

Curriculum. A complete course of study offered by a school.

Change leader. An individual who articulates the need for change and is instrumental in acquiring stakeholder support and program implementation.

Decentralization. Transfer of decision-making authority closer to the school.

Grounded theory. Grounded theory studies move beyond a description and lead to a discovery or a formation of a theory for a process or an action.

Individualization. To consider or treat individually.

Interdisciplinary teams. A group of teachers from different subject areas who work together, often planning and managing the same group of students together.

Mass customization. The process of changing the design of a product or service in response to a customer’s needs.
Mixed-ability. Children of the same age that have different levels of ability.

Personalized learning. Taking into account individual student characteristics and needs, and combines them with thoughtful instructional practices and organization of the learning environments (Keefe & Jenkins, 2002).

Stakeholders. A person or group with an interest in education or a specified school or district.

Student voice. The distinct perspectives and actions of the individual student.

Systemic change. Change that encompasses an entire organization and integrates solutions within a range of layers.

Technology. The making, modification, usage, or knowledge of tools, machines, techniques and methods of organization, in order to solve a problem, improve a solution, achieve a goal, or perform a specific function.

Summary
Personalized learning involves a whole-system approach of looking at school change that is not mandated by external policyholders. Programs have a better chance of sustaining if they are proposed and implemented by administrators and teachers, rather than being mandated by government regulators or politicians or lawmakers (Tyack & Cuban, 1997). Personalized learning is unique to each school. Each district and school will have different financial and faculty resources. Additionally, the student body each school serves will be unique. Personalized learning services can be tailored to each school and created and implemented by administrators and teachers within each school. McRae noted in The Fourth Way that personalized learning is more of a “Third Way” reform effort, meaning that it is driven by business-like customization and actually results in deeper learning through processes such as accountability (Gardner, 2012).
Many past teaching and learning reforms have failed because teachers have been unsuccessful in implementation or they have not made a connection between what they were teaching and what students were learning (Labaree, 2010). Personalized learning provides strategies and methods for students to succeed and makes connections between teaching and learning. Labaree (2010) argued that if reformers want to have an impact on the core of schooling they cannot limit themselves to the structural levels of the system. Instead, they need to change how teachers teach in the classroom.
CHAPTER TWO

Introduction

Twenty-two scholarly reports were found define and describe personalized learning. Personalization, as it pertains to learning, has been broadly defined (Yonezawa, McClure & Jones, 2012); however, some of the studies assessed aspects of personalized learning implemented in schools and some analyzed the results of implementations, while others, in the UK and the U.S., focused on case studies and analyzed developments of personalized learning. The first set of studies examined specific examples of personalized learning.

This literature review addresses the definition, history, and background of personalization. It then provides a synopsis of the literature on each of the six themes: individualization, student voice, technology, curriculum, assessment, and organization. Within the discussion of each theme, examples are provided that depict how personalized learning was implemented. Case studies are then examined that provide examples from both the UK and U.S. An analysis of three different schools/districts that incorporated personalized learning is also included. This literature review concludes with a synthesis of the literature on school reform, organizational theory, and change theory.

Personalized learning is an approach that encompasses differentiation, individualization, flexibility, matching interests, and prior experience (Wolf, 2010). Personalization means taking into account individual student characteristics and needs, and combines those needs with thoughtful instructional practices and organization of the learning environments (Keefe & Jenkins, 2002). Thus, personalized learning takes a highly structured approach to each student’s individual learning, so that all students are
able to progress, achieve, and participate. It also means strengthening the link between learning and teaching by engaging pupils as partners in learning (Leadbeater, 2005).

Several topics recur that help place parameters around the concept of personalized learning. Six major themes can be seen throughout the literature on personalized learning:

- Individualization
- Student Voice
- Technology
- Curriculum
- Assessment
- Organization

Some researchers suggested that the term personalized ('personalised' in European publications) learning was first used in a September 2003 speech in Great Britain by David Miliband, then Minister of State of Schools. He stated that, “Personalised learning demands that every aspect of teaching and support is designed around a pupil’s needs” (Hargreaves 2004a, p. 6). After this speech, the government shifted its focus to reorganize the way services were delivered, and began taking customers' needs into account for government run public services (Government of Alberta, 2010). In public and private sector services, there continues to be a demand for appealing to consumers and meeting customer needs as consumers are more consistently looking for choices, flexibility, and efficiency. Consumers often have the chance to participate in the design, delivery, and co-production of goods they believe are of most importance to them. (McRae, 2010).
Background

The government in the UK is not the only entity that is designing organizations and structures around individual customer needs. Throughout the last century, many businesses have transformed themselves by putting the customer first and recognizing that services should be user-driven (Hargreaves, 2004a). During the past decade, customers have come to expect personalization in many aspects of their lives.

Personalization has become a powerful approach for engaging people with products and services. Children can walk into a Build-A-Bear store and create a personalized stuffed animal. Individuals can log on to Nike.com and build a custom pair of shoes. Services like Facebook, Netflix, and Pandora have all capitalized on the need and desire for personalization. The more an individual uses each service, the more customized it grows (Wolf, 2010). Within minutes of creating a Pandora account, listeners can hear “radio stations” tailored to their musical tastes. Online news consumers can design newswires that deliver stories specific to their interests. When searching for new books to read, Amazon.com generates a list of recommendations based on recent browsing behavior (Russell, 2011).

Students, however, have experienced the same type of mass education for more than two centuries. This system has been used because it became standardized, efficient, practical, and reduced cost, time and energy. This was very important in the era of industry when students were being prepared to work in factories (Gardner, 2006). If schools are to continue to prepare students for modern workplaces, a shift needs to be made from the 19th century model. Mark Schneiderman, Senior Director of Education Policy at SIIA (Software and Information Industry Association) said:
We know that personalized learning is not new; it’s as old as learning itself. But what is new is that the factory model that we’ve used to meet the needs of the average student in a mass production way for years is no longer meeting the needs of each student as our student body diversifies. What else is new, too, is that our expectations have grown of what students need to know and understand. What has changed is that our students . . . are surrounded by a personalized and engaging world outside of the school, but they’re unplugging not only their technology, but their minds and their passions too often when they enter into our schools. And what is also new are technologies poised to provide tools and supports to scale and enable personalized learning (Wolf, 2010, p. 8).

President Obama’s Administration has also recognized the importance of making a change to the structure of public education. The current Administration has pushed to end this model of education and tailor policy towards personalization. The Administration’s *Transforming American Education: Learning Powered by Technology* called for an alternative to the one-size-fits-all model of teaching and learning and noted that “personalization incorporates, but moves beyond both individualized learning and differentiated instruction” (US DOE, 2009).

Moving beyond a factory model of education raises a fundamental question: what changes need to happen in schools to provide students with the skills and experiences they need to in order learn in a knowledge age? How can we shift curricula and pedagogy to more effectively help students form and answer their own questions, develop patience with uncertainty and ambiguity, appreciate and learn from failure, and develop
the ability to delve deeply into the subjects about which they have a passion to learn (Richardson, 2012)?

As scholars look at personalized learning and begin to evaluate its prevalence and effectiveness, it is important for them to note that the six components (individualization, student voice, technology, curriculum, assessment, and organization) are viewed as an integrated whole, not as a set of discrete activities which can be ‘ticked off’ (NCSL, 2005). Furthermore, no school can claim to be at the leading edge in every theme (Hargreaves, 2004a). The following section explores each of the themes in depth as they pertain to personalized learning.

**Individualization**

“To build a successful system of personalized learning, we must begin by acknowledging that giving every single child the chance to be the best they can be, whatever their talent or background, is not the betrayal of excellence, it is the fulfillment of it” Miliband (DfES, 2004).

Moving away from an industry model of education means less generalization and more individualization. As Gardner (2012) stated, schooling should no longer be about teaching the masses, but rather the individual learner. Individualization maintains a focus on each and every student, and teaching and support is designed around each pupil’s needs (Hargreaves, 2003).

Not only do students have a variety of learning needs, but they also have a wide array of different abilities and intelligences. Howard Gardner's developed the theory of Multiple Intelligences in 1983. According to Gardner there are nine types of intelligences, including verbal linguistic, visual spatial, mathematical logical, bodily-
kinesthetic, intrapersonal, musical rhythmic, naturalist, interpersonal, and existential. Since each person possesses a different combination of these and learns in a different way, the implication is that any topic can and should be taught with many different approaches (Gardner, 1999).

The goals of individualization are student success, satisfaction, and building upon the natural way that a student learns (Gardner, 2012). DOE (2010a) suggested that individualization provides the ability for students to have the same content and learning goals but progress at different speeds according to their needs. Some students take longer to finish a topic, might skip topics that cover information they already know, or might repeat topics if they need more help (Gardner, 2012).

Some specific ways to individualize the learning process include allowing students to do some, any, or all of the following: choose their own projects; work at their own individual pace; show excitement about learning new things; work with students of different ages, cultures and abilities; demonstrate their knowledge in unique ways; be actively engaged and participate in individual and group learning activities; go beyond minimal assignments (Gardner, 2012).

Personalized learning aims to adapt current educational practices and ensure that all students meet high standards and acquire the knowledge they need to pursue their own goals (Clarke, Miles, & McGee, 2003). The very idea of learning implies moving from what students know to what they do not yet know (Clarke, et al., 2003). To individualize the learning process, new approaches need to be implemented. These approaches need to capture student interest and meet each learner’s needs. To understand the needs of each student, the student’s voice should also be taken into consideration.
Student Voice

What pupils say about teaching, learning, and schooling is not only worth listening to but provides an important – perhaps the most important – foundation for thinking about ways of improving schools (Rudduck, Chaplain & Wallace, 1996).

Part of personalized learning also means allowing students to be actively involved in learning and making decisions about their own learning. Student voice includes every way in which students are allowed or encouraged to voice their views or preferences (Hargreaves, 2004b). This means students are encouraged to freely and openly express their points of view, opinions, ideas, suggestions, worries and concerns (Hargreaves, 2004b). This process is interactive and enables collaborative conversations between teachers, parents and community members. Through this process, students develop the following strengths and skills: (a) engagement – within the learning process and activities in the classroom; (b) responsibility – students have more control and increased responsibility for self, learning and behavior; (c) meta-cognitive skills – students have more control over thinking and learning processes; (d) relationships with staff – an opportunity to have open, honest and collaborative relationships that are defined by mutual respect and grounded in self-esteem; (e) social skills – increases opportunities to communicate, construct arguments, make presentations, take on leadership roles and build confidence; (f) participation – students get a chance to be involved in the design of learning, teaching, assessment and the organization of the school (Hargreaves, 2004b).

Utilizing student voice is accomplished by allowing students to play an active role in learning and by teachers becoming more receptive to hearing what students say about their learning experiences (Hargreaves, 2004b). Small group conversations or utilizing
student feedback are a few examples of how schools can incorporate student voice. Small group conversations, where students can discuss common concerns, can be a more effective and powerful source of student voice than a one-on-one interview with a teacher, as the one-on-one interview can be intimidating to the student. Students are able to build on conversations, say what they might not otherwise have said, and hear ideas they agree or disagree with via small group conversations (Hargreaves, 2004b).

Incorporating student voice in classroom teaching (how a teacher teaches and organizes the lesson or treats students) can be a sensitive process (Hargreaves, 2004b). To ease any fears involved in this process, students can fill out anonymous evaluations or suggestions, or at least be assured that their suggestions and comments will not be identified to the full class or group. The object of this process is to create a partnership between the teacher and each student so that teaching and learning are co-constructed (Hargreaves, 2004b).

When students are expected to provide feedback describing their school experience, it changes the culture of the classroom by establishing that students are treated as co-creators and participants in the design of their own learning (Hargreaves, 2004b). When teachers demonstrate that student voice is a critical component of their classroom, students tend to understand that they are being taken more seriously. This, in turn, promotes engagement (Hargreaves, 2004b). Students are engaged when they take an active role in the learning process. To increase students’ level of engagement, technological tools can be utilized to allow them opportunities to learn and to track learning.

Robinson and Sebba (2009) conducted a study in which they developed ten different case studies and investigated how learners influenced school decisions
surrounding personalized learning through technology. Schools used for these case studies met three criteria: they undertook activities that were student-led, they were focused in the area of personalized learning, and they were technology users. The researchers discovered that learners were able to make choices in regards to using technology in each case study, but the degree to which they were able to make choices varied considerably. For example, in one case study, a student was able to design an initiative to encourage young readers, while in another school students were only allowed to make small decisions, like font colors in a PowerPoint presentation. The researchers found that students who attended schools that incorporated technology had varied degrees of access to technology and choices. The study also showed that the encouragement to use technology had a great impact on the extent to which students led the learning. This research suggested that there was limited congruence in technology available in schools. Additionally, students and teachers access technology in a variety of ways and the opportunities students have with regards to choices in technology uses were limited.

Technology

“If we teach today as we taught yesterday, we rob our children of tomorrow,”
- John Dewey

Access to information and learning has become a process, which, due to the ubiquitous Internet, can now be done anytime. The Internet has improved the ability to stay connected and increased the speed at which we obtain information. The traditional education system traditionally had a monopoly on teaching and providing educational information. In the 21st Century, this is no longer the case (Speak Up, 2011). Students have more access to technology than ever before. According to Karen Cator, Director of
the DOE’s Office of Educational Technology, access to technology is "the essence and the nature of the opportunity to provide a much more personalized learning environment for students" (Demski, 2012, p. 34).

Technology allows for personalization to happen much more easily. Rather than a teacher sitting down every day and studying each student's progress, students can manage their own learning through personalization via technology (Demski, 2012). In addition, technology can be used to provide students with opportunities to learn outside of the traditional classroom. For example, through technology, students can connect and collaborate through distance learning modalities. Students can also use technology as a research tool and access virtual learning environments (VLEs).

Hargreaves (2004a) suggested that schools begin with teachers using technology in their classrooms to support learning. To integrate technology at a higher level, he recommended that VLEs be provided to all students. VLEs are e-learning systems that provide virtual access to classes and content. Additionally, Hargreaves believed that students should be given access to all data relevant to their learning, such as assessment scores and short-term and long-term goals. Additional technological possibilities include social networks and other networking tools that can cross boundaries to connect resources and systems (Gardner, 2012).

Using technology to shape a personalized learning system enables the following processes (Gardner, 2012; Hargreaves, 2004a):

- Students set their own learning goals;
- Students manage both content and process of their learning;
- Students communicate with others about the process of their learning;
• Student achieve personal learning goals;
• Students have greater access to resources;
• Students have more independence

Integrating and leveraging technology is accomplished through smart e-learning systems, which help to track and manage the learning needs of students and provide a platform for accessing engaging in content, resources, and learning opportunities to meet each student’s needs everywhere at any time (Wolf, 2010). Technology applications that support personalization include: (a) multi-modal and universally designed digital content, adaptive software, and multimedia resources, including learning games and simulations, that address various learning styles and reading levels; (b) computer-based and learning-embedded formative assessments that dynamically identify student needs to immediately impact instruction, along with related data systems for managing that information; (c) online learning and virtual learning communities that provide a range of opportunities otherwise not available, including platform for peer-to-peer learning and communication with community-based people and resources (Wolf, 2010).

In addition, Thomas Greaves, Chief Executive Officer of The Greaves Group, an educational consulting firm, found four specific technological implementations as most effective in supporting personalized learning in these classrooms:

• A well-implemented 1-to-1 laptop initiative;
• Learning management systems;
• Access to online remedial coursework;
• Open access to search tools.
Some schools view the eruption of technologies and environments that allow for personalized learning as a “disruptive innovation,” according to Scott McLeod, Associate Professor of Educational Leadership at the University of Kentucky (Richardson, 2009). The ability to learn what students want, when students want, with whomever they want as long as they have access creates a huge push against a system of education steeped in time-and-place learning (Richardson, 2012, p. 23).

Personalization, however, cannot take place on the same scale without technology. Technology dramatically increases a teacher's ability to identify and manage the needs of many students and for students to access a large variety of interventions, content, resources, and learning opportunities (Wolf, 2010). Technology allows for greater teacher and student collaboration and for the learning process to be further individualized. Paired with individualizing curriculum, personalized learning is further enhanced.

**Curriculum**

"...nearly half of the high school dropouts point to boredom and lack of interest in classes as a reason for leaving school. This comes as no surprise as most students have little to no choice in what and how they learn. This is because the educational system is standardized with an increasing number of curriculum requirements and must, by design, ignore individual needs and interests of students" (Kolderie & McDonald, 2009, p.3).

Creating environments where learning is personalized through technology allows for students to move through curricula at different rates. When students move through a curriculum at various speeds, a uniform curriculum becomes disadvantageous to a multitude of students. In developing curricula, attention needs to be paid to students’
ability to progress at a pace suited to their needs that will enhance their successes. Students need to have the opportunity to build on individual strengths and achievements, pursue their passions and interests, and learn in ways consistent with their individual learning styles. An important facet of this is that barriers to learning are reduced to allow flexible instruction and schedules (Gardner, 2012). Furthermore, a uniform curriculum for every student does not take into account the different ways students learn or the different languages, cultures, values, goals, and interests they have (Fischer & Bidell 2006; Fink & Samuels 2007). Additionally, information is growing and changing incredibly quickly. It is too challenging to respect the priorities of different cultures and encompass new information within one curriculum. It is no longer about what knowledge is acquired, but rather how the information is used (Littke & Allen, 1999). Curriculum entitlement and choice is characterized by:

- A guaranteed core curriculum
- Enrichment and inquiry
- An increase in choice over an individual’s school career
- Support and information to make choices
- Flexibility leading to relevant qualifications for all (Aspect, 2006)

Personalized learning requires access to a wide range of curriculum resources to meet the mixture of student learning styles, performance, and interests. A personalized curriculum provides students and teachers choice and includes different types and sources of information. Schools that embrace personalized learning through curriculum utilize multi-dimensional and multi-modal curricula that enhance personalized learning by reading levels, interaction, and other preferences (Wolf, 2010).
Teachers are a critical factor to personalized curricula. State and national curricula can provide choice, breadth of study, relevance, and flexibility, but it is teachers who have the ability to capture the imaginations and enthusiasm of their students and provide opportunities to enrich and extend basic curriculum (Wolf, 2010). Allowing curricula to extend beyond the traditional classroom is paramount to personalized learning. This could include learning apprenticeships in the community, cross-curricular opportunities, group or team learning, or problem-based experiences (Wolf, 2010).

Ultimately, curriculum provides a way integrate learning goals and engage students. As Hargreaves (2006a) stated, “Engagement is a precondition of learning, so a deep experience of school must ensure engagement” (p. 8). To make school engaging for all students might require restructuring, rather than making a few changes, to a curriculum to make it more ‘relevant.’ Students should have some ownership in the curriculum and have opportunities to be engaged (Hargreaves, 2006a). With adaptations to curriculum choice and instruction, assessment is naturally next on the list. Through useful and personalized assessment, learners can begin to understand how they most effectively learn.

Assessment

“The important question is not how assessment is defined but whether assessment information is used…” -Palomba & Banta

Personalization through assessments provides a new way of understanding the relationship between the way teachers teach and the way students learn. In the same way that Google and Amazon.com leverage customer data to better serve each person’s unique interests and tastes, educators can do the same to understand each student’s
learning performance level, style, and preferences. Adjustments can then be made to instructional strategies and content to meet those needs (Wolf, 2010). Effective assessments provide not just what the student completed in a learning task, but also provide information to help the student learn more effectively. The teacher is then able to adapt his or her teaching to appropriately meet student needs. Using assessments for learning not only helps students master the concept but also improves metacognitive skills, including the ability to learn how to learn (Hargreaves, 2004b). When students increase their ability in learning how they learn, their achievement and independence in learning rises. This leads students to feel motivated and empowered to engage in further learning. Using assessments for learning then reduces the dependence on the teacher and increases student control over their own learning (Wolf, 2010). This also provides an opportunity for students and teachers to understand not only what students did or did not learn but also why.

Hargreaves (2006b) suggested beginning with individual learning plans and targets. Assessments can provide regular feedback and teachers can assist students in achieving their learning goals. He further recommended, however, that assessments can be taken one step further to achieve maximum personalization. This is done through students developing their own assessment criteria and teachers reforming their questioning techniques (Hargreaves, 2006b). Personalizing test items and administration conditions has several advantages, such as: (a) maximizing accurate understanding of the test item by the student; (b) minimizing interference from other competing constructs, and (c) allowing responses that accurately reflect students’ understanding (Russell, 2011).
Assessments within a personalized learning structure contain the following elements: (a) varied; (b) ongoing; (c) carefully designed to give teachers useful information from multiple perspectives (Worsley, Landzberg & Papagiotas, 2004).

Individualization, student voice, technology, curriculum and assessment are all areas wherein personalized learning can be encouraged and used as a force to transition from old models to new. The organization of the school; however, must also make significant changes in order for these strategies to function at a high level.

**Organization**

“What we’ve been doing for so long is trying to meet the needs of learners around the structure, trying to get them to fit into the structure that we’ve tried and tested. Instead we now need to do the reverse, where we fit the structure around the needs of an individual learner.” - Cheryl Heron, headteacher Bridgemary Community School (Hargreaves, 2006b).

Grouping students according to their age, teaching them in large groups of 25-30 student, and arranging them in a single classroom are all part of the traditional approach to organizing school (Hargreaves, 2004a). Additionally, schools continue to be designed as if learning were mechanical, uniform, and impersonal (Clarke, et al., 2003). Schools that embrace an organizational structure compatible with personalization share the following: (a) decentralized, not oriented from the center; (b) distributed, or shared ideas between groups instead of individuals; (c) disciplined, or working toward established priorities rather than letting every new idea take formation (Hargreaves, 2006b).

Oftentimes, this means restructuring when, where and how teachers work. Restructuring means allowing additional time for planning, preparation, and assessment.
By restructuring schedules and the typical school day, teachers have more opportunities to ensure students receive a personalized and enriching experience (Wolf, 2010).

Learning centers are another innovation when it comes to personalizing the organizational structure at school. Learning centers are areas where students can conduct research, work as self-paced learners, participate in small groups and have opportunities to be more self-directed (Gardner, 2012).

Changing the age and ability levels in classes is an additional way to personalize the experience. Mixed-ability classes work best when teachers use authentic tasks to organize learning, allowing students to develop different answers to complex questions.

Interdisciplinary teaching teams are yet another way to restructure traditional teaching methods. These teams work best when teachers have the time and support to identify common themes, rethink their subject areas around essential questions, and design projects that call upon two or more subjects (Clarke, et al., 2003).

The flexibility required of a school's organizational structure to provide personalized learning services is quite significant. In a typical school setting of eight class periods per day and thirty students per class, tracking student progress and content acquisition is extremely difficult for each individual teacher. The difficulty of tracking is why personalized learning depends on the entire school. Students, teachers, administrators, and community members must engage in their schools to encourage and assist each student in learning (Clarke, et al., 2003).

Today’s students are presently learning in a variety of environments. To personalize the learning process a more flexible, anytime, everywhere learning philosophy needs to be encouraged. This learning includes online or blended learning,
hands-on opportunities in the community, and instruction offered by a range of teachers, experts, or technologies. These types of learning opportunities allow for 24/7/365 access to learning, which can then be constant and provide access to courses and instructors not otherwise available (Wolf, 2010).

Through the Center for Research on the Education of Students Placed at Risk (CRESPAR), Herlihy and Kemple (2004) conducted a study involving six middle schools that were part of the Talent Development Middle School model. This model was a comprehensive reform initiative designed to help transform the structure and curricula of large middle schools in urban districts. The goal of this reform was to improve student achievement and raise teacher and student expectations. Schools were organized into small learning communities (SLCs), students had team teachers, a curriculum with nationally recognized standards was used, and teachers received professional development instruction regarding curriculum and effective practices.

The study looked at achievement during students’ eighth-grade year. Prior to the restructuring, 83% of students scored in the bottom quartile for the state as a whole. By the third year in the program, those students scoring in the bottom quartile had dropped to 72%. Reading scores also increased for eighth-grade students when schools had been implementing the program for two years. Schools that were in years 3 and 4, however, showed a drop in scores. These results indicate that when SLC teams and structure is in place to provide students with a more personalized and individual experience, students excel academically.

Darling-Hammond, Ancess, and Ort (2002) analyzed change in student outcomes when a large, urban high school in New York was replaced by six smaller schools
designed to personalize learning. The Coalition Campus Schools Project compared measures of success for the original Julia Richmond High School (1992-1993) with the same measures for the six smaller, personalized schools that replaced it (1995-1996) (Clarke, et al., 2003). Within the first year, the average attendance for ninth-graders at the six new schools was 88.5% compared to 66% for ninth-graders at Julia Richman the year before. Two years later, disciplinary and dropout rates were also far below the city and Julia Richman averages. Gains were also seen in reading and language skills of limited-English-proficient students.

The researchers suggested that the following initiatives be allowed: (a) smaller class sizes; (b) structures that allowed for personalization and building of strong relationships; (c) curriculum aimed at specific standards; (d) teachers ability to adapt to student's needs; (e) performance assessment systems; (f) flexible supports; and (g) collaboration and problem solving.

**Cases Studies of Personalized Learning in England**

Sebba, Brown, Stewart and James (2007) investigated personalized learning approaches used in British schools. Case studies and surveys illustrated a wide range of personalized learning services were used in schools. Some of the activities employed were: reorganizing teacher assistants, mentors, and administrators to provide support, small groups, extended alternative curriculum, and work-related opportunities. Schools that developed strong personalized learning approaches included aspects of assessment for learning, students who took more responsibility for their own learning, incorporating student voice, building connections to the community, and implementing flexibility with the curriculum. The case studies and surveys also suggested that schools which are
characterized as strong on personalized learning see learners as co-investors in education in terms of their aspirations and commitment to learning.

Leadbeater (2005) visited six schools in England recommended by their peers as schools that engaged in personalized learning. The intent of these visits was to create a connection in the dialogue between policy-makers and practitioners. Leadbeater set out to answer the following questions:

- What does personalized learning mean to those trying to make it a reality in schools?
- How do schools need to change how they work to make personalized learning possible?
- What are the implications of personalized learning for collaboration between schools and with other partners outside education?
- What kinds of collaboration are most effective in supporting personalized learning and how are they funded and led?
- How do personalized learning and collaboration feed improvements in education across the system as a whole and what is the role of the center in propagating change?

Leadbeater discovered that personalized learning schools have found new ways of organizing through collaboration with other schools or agencies. This allowed for greater flexibility and adaptability in services offered to students (Gardner, 2012). Furthermore, Leadbeater found that staff in personalized learning schools shared a clear vision as learning was seen as interactive. In addition, there was a belief that learner-led learning led to achieving high standards as well as a culture of innovation.
Case Studies of Personalized Learning in the U.S.

Jenkins and Keefe (2002) reported strong evidence that two high schools, where personalized learning was implemented, achieved higher test scores than other schools in one district. One of the schools studied, the Francis W. Parker Charter Essential School, was guided by personalized learning. One of the common principles that guided the school was that teaching and learning should be personalized and that the student should be seen as the worker, as opposed to the teacher as the deliverer. Also, the school subscribed to the belief that credit is not earned for time in class, but for mastery of skills and knowledge. Students at the Parker School scored higher than average on the Massachusetts Comprehensive Assessment System (MCAS) and the Stanford Achievement Tests (SAT) in 22 of the 25 school districts from which the school draws its students.

Thomas Haney Secondary School was another school that Jenkins and Keefe (2002) studied. The goals at this school included the following: (a) learning requires active participation; (b) students learn in a variety of ways and at difference rates; (c) learning takes place in individual and social contexts.

Students were able to experience independent learning as well as work in small groups. Most traditional classrooms were replaced by spaces designed for personalized learning. Results at this high school have been significant. According to results from provincial final exams, Thomas Haney was ranked at the top of the list of British Columbia's top high schools.
Examples of Personalized Learning

Some educational researchers believed that John Dewey's laboratory school at the University of Chicago was the first school to incorporate personalized learning (Keefe & Jenkins, 2002). The school ran from 1896-1903 and was an attempt to establish a creative environment and test educational theories (Mayhew & Edwards, 1936). Even in the early 1900's, Dewey recognized that a change was needed from the traditional approaches of the time. He believed in experimenting to discover the best ways for students to learn. Furthermore, he also believed the setting of his school allowed for more opportunities for initiatives, discovery, and independent communication (Mayhew & Edwards, 1936).

Many schools have taken on the spirit of Dewey's willingness to experiment and try new approaches. Very few schools use all of the themes of personalization in a comprehensive and systemic ways; however, many are working towards greater implementations (Jenkins & Keefe, 2002). The following portion of the literature review showcases the research on schools that have integrated personalized learning services. Several schools were referenced throughout the literature as schools that incorporate several of the themes of personalized learning. These schools are listed in Appendix D.

School of One: New York City. “Choose your modality.” Joel Rose, founder of the School of One, saw this sign hanging in the entryway of a technical training school. This inspired him to create a new model of education. The School of One started as a summer pilot program in 2009. In the fall of 2010, it began its first full school year. After the summer pilot program, an evaluation was conducted by the Education Development Center (EDC). The EDC found that students gained 28 percentage points from pre-test to post-test on math assessments (EDC, 2009). To achieve these results, a multitude of
factors that contributed to a personalized learning environment were implemented including continuous assessment, schedules created by advanced technology, and incorporation of students learning styles (McLester, 2011).

At Rose's School of One, students have a variety of instructional opportunities, such as large live instruction, small live instruction, virtual large and small group instruction, group collaboration, and independent practice (Dubner, 2011). The School of One uses an algorithm to select the modality of student learning, much like the algorithm used to predict a listener's next song choice on Pandora (Dubner, 2011).

A “playlist” is created every day for each student at the School of One. These “playlists” are created by using formative assessments (McLester, 2011). This “playlist” contains lessons, activities, and strategies that will help each student learn new skills. Allowing students to take advantage of a wide range of instructional approaches and strategies gives them an opportunity to learn in a personalized manner. Students are learning and mastering concepts in a way that is not based on age, grade level, or class assigned (Wolf, 2010).

The School of One offers flexibility that encourages a range of teaching and student learning. The algorithm that the school utilizes for assessments provides a method that capitalizes on matching instructional strategies, resources and modalities with student learning. Many other schools across the US have followed suit and have integrated new learning modalities and strategies.

The Adams 50 School District. Another example of integrating personalized learning is the Adams 50 School District in Colorado. This district made some radical changes after many of its schools ended up on an academic watch list because of below
average test scores (CNN, 2011). In 2008, the district began following the Re-inventing Schools Coalition (RISC) model and implemented a standards-based reform model in which grade levels were no longer used (Vail, 2010). Students worked through learning levels on their own pace. Students who mastered skills quickly had the opportunity to advance to the next level at any time (Vail, 2010). This was referred to as Competency-Based System (CBS). The district's website (http://www.cbsadams50.org/) stated the school’s educational system was organized around engaging students in 21st Century skills, allowing students to work at their developmental levels and advance when they have demonstrated proficiency or mastery.

Since the reform, Sarah Gould, principal at Hodgkins Elementary School, a part of the Adams 50 School District, said that discipline problems decreased 76% at her school (CNN, 2011). Students were also showing significant progress academically. In 2010, 31% of Hodgkins students were proficient or at an advanced level in reading. This district provided another example of using flexibility and individually assessing student needs and matching instructional strategies to increase student results.

**Cooperative Educational Service Agency (CESA) #1.** Cooperative Educational Service Agency #1 (CESA #1) serves 45 school districts in southeastern Wisconsin. It is one of twelve regional agencies in the state that was created by the legislature to serve educational needs by serving as a link between school districts and between school districts and the state. The agencies goals are to facilitate communication and cooperation among all public and private schools, agencies, and organizations that provide services to pupils (Cooperative Educational Service Agencies, 1983).
CESA #1 has a unique vision that includes integrating three core components of a personalized learning system. These are learner profiles, personalized learning paths and proficiency-based progress (The Institute @CESA #1, 2011). Learner profiles are built by data, much like the algorithms used at the School of One, and provide educators with details on how a student learns. This allows for a customized learning environment and instructional strategies to be used (The Institute @CESA #1, 2011). Personalized learning paths provide students with an opportunity to use their voice and collaborate in building their education place based on their interests and learning styles (The Institute @CESA #1, 2011). Proficiency-based programs incorporate a range of assessments that are used to measure competency in academic and 21st century skills. Students move to the next level based on what they have learned and now how much time they have spent in school (The Institute @CESA #1, 2011).

CESA #1 has put into place many innovative practices, including progress-based groupings instead of age-based groupings, using customized learning plans instead of standard learning plans, incorporating dynamic digital resources, and accessing teacher a blend of face-to-face and online approaches (Devaney, 2010).

Superintendents from various school districts that make up CESA #1 attended workshops before many of the strategies were implemented. These workshops led to a white paper that established background and actions for change: “Transforming Public Education: A Regional Call to Action” (Devaney, 2010). This white paper provided a list of transformative practices that many schools within the Agency focus on. These included:

- Moving from age-based cohorts to learning or progress-based groupings
- Changing classrooms into small, collaborative, flexible learning groups
- Dropping standardized solutions in favor of customized learning plans and processes
- Transforming largely face-to-face, teacher-directed instruction into electronic, digitally blended instructional approaches
- Phasing out largely print-based instructional resources and implementing digital, highly customizable textbooks and online instructional and learning resources

These strategies were already implemented in many of the Agency’s schools. Asa Clark Middle School was one example of a school with transformed classrooms. Learners had up to six instructional strategies available to them on demand. These strategies ranged from video, digital content, collegial work, one on one, small group, large group, and instructor led experiences (Rickabaugh, 2012).

The Director of the Institute at CESA #1, Jim Rickabaugh, was the keynote speaker at the 2012 School Improvement Innovation Summit held in Salt Lake City, Utah (Rickabaugh, 2012). He shared some of the results that schools in these districts have seen. For example, four elementary schools that had transitioned to personalized learning schools compared math and reading scores to “matched” schools in other districts. The matched schools had similar test scores in years past and similar demographics. In every single case, Rickabaugh stated, the personalized learning school surpassed the matched school in reading and math scores. Additionally, the average growth of the students in math and reading approached double the projected learning growth for the year in all four schools (Rickabaugh, 2012). Schools in CESA #1 have incorporated many of the themes
of personalized learning that have been found in the literature. Like the School of One and Adams 50 School District, the results from personalizing the learning services have been significant in increasing student outcomes.

**Chugach School District.** Chugach School District in south central Alaska is yet another district that incorporated personalized learning to help increase student achievement. In 1994, the district was failing by nearly every measure: staff turnover, low student test scores, and incredibly low numbers of students attending college (COSN, 2010). Conversations between all stakeholders began happening in the community through town hall meetings. Through these meetings, radical changes were recommended. The district eliminated grade levels as measures of progress, much like that of the Adams 50 School District, and adopted a standards-based system that emphasized real-life learning. Students were also allowed to complete their education at their own pace. Students were provided with learning plans that were based on their learning patterns and needs (COSN, 2010). Students only progressed to the next level when they mastered the current level with at least an 80 percent proficiency level (Rubenstein, 2007).

In 1995, reading scores in the district for the California Achievement Test were in the 28th percentile. By 1999, scores had risen to the 71st percentile. Math scores also rose from 54th to 78th. Language arts scores also went up from 26th to 72nd percentile (COSN, 2010).

The schools and districts referenced above have incorporated many themes of personalized learning including individualization, student voice, organization, curriculum, assessment, technology. Through these themes of personalized learning, each
of these schools and districts have been able to successfully match students with appropriate learning styles and demonstrate positive results.

While gains are being made in the literature on personalized learning, there is still an area that is underrepresented: studying how schools were able to make the transition from a traditional model to a personalized learning model. Studying this would add a component to the literature that does not exist. Schools or districts could use this as a template in regards to action steps to take and barriers to expect.

**School District Reform**

Bergeson (2004), the Washington State Superintendent of Public Schools wrote a report titled, “Characteristics of Improved Districts: Themes from Research.” He completed review and synthesis of research literature that studied school system change during the prior 10-15 years. Over 80 reports and articles were reviewed and 23 were analyzed to identify common themes. In this report, Bergeson highlighted best practices for schools that had integrated sustained change and improvements. Districts that had shown improvement focused on student learning and school leaders believed that it was everyone’s responsibility. Improved districts also maintained a focus on learning goals and removed programs that interfered with reaching those goals (Bergeson, 2004).

Bergeson also identified leadership practices that contributed to improvement and sustained change in district. Leaders of improved school districts were dynamic, united in purpose, involved, visible, and interested in instruction. They were also encouraging, provided recognition, and supported student learning (Bergeson, 2004).

Bergeson (2004) also noted that improved districts use data as evidence to monitor results, make instructional and resource allocation decisions, and to aid
accountability. At the district level, time and training was provided to help schools use and interpret the data. The evidence was used to make decisions about alignment and targeting professional development efforts.

In *Tinkering Toward Utopia*, Tyack and Cuban (1997) took a wider approach to analyzing school change. The authors suggested that change results from internal knowledge created by teachers and administrators. They further elaborated that policymakers often have no experience in the classroom and bypass teachers and administrators by discounting their knowledge of school systems. Reform efforts initiated by policymakers and implemented by remote control has rarely worked (Tyack & Cuban, 1997). They also encouraged school reforms to be adapted by educators working together and taking advantage of their knowledge of their own diverse students and communities. In addition, the authors encouraged parents and the public to be engaged and incorporated into the process of school change. The aim of reform is not to improve test scores, but rather to improve learning and enrich student’s intellectual capacities and social development (Tyack & Cuban, 1997).

Elmore and McLaughlin (1988) elaborated on Tyack and Cuban’s interpretation of why reform efforts in schools often fail. As addressed in Labaree’s book, *Someone has to Fail: The Zero-Sum Game of Public Schooling*, Elmore and McLaughlin saw the issue of school reform in organizational terms. They argued that the key variable was the ability for the intended change to move across the levels of the school hierarchy. These three levels included policymakers, school administrators, and practitioners. In theory, the policymakers frame and initiate the reform effort. The school administrators then facilitate the change and the practitioners implement it. The problem lies, however, in
each group’s own unique social and cultural world and communication across each level.

Elmore and McLaughlin suggested that most reform efforts never get past the school administrator because the change effort has to move from the rhetorical level to the core of teaching and learning in the classroom. The reform has to persuade educational opinion levels, reshape the formal structure of the classroom and reconstruct the learning of the students in the classroom.

**Change Theory**

Dr. John Kotter (1996) describes leading changes an eight stage process: (a) establishing a sense of urgency (b) creating the guiding coalition (c) developing a vision and strategy (d) communicating the change vision (e) empowering employees for broad-based action (f) Generating short-term wins (g) Consolidating gains and producing more change (h) Anchoring new approaches in the culture.

After nearly thirty years of research on organizational change, Kotter (1996) suggests that nearly 70% of all major change efforts in organizations fail due to the lack of a holistic approach and willingness to see the change through.

In Gladwell’s text, *The Tipping Point* (2000), he looked at a number of anecdotes and stories of organizational change. He states that the first lesson of the Tipping Point is the Law of the Few (Gladwell, 2000). Change happens because of three types of people: connectors, mavens, and salesmen. Connectors are the individuals who facilitate the change process and are few in number. Mavens are collectors of information and share what they know. Salesmen sell individuals on what they know. They are persuasive and understand that little things can make a big difference. They are able to tune in to the
person they are trying to persuade. They empathize, are influence and spread change (Gladwell, 2000).

While the people are an important part of the change process, the message is also critical. Having a story, or narrative, that can be retold helps the change initiative stay (Gladwell, 2000). It is important that the change leader’s story is not underestimated and the same message is repeated in a variety of ways. The story must have meaning, address the identity of the organization and its members, move people to action, and communicate values (Gladwell, 2000).

Gladwell (2000) makes the case that there is a “magic number” of 150. The number 150 represents the maximum number of people that a group is able to maintain relationships with. When a group or organization reaches this number, it is necessary to divide. Gladwell’s point on change theory is that in order for change to become contagious, groups will need divide and create small movements. This will, in theory, expedite the change epidemic. He cautions that crossing the 150 line will adversely affect both efficiency and effectiveness (Gladwell, 2000).

Gardner (2004) identified seven factors that provide how one can lead change. These seven factors are: (a) reason (b) research (c) resonance (d) redescription (e) resources & rewards (f) real-world events (g) resistances.

**Reason:** Gardner (2004) suggested that many organizational members can be reasoned with. Change leaders can use rational approaches that have an appeal for thinking and reflection when proposing change.

**Research:** Much like that of reason, this factor involves sharing and presenting supportive data to members of the organization. Depending on the scientific orientation
of members, the research may need to be presented in a rigorous and persuasive manner. For other members, the research does not have to be as formal (Gardner, 2004).

**Resonance**: Change leaders need to ask themselves if the argument for change resonates with the organizational members. Some organization members are persuaded at an unconscious level and must feel like the change leader is reliable, consistent, and honest.

**Redescriptions**: Garnering support for change includes utilizing a number of different forms or presentation. The point of argument can be made through linguistic, numerical, and graphic ways. While presenting a story is one way to illustrate the change, figures, graphs, percentages, and data may persuade more individuals.

**Resources and Rewards**: With this lever, the change leader can provide resources that will facilitate the change being proposed. For example, an expanded budget, additional staff, or more space (Gardner, 2004).

**Real-World Events**: Events in the external environment like economic depression, natural disasters, breakthroughs in research, or the creation of a new technology can change the minds of organizational members (Gardner, 2004).

**Resistances**: Gardner (2004) believes that change could still be met with some resistance. His suggestion if for all aforementioned levels to be mutually reinforcing. If, however, they are inconsistent and resistances are strong, changing minds will be unlikely.

**Summary**

The current research on personalized learning provides some rich examples on current practices. Studies are limited, however, that focus on results and how
personalized learning was integrated. Because of this, the researcher also analyzed school
district reform and change theory to get a better sense of how systemic change can be
implemented.

While the researcher found numerous case studies on personalized learning, no
qualitative grounded theory research exists on personalized learning. Therefore, I used a
qualitative grounded theory study to develop a theory on how to most effectively
implement personalized learning practices.
CHAPTER 3: METHODOLOGY

Introduction

The purpose of this grounded theory study was to develop a theory on how personalized learning services were implemented in public schools in the US. Grounded theory was chosen for the methodology as no theories were found in the literature that explained the process of how personalized learning was integrated in schools. Creating a new theory is the goal of grounded theory research and the researcher proposes such a framework through this study (Glaser & Strauss, 1967).

The study was exploratory, as it aspired to identify best practices for integrating and sustaining whole school systemic changes through personalized learning. The participant population included ten interviews with twelve change agents from selected public school districts. These change agents represented eight different school districts. The interviews were conducted to build a theory that explains how personalized learning services were integrated and sustained.

Qualitative Methodology

Qualitative research was used, as this method is appropriate for the development of new theories, hypothesis and knowledge based on inductive reasoning and inquiry. This methodology was also chosen as there was little established theoretical knowledge in regards to personalized learning. Qualitative research uncovers and explains underlying experiences and is able to provide rich explanations that might otherwise be difficult to study through quantitative methods (Roberts, 2010). Qualitative research also allows inquiry in natural settings and for the meaning people bring to the research to be interpreted (Creswell, 2012). The researcher was interested in understanding the detailed
complex narratives of participants in the study. These narratives were used to build the
case for the researcher’s interpretations (Hatch, 2002).

**Grounded Theory**

Grounded theory was chosen by the researcher as its intent is to move beyond a
description and generate a theory or an explanation for a process or action (Creswell,
2012). Further, grounded theory allows for the collection of data in a systematic fashion
in which it can then be sorted and analyzed (Strauss & Corbin, 1994). Participants in this
study experienced implementation of personalized learning services in public schools.
The theory that was developed through the research explains the practice of
implementation and provides a framework for future implementation (Creswell, 2012).

**Worldview of the Researcher**

A social constructivist worldview approach was taken in this study as social
constructivists seek to understand the world in which they live (Creswell, 2012). The goal
of the qualitative researcher with a social constructionist view relies on the views of the
research subjects (Creswell, 2012). The researcher seeks to understand the current
landscape of education, specifically transitions into personalized learning. The researcher
sought to gain a clearer understanding of how the successful and lasting personalized
learning changes were integrated and sustained. Hatch (2002) also suggested that
grounded theory is a postpositivist model and “works from the assumption that rigorous
methods can be used to discover approximations of social reality that are empirically
represented in carefully collected data (p. 26).”
Role of the Researcher

Researchers must identify their biases, values, and personal backgrounds that may shape their interpretations (Creswell, 2013). The researcher did not have any experience working in a school that integrated personalized learning as a whole systems approach. As an educator, she did attempt to incorporate some of the themes, like student voice and technology. This, however, did not encompass all of the elements of personalized learning and did not provide an accurate picture of how schools transition from traditional to personalized learning. At the time of the study, the researcher was a fourth year teacher teaching in a Title 1 building and classroom where students’ learning abilities varied greatly. The researcher experienced reading levels between Kindergarten and 12th grade each year in her 9th grade classroom. An interest in personalized learning stemmed from a desire to explore learning strategies that served the diverse learning needs of students.

Selection of Participants

A study that focused on identification of personalized learning and offered descriptions of services had previously been conducted. Further, no literature was found that addressed future school leaders who wish to integrate personalized learning services. Therefore, a study of change agents in schools who were instrumental in integrating personalized learning services was deemed necessary. The researcher was interested in not just what personalized learning services were offered, but how change agents talked about, integrated and garnered stakeholder support in regards to personalized learning.

At the onset of the study, the researcher wanted to focus on urban high schools, but after a review of the literature and initial research into schools that incorporated
personalized learning, the researcher uncovered that many schools that incorporated personalized learning were charter schools. Due to the different structures and rules charter schools abide by, the researcher decided to keep the study limited to public schools. The researcher then had to expand her search to schools outside of urban areas and outside of just 9th-12th grade. The researcher ended up with participants from a variety of public schools that spanned K-12th grade. Participants consisted of the following twelve change agents:

- Two high school principals
- A director of a Cooperative Educational Service Agency
- An elementary school principal
- A superintendent of a school district
- A personalized learning coordinator
- A principal of an alternative school
- An assistant superintendent and an e-learning coach
- A personalized learning project coordinator
- An elementary school principal and director of academic services
- The majority of these participants were located in the Midwest, with one participant from the east coast. Demographics of students within schools varied. There was even a variance within some of the participant’s own districts, ranging from schools that were considered suburban to urban, inner-city schools.

**Sampling**

A snowball sampling method was used to identify and recruit subjects (Biernacki and Waldorf 1981), as there was no large existing database that categorically identified
schools that had integrated personalized learning. To begin the process of finding participants, the researcher was directed to a superintendent of schools who had recently worked with a district that transitioned from a traditional approach to a personalized approach to learning. The snowball sampling technique was then employed, as he was able to connect the researcher to additional school leaders who were instrumental in integrating personalized learning services.

After the initial phase of snowball sampling, the researcher then employed purposeful sampling by selecting participants that were mentioned in the literature on personalized learning. Purposeful sampling is an intentional sample of a group of people who can best inform the researcher about the issue under examination (Creswell, 2012). Purposeful sampling allowed the researcher to identify participants who had previously integrated personalized learning services within their schools. Purposeful sampling was achieved through emailing potential participants and reaching out to change agents via Twitter. Through Twitter, the researcher was able to make a connection with a resource who directed her to several potential participants.

Some potential participants were excluded after an initial phone or email conversation, as they were in the initial planning stages of personalized learning or their definition of personalized learning did not match what the operational definitions for personalized learning that were included for this study. The researcher limited participants to 10 interviews, as she reached saturation at that point. That is, the researcher came to a point during her grounded theory where each category was saturated and no new information added to the findings (Creswell, 2012).
Research Procedures

A set of ten questions focused on how personalized learning was integrated in schools was used with each participant. These questions can be found in Appendix C. The interview questions were field tested for validity. Ten individuals outside of the research study were selected for the field test. These individuals looked for the following: (a) understandable directions (b) clear wording (c) adequate answers (d) sufficient detail (e) regional differences (f) difficult section (g) irrelevant questions (h) length (i) convenience (Roberts, 2010). Nine individuals responded and their feedback was analyzed and incorporated.

Data Collection

The Creighton Institutional Review Board approved this human subjects study. Data collection began in October 22nd of 2013 and was completed by December 12th, 2013. Participants were first contacted by phone or email to ask for their participation. Respondents were informed that neither their personal identity nor the identity of their school would be released. All long distance interviews were conducted via Skype. These interviews were audio recorded and handwritten notes were taken. Each interview lasted between 30 and 60 minutes. The interview recordings were transcribed by a professional transcriptionist.

After the interview process, the researcher triangulated the data by analyzing district and school documentation, including websites, videos, board meeting notes, newsletters and communications sent to community members. A theory was then built through the process of memoing, in which the researcher wrote down ideas as data were collected and analyzed (Creswell, 2012). Within these memos, ideas were formulated that
contributed to the processes observed by the researcher. The processes were then analyzed and theorized by the researcher (Creswell, 2012).

Data Analysis

Step 1: Initial reading of transcripts

The researcher received transcriptions from each interview and did a careful review of each one. Next, the researcher developed a preliminary list of response categories, themes, and patterns using NVivo10®. Several prominent themes emerged from the initial reading. Each theme was given an initial coding (Roberts, 2010).

Step 2: Organization and Coding of Responses

The responses were sorted and grouped by research questions. The researcher read through all responses for each research question and highlighted important information. The researcher then developed a master coding list of response categories (Roberts, 2010). This was considered open coding and major categories of information were established (Creswell, 2012). These categories included definition, processes that facilitated personalized learning, barriers, types of personalized learning services, leadership, and resources. From open coding, the researcher then employed axial coding, in which the researcher identified one open coding category upon which to focus (Creswell, 2012). Within the initial categories referenced above, the researcher developed additional themes within each one. The researcher then went back to the data and created categories around the core experiences (Creswell, 2012). The following table illustrates the themes discovered within the category of definition.
Table 1

*Themes within the coded category, definition*

<table>
<thead>
<tr>
<th>Directed by students</th>
<th>Teacher as facilitator</th>
<th>Student interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning needs</td>
<td>Learner readiness</td>
<td>Flexible</td>
</tr>
<tr>
<td>Any time</td>
<td>Any where</td>
<td>Demonstration of knowledge</td>
</tr>
</tbody>
</table>

Types of personalized learning services was another category. The following table shows the themes the evolved from this category.

Table 2

*Themes within the coded category, types of personalized learning services*

<table>
<thead>
<tr>
<th>Open courseware</th>
<th>Flexible schedules</th>
<th>Content mastery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customized format</td>
<td>Small group work</td>
<td>Student selected projects</td>
</tr>
<tr>
<td>Centers/Workshops</td>
<td>Learning management systems</td>
<td>Self-organized learning environment</td>
</tr>
</tbody>
</table>

The next category that was analyzed was results. Results fell into three different themes, as seen in Table 3.

Table 3

*Themes within the coded category, results*

<table>
<thead>
<tr>
<th>Test scores</th>
<th>Student engagement</th>
<th>Teacher engagement</th>
</tr>
</thead>
</table>
The next category that emerged was processes that facilitated personalized learning. The following table illustrates the themes found within this category:

Table 4

*Themes within the coded category, processes that facilitated personalized learning*

<table>
<thead>
<tr>
<th>Planning/Vision</th>
<th>People</th>
<th>Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>Organization</td>
<td>Flexible</td>
</tr>
</tbody>
</table>

Next the researcher addressed barriers. The themes that emerged from this category can be seen in Table 5.

Table 5

*Themes within the coded category, barriers*

<table>
<thead>
<tr>
<th>Transferability</th>
<th>Difficulty level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of support and understanding</td>
<td>Current assessment practices</td>
</tr>
</tbody>
</table>

Lastly, leadership was utilized as a major category. The themes coded within this category can be seen in Table 6.

Table 6

*Themes within the coded category, leadership*

<table>
<thead>
<tr>
<th>Personal development</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk taking and trust</td>
<td>Systems thinking</td>
</tr>
</tbody>
</table>
“Resources” was the final category coded in the initial stages. The researcher discovered that the concepts discussed in this category could be placed within previously discussed themes.

**Step 3: Review of Total Transcripts and Final Coding**

The researcher used the master coding list to code the full transcript of each participant. The researcher then noted when second or third references were made in a response category. The coding list was then finalized (Roberts, 2010).

**Step 4: Completion of Data Analysis and Report of Findings**

An analysis of each response to the research questions was conducted. Additionally, a comprehensive analysis of each interview was done. The final step was selective coding, in which the researcher took the model and developed theory that interrelated the categories in the model and assembled an explanatory story that describes the interrelationship of categories in the model (Creswell, 2012). This resulted in the final themes, patterns, and categories for the research questions.

**Step 5: Review of all of the Transcripts to Validate the Findings**

The researcher reviewed all the transcripts a final time to ensure that the findings and the main themes and patterns were consistent with the data. A comparison of the literature was made to determine which findings were supported or not supported by the literature (Roberts, 2010).

**Validation Strategies**

Validity is used to increase the trustworthiness of the study (Roberts, 2010).

Methods used to build internal validity in the analysis include peer review of the
interview guide, triangulation, feedback from respondents, and an audit trail conducted by committee members.

**Interview Guide**

The interview questions were field tested for its validity. Ten individuals outside of the research study were selected for the field test. These individuals looked for the following: (a) understandable directions, (b) clear wording, (c) adequate answers, (d) sufficient detail, (e) regional differences, (f) difficult section, (g) irrelevant questions, (h) length, (i) convenience (Roberts, 2010).

**Triangulation**

In addition to responses from interviews, the case data from archival records such as board policies, memos, newsletters, pilot program manuals, goal statements, and other such documents were reviewed. The records were reviewed to validate or extend the statements made by the change agents in each of the districts. These records validated responses from interviews and were added to the coding process.

**Feedback from Respondents**

To validate the interviews, the researcher sent each participant an electronic copy of the transcript from their interview. This is considered member checking (Creswell, 2012). Participants were allowed seven days to identify any errors and no response would mean they agreed with the transcription. One respondent responded with a concern about mentioning a particular University. I assured her the name of the University would be omitted. Another respondent responded by saying that the transcript looked accurate. A third respondent responded by saying that it looked great.
**Ethical Considerations**

All participants were informed about the procedures and the potential risks. See Appendix A for the Participant Consent Form. Participation was voluntary. The identities of the participants was kept confidential. All identifying characteristics, such as city and school name were changed. Only aggregate data were reported in the study. No other researchers will have access to the study’s data. Electronic and paper files that contain confidential data were locked and stored in a place away from public access. The tapes and notes will be destroyed three years after the research has been published.

**Summary**

This chapter presented the methods of grounded theory used in this study. Included in the chapter was the use of grounded theory research methods, such as sampling techniques and coding methods. This chapter concluded with data collection methods as well as analysis procedures intended to increase data reliability and validity.
CHAPTER FOUR

Introduction

In this chapter, the results of the 10 interviews conducted for this qualitative study are reported. This will be done by first discussing the process of how the data were analyzed and validated by the researcher. Five critical areas of personalized learning emerged through the analysis and will be discussed in this order:

1. Definition of Personalized Learning.
2. Description of Personalized Learning Services.
3. Personalized Learning Results.
5. Leadership.

Within each area, sub-themes will be discussed as well. After analyzing results, the researcher developed a grounded theory referred to as Personalized Learning Integration Systems Approach. This theory and its components will be discussed following the five themes.

Data Analysis

After the audio-recorded interviews were transcribed by a transcription service, all data was reviewed and a list of themes and patterns emerged in the transcripts. Each theme identified was assigned a code utilizing NVivo10 software (QSR International). The interviews were then uploaded to begin digital coding and analysis. Meaningful segments from interview transcripts are included in Chapter 4. Transcripts were not included within the dissertation to maintain confidentiality of participants’ identities. The researcher reviewed all responses in each interview question transcription. A final review
of all the transcripts was done by the researcher to ensure all identified themes and patterns were consistent with the analysis. The transcripts were electronically sent to each participant for review and feedback. A comparison of the literature was made to determine which findings were supported or not supported by the literature presented in Chapter 2 and will be discussed in Chapter 5.

Summary of Interviews

All interviews were conducted via Skype from October 22, 2013, to December 12, 2013. A total of ten interviews were completed during this time. Two interviews had two different participants. An additional interview was scheduled, but later cancelled due to the potential participant’s concerns that her school was not far enough along in the integration process of personalized learning. Interviews were done with change agents who had experience with personalized learning and were located in the Midwest and East Coast. These change agents had various roles in education. Including:

- Two high school principals
- A director of a Cooperative Educational Service Agency
- An elementary school principal
- A superintendent of a school district
- A personalized learning coordinator
- A principal of an alternative school
- An assistant superintendent and an e-learning coach
- A personalized learning project coordinator
- An elementary school principal and director of academic services
Defining Personalized Learning

Whether searching for the term online or discussing the concept with educators, parents, or students, the term personalized learning brings with it many connotations. There are many terms that are being used in tandem with personalized learning, like next generation learning, customized learning or mass customization. While the term is an evolving definition, it is critical for each school to define the term and put parameters around what it is and what it is not. As participant 4 said, “How you define it becomes your why.” Participant 4 further elaborated on this point by suggesting that personalized learning looks different in each school. She discussed the concept of freedom within fences and believes that each school should be allowed the freedom to utilize personalized learning in ways that best fit the needs of their school. With that being said, each school should begin with a general definition or understanding of the term. After discussions with each participant on how their school defines personalized learning, the following definition was created as a summary of their responses.

Personalized learning is centered on and directed by students. The educator plays an integral role of being the facilitator and “engineer of experiences and pathways.” Personalized learning is tailored to student interest and aptitudes. It is responsive to the learning needs, interests, and readiness of the learner. Personalized learning is flexible, both in its location and pacing. It is anytime, anywhere learning. Personalized learning allows for the construction and demonstration of new knowledge and skill sets. Personalized learning is an environment that incorporates standards and provides for college and career readiness.
Participant 5 believes it is critical that personalized learning is not seen as a “flavor of the month” and that further conversations on education are centered on what learning needs to look like for students to truly be prepared.

**Description of Personalized Learning Services**

To further enhance the definition of personalized learning, participants described personalized learning services that had been integrated in their schools. The aspects of personalized learning ranged from open courseware offerings to the elimination of bell schedules.

Participant 1 discussed the integration of independent open courseware at his school. Students are able to select courses from universities like MIT, Harvard, Yale, or Stanford. The courses are offered online and are free to the students. Students are able to get high school credit for the courses and demonstrate their knowledge and expertise through presentations. As participant 1 stated, students get the opportunity to show what they have learned.

Personalized learning also means setting higher expectations. Participant 10 discussed content mastery. Students are required to master content standards at a level of eighty percent or higher before they move on in their math classes. To support content mastery, morning tutoring is offered and each student has an iPad or laptop, with which they can download teacher-recorded lessons.

Participant 2 elaborated on aspects of personalized learning that were happening in 29 different school districts within his action network. The integration of personalized learning ranges from single classroom projects to over a hundred classrooms engaged in the process. Learners develop learning plans with teachers by looking at strengths,
weaknesses, and current progress. Together they build customized instruction. Participant 2 further addressed what personalized learning might look like in a classroom. “You’ll find students sitting, working in small groups, doing individual work. They might be off to the side in a seminar with a teacher, but they won’t be sitting in rows.” Each student has clear goals and interacts with their teacher based on those goals and their current progress.

Participant 3 discussed the process of integrating student choice. She stated that in her school students are able to select what activities they are going to participate in. They also get to choose seating in several classrooms. Students also work through stations or work centers depending on their progress towards their goals. A specific example she highlighted was that of reading classes at the elementary level. A classroom might have centers that incorporate the five elements of reading. Students, however, get to select which center they are going to. A student could, for example, chose to go to the fluency station more than one day. If fluency is an issue, the data program (Audacity in this case) is leveled to the student’s ability. She also suggested that the level of personalized learning within her building is a continuum of implementation.

Like participant 3, other schools are using software programs to collect data and help differentiate instruction. Participant 4 discussed DreamBox, a program that is used in math classes and moves along with individual student pacing. He further discussed the implementation of using technology to fully integrate personalized learning. The school is 1:1, meaning each student has a laptop or iPad. Participant 4 also illustrated what a typical classroom might look like in this kind of environment. She said students are often split into groups. Some may be working on computers, some may be working with an
aide, while other students are receiving teacher-lead instruction at their level.

Participant 6 further addressed the importance of computerized systems. She said this allows the students to make more choices about how they would like to demonstrate learning. Students are given the opportunity to see the standards and then asked how they would like to demonstrate their learning.

Participant 7 has eliminated bell schedules at the elementary school level, which has allowed for more flexibility. At the middle school level, more content is being added online, so information is always available to students. Participant 7 also discussed Self-Organized Learning Environments (SOLE) classes. In SOLE classes, teachers take on the role of facilitator or coach and students make choices about learning content and delivery. In one of these classes, students determine that they wanted to learn about developing applications. They have been watching videos (e.g., via YouTube) and have video-conferenced (e.g., via Skype) with experts during the learning process.

Participant 9 discussed the process of personalized learning in math classes. She stated that students may be on several different topics, but the teacher begins the class with a teacher-directed lesson. This may not be very lengthy, but the teacher goes over concepts pertinent to the curriculum with the whole class. The students then break into different groups. These groupings could include work on a computer, taking a pretest, independent practice, or small group guided instruction.

**Personalized Learning Results**

While integrating personalized learning has been a newer endeavor for many of these schools, interesting results have already been realized. Participant 2 stated that “students who are progressing at a rate faster than is typically seen in [personalized
Participant 1 commented on the increased level of effort from students. He said, “The level of effort that goes into creating a product that’s meaningful is so much more than it was for them before this.” He went on to discuss the feelings students have towards college preparation. Students have told him that they now feel more prepared for college. Students have also expressed their appreciation for being pushed out of their comfort zones. While participant 1 did not feel comfortable attributing some of the growth at his school specifically to personalized learning (as he said they have many different initiatives working in concert with each other), graduation rates have gone up from the low 90s to about 96 or 97 percent. There has also been an increase in standardized test scores, AP scores and more student getting accepted to 4-year colleges than two or three years ago.

Participant 10 also commented on standardized tests scores. He said, “Student achievement on state test has been out of this world.” On his state tests, students receive a pass, no pass or pass plus. He said the school’s scores have been almost at a pass plus as an average over the last five years. This is the school’s sixth year implementing personalized learning.

Participant 2 saw results from personalized learning in three different categories: on-task behavior, students move at a quicker pace, and state testing. He said, “When students choose and are part of developing their goals, they’re less likely to choose to do something else. They’re invested in this.” From a pacing perspective, students move
forward faster than the normal pace of class, whether they are gifted, middle of the road or special education students. He said, “Students are capable of moving forward much faster than we previously has assumed or allowed them to.” He also saw results on state assessment. Schools in his district that were most intensely engaged in personalized learning showed dramatic increased in performance. Students are not only meeting the projected results, but in some cases are coming close to doubling. Students who have been part of personalized learning math classes for two years have doubled the percent of proficient advanced on state tests as compared to the district average. In looking at 30 classes that participated in personalized learning within their reading classes, there was a 60 percent difference on state tests scores, compared to the district average. For classes participating in personalized learning in reading classes for only a year, there has been a 15 to 18 percent difference on state test scores over the district average. Participant 2 also commented on student engagement. He said students will make comments that they do not know when to stop with the learning process because they are so interested in their work. A specific example of how personalized learning has impacted a student was relayed by participant 2. He said she has a student who came into seventh grade math, but performed at a fourth grade level. During the course of the school year, he finished not only fourth grade math, but almost all of fifth grade. He then asked to be part of summer school so he could continue to accelerate his work because he had a plan to be on track when he entered ninth grade.

Participant 3 also discussed increased levels of engagement. She has previously observed thirty percent of classes where students were engaged for up to a twenty minute period of time. Since personalized learning has been implemented, she now observes a
hundred percent engagement of twenty minutes of class time. Participant 3 also gave a testimonial about the benefits of personalized learning when it came to a student with some behavioral challenges. This child often displayed three behavioral outbursts a day and needed additional staff who often had to escort him out of the classroom setting. She said since personalized learning has been integrated into his class, they have gone from three outburst a day to maybe three a month. She also had a kindergarten student that had been suspended over twenty days last year. This year he is in an environment that is more personalized, and he has only been suspended once.

Participant 4 discussed some of the qualitative results they have received from student surveys. Students talked about liking working at their own pace, feeling like they are being allowed to pursue more and conquer more learning at their own desire and at a pace that is workable for them.

Participant 5 further elaborated on student engagement. He said, “We have some classroom walk-through data where we have fifty percent of kids unengaged and a certain percent of those were actively disengaged. That means they were literally doing something else. When we go back through those classrooms that we’ve now introduced personalized learning to and working with those teachers, we have classrooms where that’s gone to a hundred percent engagement.”

Participant 6 said due to so many of the other variables that come into play with her students, like drug abuse or psychiatric issues, she is unsure of the direct impact of personalized learning. She said, “I would like to say everybody is fabulously in love and everybody's motivated, but we still have absentee and non-work completion issues.” She did suggest that a personalized learning environment has helped contribute to a very safe
Participant 8 discussed the positive changes with adults. He said, “We’ve seen an increased passion for what people are doing. Even people that have been teaching twenty years are now getting excited about what they do again.” After a training on personalized learning at the end of the school year, a teacher made the comment, “I can’t wait until school starts.”

Participant 9 commented on the productivity of students. She said when she walks by classrooms the kids are busy. She said, “They’re not just sitting and waiting for the teachers to feed them information. They know what they are to do.” She also stated that teachers know more about their students than she has seen in years past. Teachers are able to collect important data on their students’ progress. Teachers can speak to parents about exactly what their children have mastered, how many times they have taken an assessment and explain what concepts they are struggling with. As far as testing data, participant 9 is also seeing results. After a year of implementation, eighty-seven percent of students in personalized learning classrooms passed the state math test, compared to eighty-four percent not in personalized learning classes. Ninety-five percent of fourth graders passed the state math test, compare to eighty-four percent of students no in personalized learning classes. Participant 9 also discussed the lack of discipline issues with students in personalized learning classes. She has not had any discipline referrals for students involved in those classes. She also stated that the classes contain a blend of kids; some are high-needs students.
Barriers

Several barriers were discussed when schools took on the integration of personalized learning. These barriers included transferability to a school/district wide initiative, difficulty level, lack of support and understanding, and current assessment practices.

Transferability to a School/District Wide Initiative

Several participants were concerned with transferring personalized learning that was happening in individual classes to a school wide initiative. Participant 1 said he thinks the overall challenge in regards to personalized learning is thinking about how to mainstream this initiative into core content classes. Participant 10 also wanted to see personalized learning spread further than just a couple of classes in his school. He said, “The issue that we’re seeing now is trying to get [personalized learning] to other classes.” Participant 4 said that she sees personalized learning moving away from just the single classroom. She said the challenges her district faces now are how to scale it out so that it is workable. She said, “I need to be able to make discerning decisions with principals about what we should scale and what we shouldn’t.”

Difficulty Level

Participants 1, 3, and 10 discussed the idea that personalized learning, in its initial stages, may actually be more work than current practices. Participant 1 said personalized learning is a lot harder in practice than it is in theory. Participant 10 said the biggest barrier is lack of understanding that it is harder. He elaborated by saying that at the root of personalized learning is content mastery. He believes that content mastery is something that can never really be achieved. He said, “You might think someone is a
really great chef. They are always working towards mastery. They’re never going to
master this skill. Maybe they might one day make a perfect pancake, but the next day it’s
not going to be. So it becomes something that you have to keep working toward.”
Participant 3 thought teachers initially assumed that there was going to be less planning
and less responsibility. “It’s actually more,” she said, “You have to figure out how you’re
going to facilitate and get learning objectives met without just talking them through the
process. A lot of times, this takes more planning than a traditional model.”

*Lack of Support and Understanding*

Participant 10 believes it is critical to have support. He said often times parents
are fearful of personalized learning because it is hard, and they do not understand it. He
said pushback often comes from the community when trying something new and this can
be very difficult to get through. Participant 2 believed that people are the biggest barriers
- specifically, people who are afraid to try something new. He said, “Even with all the
frustration they experienced in the old system, there are people who are reluctant to let go
and it really is sort of loosening your grip of perceived control of students. Participant 5
agreed and believed the biggest barrier to integrating personalized learning was people
that do not like change.

Participant 7 said people struggle with making connections between what is
happening in the classroom and state assessment. She said, people will ask, "Well, how
are my kids going to do on the test?" Participant 8 also acknowledged a lack of common
understanding of what schools are trying to accomplish with personalized learning. He
said a lot of people view or hear about personalized learning, and think it is a free for all.
He went on to say that “there's a high awareness right now. Low level of common
understanding.” Participant 9 also believed that the unknown was a struggle for them during the initial stages of implementation. She said, “Every once in a while you’d have a rumor come around. It was everything…even we’re doing voodoo.”

**Assessments**

Several participants also commented on current assessment practices being barriers to personalized learning. Participant 7 stated that standardized testing is one of his school’s biggest roadblocks. Participant 8 agreed with these sentiments and said some of the barriers they face are standardized tests and how those are written. He said, “We have publishers that are driving the school communities right now—Pearson, McMillan, McGraw-Hill. Those are big players in writing tests. And so, writing standards and curriculum comes into that. And the training that you typically receive from a company like that is, ‘OK. Just...page 1, do what it says on page 1 and you're good. Page 2,’ and that's not real world. That does not get kids prepared for a test that the same . . . publisher happens to be putting out that they want people to because it's a multibillion dollar business.” He continued to say that individuals have bought into this idea that testing leads to good things. He did say, however, that he believes in assessment and accountability, and that well-done testing can be a very powerful tool.

**Leadership**

Effective leadership practices were discussed with each participant. Many principles employed by school leaders enabled personalized learning to be implemented and sustained successfully. These include personal development, resolution, risk taking and trust, and systems thinking.
Personal Development

Participant 1 said that he was intrinsically motivated to leverage technology to grow professionally. He said, “I think as a leader, making that choice to want to get better, to be more of a learner, really was a leadership decision that I made. If I had not made that we would not be having this conversation today, nor would we have even a fraction of the initiatives.”

Additionally, several participants, including participant 2 discussed growing in their own development by participating in book studies centered on personalized learning. Participant 4 talked about reading Jim Collins’ book Good to Great. Participant 7 participated in book studies based on Beatrice McGarvey’s book, Inevitable: Mass Customized Learning. Participant 7 also discussed the importance of adaptive leadership, which his district did additional book studies with. Ron Heifetz’ concepts on adaptive leadership were integrated into these studies. Principals in his district also charged with reading articles from Harvard Business Review around the idea of adaptive leadership. He explained that the idea behind adaptive leadership is that “the job of the leader isn't to come up with technical answers to things all the time, but it's to keep the water boiling a little bit...to keep pressure...for people to change, and that the old style of leadership is to answer everybody's questions and to be an answer person and the problem solver for everybody, but that the current mode of leadership is around teaching people to be adaptive, self-reflective and just keep that pressure cooker going.”

Resolution

Resolution was another piece of leadership that participants believed to be an important trait. Participant 10 said courage has been critical He said, “When you do
something new like this, it takes an awful lot of courage to stick with it because it is really easy just to quit after a year or two. Participant 4 talked about new issues that come up as her district continues on its journey of personalized learning. She said now they are in a dilemma where the transition between middle and high school is not working as seamlessly as she would like. She said, “We’ve just started in some of those hurdles. But we’ve just never let that stop us. We’ve never used it as an excuse not to move forward. If we haven’t got it figured out, we just figured we would…and we have!” Participant 9 discussed “panic meetings” that occurred in the initial stages of implementing personalized learning. She said she allowed her staff to share their grievances during these meetings. She said many people did not understand personalized learning because “we have trained people to play school.” This school year, however, has been completely different for her. She said, “I don’t know if it was the thousand prayers that were said, but this year I don’t think I’ve met with on parent regarding customized learning. The teachers [have] a calm presence in the hallways. They have a sense of ‘Ok, I know what I’m doing.’ And I think that the community saw that…nobody got hurt in the process. My kid is ok.”

Risk Taking and Trust

Several participants commented on the importance of risk taking. Participant 2 said that it is important to have leadership that is willing to take some risks as opposed to enforcing tight management processes and working on compliance. He said a key shift is that of a shift to leadership business, moving away from a focus on compliance with “processes toward greater commitment, the same thing we're asking of learners . . . the role of learner is not that of being compliant based to commitment based.” Leaders need
to provide permission, and then the “support for this to happen and an understanding that not everything we try is going to work.”

Participant 2 further commented that leadership skills that are critical to implementing educational change are real support and trust. “And when things don't work out, you treat that as a learning circumstance, not a blaming circumstance.” Participant 8 also brought up trust. He said a culture must be created where trust is there. He discussed the importance of risk taking as well. He said the schools where we see the least progress have leadership that wants to run a really tight ship and tighten the reigns the most. Participant 5 also mentioned risk-taking as part of key leadership practices. He said risk-taking, creativity, and collaboration are the three keys. He said when schools have principals and teachers with these qualities, personalized learning can take off fast.

**Systems Thinking**

Participant 4 said the leadership at his school has been very systematic about planning and systems thinking. She said this can be very constraining so they do not meddle in stuff if it is not in the strategic plan. She said, “Our biggest ah-ha was...in our leaders that by being very tight around systems thinking, you could end up becoming incredibly innovative, which I believe we are incredibly innovative in how we personalize our learning here. And it really evolved out of a very systematic approach. It wasn't chaotic. It wasn't an ah-ha in the middle of the night, which I think some people feel is what innovation is.” She also said leadership within her district thinks strategically. “We think very carefully about where we're going to go. And then when we make the decision to go, we go, we go hard. And I think that that's really been a leadership growth opportunity for our people to really see that out of systems thinking
you can become incredibly innovative.” Further evidence on systems thinking is portrayed in the theme strategic planning, in which half of the participants for this study elaborated on concepts behind a systematic approach in their strategy.

Grounded Theory – Personalized Learning Integration Systems Approach

Through this study, processes that facilitated the incorporation of personalized learning were analyzed and used to build the researcher’s grounded theory. The researcher found five themes that allowed for schools to successfully integrate and maintain personalized learning. These themes are referred to as the Personalized Learning Integration Systems Approach. These five themes are (1) strategic planning, (2) modeling, (3) collaboration, (4) communication, (5) organizational culture, and (6) flexibility.

Strategic Planning

Nearly half of the participants commented on the importance of goal setting and strategic planning. Participant 3 said goals are set every year with their Personalized Learning Team. The goals are aligned with the school’s improvement plan. Current goals include at least one personalized learning activity per classroom per quarter for the whole school. Some teachers are already doing an hour a day of personalized learning. Their goals will be to increase to two hours a day by the end of the school year.

Participant 4 also discussed the integration of personalized learning with the district’s strategic plan. She said this has been foundational and has allowed personalized learning to be solidified. She said, “It’s in our teaching and learning area of our strategic plan, and it’s a strong facet of it.” In her district, they create ninety-day action plans, which include embedding personalized learning and making it a richer and deeper
experience. She said, “We’ve brought action to [personalized learning] in a very strategic fashion, not a haphazard fashion.” She further stated that the district is on a five-year curriculum adoption. “Now that personalized learning is part of the strategic plan, anything that is adopted is going to work in a more personalized environment.”

Participant 5 also discussed the importance of long-range planning. He said, “We have a really organized behind-the-scenes planning approach.” The district created a five-year long-term vision for teaching and learning called Our Personalized Learning Vision. He further addressed the long-term planning by discussing how the leadership team takes the information from their collaborative, planning sessions and creates goals. An example he shared is the district’s first goal on learning, which is “All learners have access to appropriate resources, not limited by time or location.” He further addressed the importance of each school having a strategic plan. He said, “Every single school in our district has a personalized learning strategic plan.” These plans are in the form of an Excel spreadsheet. School representatives are taught to copy and paste goals from the district’s plan. They also incorporate the district’s vision. Each school then picks between two to five goals. The school representatives then fill out the “who, what, where and when” according to each goal. Participant 5 also realizes that just having a plan does not necessarily mean it will be a success. He said, “In reality, some schools make this plan, and it’s a check-off item. Some principals think we’re crazy…other principals have totally embraced it.”

Participant 8 additionally suggested that long-term planning was a large part of the process of integrating personalized learning. He said, “One of the biggest practices that we’ve worked on with my school is a comprehensive visioning and project
management process.” He said the process is built on vision, forming a team and choosing a team that heterogeneous in its makeup.

Participant 7 drew attention to the importance of working with the school board. He said his school had several meetings with the school board around strategic planning. “We’ve just framed it around...we want to personalize learning...we want to get to the point where we have individual learning plans for kids...and we frame it in a what that it’s hard to argue.”

**Modeling**

Several schools discussed the importance of finding other programs to observe and model including participants 10, 2, 3, and 7. Participant 2 invited people into his community who had done some thinking about personalized learning and who were willing to help them get started. Participant 1 gained knowledge from his personal learning network via social media, which is how he found out about open courseware. Participant 2 also uses the modeling process to encourage other teachers. He said, “We invite people to come in and look at what we’re doing. There’s almost no substitute for seeing this at work. When you see how students are committed to their work and how much they take ownership for their learning, it’s hard to ignore.” Participant 3 turned to online resources for programs to model. She said, “We’re using teachers’ videos from Canada to Europe. We use YouTube videos of teachers teaching, and we critique them as a group. Next semester we hope to videotape each other.” She also said they have experienced a lot of visual models through online research and Skype videos and presentations. Her school also had two district representatives present on personalized learning and model a lesson incorporating personalized learning techniques. Participant 5
also talked about the importance of modeling personalized learning when presenting on the topic. He said, “You can’t run workshops on personalized learning and stand and lecture for an hour.”

**Collaboration**

Participants 1, 2, 5, and 9 talked at length about the importance of collaboration. Participant 1 said a process that helped him facilitate personalized learning was “collaborating with people in my local area to help create this initiative, integrate it, and sustain it.” Participant 2 said an action network came about in his community, as there were a group of individuals who were frustrated. “We saw people…working harder than we remember them working, but we’re still not producing the results that we believe that should be possible.” While additional funding was coming in every year, things hadn’t changed. As he said, “Maybe we’re looking at this the wrong way.” A group of 20 superintendents in his area started a study quest to see who was looking at the work of education differently. “We talked to lots of people, read, had book studies, went to conferences…everything…to try and get a different perspective.” He said the network started with sharing information, research, and concepts about personalized learning. Eventually, they established Series of Design sessions, where they invited schools to send in teams who were interested in learning about personalized learning. During this process, leadership facilitated, coached, and helped them think through some of the small projects they could use to get started. The action network began out of this process, with a goal of creating a movement that would expand beyond their boarders, where people could utilize the practices they developed but can also learn ways to enrich the work.

Participant 5 discussed collaborating with a variety of stakeholders. He said, “We
sat down with a large group of participants and teachers, principals, assistant
superintendents and everyone in between, and we had workshops.” These workshops
centered on teaching, leadership for administration, professional development, and
community. He said the conversations began with learning and they asked themselves
what learning could look like in five to ten years. They also asked themselves questions
like ‘What’s our role in the wider community and how do we better connect? Participant
7 discussed sharing articles and doing book studies. They made sure that people from
every building within the district participated in the formal book studies. Participant 9
shared the view of the importance of collaboration. She discussed the important of
working as a team. She said, “We have a team that works really well together and even
have a team inside a team where four principals and the superintendent get together
weekly.”

Communication

Participants 2, 4, 7, and 9 all talked about the importance of communication.
Participant 4 specifically commented on the importance of communicating with
community members. She said it is important how schools message personalized learning
to the community. She continued by saying that personalized learning needs to be
presented carefully to parents by schools and school districts. She believes that many
have a current mindset that personalized learning is “kids teaching themselves, and it’s
anything but that.” She said, “Make sure that they understand the why and what it looks
like. I don't think you can do that too much.” She also suggested that once schools get
some “quick wins” with students and results to share and celebrate them. She said,
“Create a flywheel about that innovation.” In her district, they created handouts,
newsletters, and provided information on their website about personalized learning.
Participant 7 said it is important to build capacity in the community for the idea that students can organize themselves around learning. He said it is often a big shift for people to subscribe to this mentality, as they are used to seeing a teacher in the center of the room. He said it was key to figure out how the conversation on personalized learning would be framed to the community. “We phrase it in the sense that we want to personalize learning for every kid and do what’s best for every student, and we don’t want to hold students back.” He believes when the conversation is framed that way, stakeholder dissatisfaction is decreased. Participant 2 agreed that communicating with parents could be a challenge. He said there are parents that “like school as they remember it” even when aspects of that didn’t work were pointed out. “It’s still comfortable, and it’s what they know. I need to be able to explain why this offers more benefit than risk.”

Participant 9 also made connections with the importance of communicating to the community. She said her school spent a lot of time devoted to educating the public. Her district had community meetings, sent newsletters to parents, and promoted personalized learning through their Facebook and Twitter pages. She said when concerns arise, school leaders have to have a “finesse with dealing with people’s concerns…and committed. Sticking to it if you know this is right.” Participant 9 also discussed the importance of internal communication. She said they would have weekly meetings where they would ask each other questions, ask for advice or talk through things. She also said the superintendent of her district established a Steering Committee made up of board members, community members, teacher, and administrators. The Steering Committee had strong voices about the different processes of personalized learning. She believes the
Steering Committee allowed for everyone to have a voice and for staff to get involved in the process.

**Organizational Culture**

Participants 1, 5, 8 and 10 commented on the importance of analyzing school culture. Participant 1 said personalized learning is a different mindset for the entire school. He said, “We just look at it as creating a better culture for our students.” Participant 8 subscribed to the same ideas as far as changing mindsets. He said, “I think it’s a real culture, a renovation. And it’s a culture where that trust is there. But also it’s a culture of risk taking.” He further suggested that the schools where the least progress has been made have leadership that want to run a “right ship and tighten the reigns the most.”

Participant 10 agreed that school culture can make or break initiatives. He said, “We all have to work through the culture of the school and how that aspect…has become so difficult to maneuver and to change, which can stop really great program ideas or program initiatives.” He suggested that school leaders should be aware of this and willing to work through it. Participant 8 not only discussed school culture, but classroom and school board culture as well. He said this is the most important aspect and that nothing will happen beyond having an idea for something if the appropriate culture is not in place.

Participant 5 discussed the importance of recognizing that personalized learning has a lot to do with school culture. He said they began working with some schools where they started redesigning their rooms, gave students a lot more ownership and freedom but that unfortunately there is a culture and attitude from teachers of having “these kids.” He said, “Eighty percent of our [students] are free and reduced lunch and half of them are
second language learners. You can redesign your room. You can put your own curriculum online. You can send laptops home with kids, and you’re not going to see squat change because of that culture piece.”

**Flexibility**

Participants 2, 6, 7, 8 and 9 discussed the importance of flexibility. Participant 8 said schools should remain flexible. One of the first things he does within his district is look at the set-up of a classroom, what message that sends, and how the flow of classrooms feed into learning, and what types of learning do you want to happen here, and how does your classroom reflect that? He says he does a lot of redesign work with current furniture that gets teachers to think about the spaces in a little bit different way, more flexible and more student focused. He believes that delivery methods must also be flexible: how can we get students to open up the opportunities?

Participant 7 also saw flexibility as an important factor. Starting at the elementary level, the barriers of a bell schedule are broken down, which has led to “the flexibility that is necessary to do personalized learning.” Participant 6 agreed with the importance of flexibility. She said, “It’s a lot of scheduling…and you have to be flexible all the time.” Participant 9 discussed the importance of allowing personalized learning itself to be flexible. She said they did not want teachers thinking it had to look exactly like one thing. She said there is no perfect classroom. Personalized learning plans were “tweaked” and made to work for the age level of students that were in classes and subjects that were working with personalized learning. She said it is important to be able to say, “Ok, you’re right. That didn’t work out the way we thought it was going to work. Let’s change it up.” She said while school leaders have an idea and a vision and are ready to go, it takes patience to get through all the processes and figure it out. Participant 2 also commented
on allowing teachers some flexibility as personalized learning is integrated. He said, “We didn’t go all in. Not all classrooms are a hundred percent of the day. It’s just specific to certain times of the day that are more personalized for children.”

While these five themes allowed for a successful implementation of personalized learning, there were several barriers that many schools experienced. As participant 5 discussed, it is often difficult to create and maintain change in an educational setting. He said, “Change, in my opinion, moves at a glacial pace in education. And that might be even faster than how the change occurs. But, you have to have enthusiasm and you have to be a risk taker.”

Summary

Chapter 4 began by looking at how personalized learning is defined. While the researcher provided a framework for a working definition, it is important that the definition remains flexible and adaptive to each school’s or district’s needs. Several examples of personalized learning were given by each participant. The range of services offered reinforces the importance of remaining flexible in defining personalized learning. Through the findings of the study, the researcher analyzed findings that facilitated the process of implementing and sustaining personalized learning. These findings developed the grounded theory Personalized Learning Integration Systems Approach. Within this theory, the following themes were discovered: (1) strategic planning, (2) modeling, (3) collaboration, (4) communication, (5) organizational culture, and (6) flexibility. While this theory presents a roadmap for successful implementation, it is important for school leaders to be aware of potential barriers. Through following the Personalized Learning
Integration Systems Approach, and incorporating key aspects of leadership, these barriers can be overcome.
CHAPTER FIVE

Introduction

This chapter summarizes the study by revisiting the purpose and research questions of this study described in Chapter 1. Conclusions presented are drawn from the data presented in this study and connections between the literature review and research findings of this study. The chapter will conclude with recommendations for action and future research.

Summary of the Study

This grounded theory qualitative study sought to learn from educators, administrators and leaders who are active in the role of change agent within an individual school or education district and who have been instrumental in developing personalized learning initiatives. In addition to this central research question, sub-questions focused on defining personalized learning, personalized learning practices, results from personalized learning, barriers and leadership. As a result, a Grounded Theory *Personalized Learning Integration Systems Approach* was developed.

This study contributes new explanations and understandings about the implementation and institutionalization of personalized learning. No previously published scholarly studies were found that provided a framework for integrating personalized learning. Added research within the field of personalized learning helps garner support for programs and initiatives. Further, more districts and schools are integrating personalized learning practices. Stacey Childress, Deputy Director of Education at the Bill and Melinda Gates Foundation published an article on January 1st, 2014 titled, “Personalized Learning Will Go Mainstream.” In this article she stated that a growing
number of personalized learning model schools will lead to the possibility that personalized learning will go mainstream during 2014 (Childress, 2014). With educational experts predicting that personalized learning is growing, it is critical to provide school leaders with a framework that further enhances their potential for successful implementation.

The grounded theory methodology used in this study focused on interviewing change agents who met requirements to participate in the study. In total, 12 change agents with experience in personalized learning were interviewed through 10 interviews. Their response to ten interview questions were coded and themed. Five major themes emerged and based on these themes and data, the researcher was able to identify major findings and create the grounded theory Personalized Learning Integration Systems Approach.

Conclusions

Defining Personalized Learning

The first conclusion drawn from this study is the importance of a working definition for the term, personalized learning. Not every school or district functions the same. To begin the process of integrating personalized learning, school personnel should agree on an operational definition that can be applied to their particular needs. Through participant responses, the researcher was able to establish a theoretical foundation for this definition:

Personalized learning is learning that is centered on and directed by students. The educator plays an integral role of being the facilitator and “engineer of experiences and pathways.” Personalized learning is tailored to student interest and aptitudes. It’s responsive to the learning needs, interests, and readiness of the
learner. Personalized learning is flexible, both in its location and pacing. It is anytime, anywhere learning. Personalized learning allows for the construction and demonstration of new knowledge and skill sets. Personalized learning is an environment that incorporates standards and provides for college and career readiness.

Chapter 2 provides parameters for the term personalized learning that were found throughout the literature review. The working definition in chapter two included the following themes: (1) individualization, (2) student voice, (3) technology, (4) curriculum, (5) assessment, and (6) organization. The themes individualization, student voice, and organization all line up with participants’ contributions to defining personalized learning. While technology, curriculum, and assessment were all addressed at some point throughout the study, they were not found to be an integral part of the definition. Results indicate that technology, curriculum, and assessment may be part of the planning or integration phases, however, these themes or terms are not relevant in creating a working definition of personalized learning.

Jenkins, Jenkins & Keefe (2002) commented on the importance of having a flexible definition when it comes to personalized learning. They suggested that few schools use all of the themes of personalization in a comprehensive and systemic way, which was proven by participant responses that can be seen in chapter 4.

**Description of Personalized Learning Services**

Another aspect of the study that the researcher addressed was a description of personalized learning services. The researcher uncovered a multitude of services implemented in each school or district. No school or district looked the same. Participants
even discussed the importance of allowing their teachers the flexibility to integrate personalized learning in their classroom in a way that fit their individual need. Participant responses in regards to what personalized learning services were offered ranged from free open courseware offerings, to a bell less schedule to reading and math classes organized around work stations and learning management systems. The literature review in Chapter 2 presented similar results in which students participated in a range of learning activities, including large live instruction, small live instruction, virtual large and small group instruction, group collaboration, and independent practice (Dubner, 2011).

**Benefits of Personalized Learning**

The researcher found through this study that student engagement, student test scores, and teacher engagement all increased when personalized learning services were integrated. Chapter 2 highlighted several case studies in which test scores and engagement rose as well. These included studies done by Darling-Hammond, Ancess, and Ort (2002) and Jenkins and Keefe (2002). Several participants within this study discussed walk through data in which active disengagement was prevalent. Participant 8 said he saw active disengagement numbers between 16 and 18%. After personalized learning was integrated, active disengagement went down to 0 to 3%. Participant 2 relayed results from state test scores. He looked at 30 classes that participated in personalized learning. There was a 60 percent difference on state reading tests scores, compared to the district average. For classes participating in personalized learning classes for only a year, there has been a 15 to 18 percent difference on state test scores over the district average. Further, discipline issues declined. Participant 3 highlighted some of the changes she has seen in her school. Last year, she had a kindergarten student who was
suspended over twenty days last year. Now that he is in a personalized learning
environment, he has only been suspended once. Teachers were also excited about the
process. Participant 8 talked about leading training on personalized learning one week
into summer. A teacher approached him after the training and told him that she couldn’t
wait for school to start.

**Barriers**

Several barriers were addressed when it came to implementing personalized
learning. These included transferability to a school/district wide initiative, difficulty
level, lack of support and understanding, and current assessment practices. While
participants varied in their progress of implementation, many wanted to extend services
to a wider scale. Many of them voiced concerns about scaling out their programs.
Participant 4 said the conversation needs to change once this choice is made. “I need to
be able to make discerning decisions with principals about what we should scale and
what we shouldn’t.” Participants also discussed the fact that personalized learning is not
necessarily easier. Up front it takes planning, development, and engagement. It also
requires long-term planning and collaboration between teachers and personalized
learning coordinators. Many participants voiced concern about the lack of understanding
when it comes to personalized learning. Because it is a relatively new concept,

stakeholders, like parents and board members, need to be educated on what it is and how
it benefits students. A final barrier addressed was current assessment practices.
Participant 8 talked about how assessment and accountability are good things, but current
assessment practices that are driven by textbook companies hinders progress.
Leadership

Leadership was believed to be an important factor in establishing and maintaining personalized learning services. Chapter 2 presented a case study by Bergeson (2004) in which leaders of improved school districts were studied. Effective leaders were found to be united in purpose, involved, and interested in instruction. The leadership traits found in this study to facilitate the process were personal development, resolution, risk taking and trust, and systems thinking. Several participants discussed the importance of staying up to date on current literature on change theory and personalized learning. Many of these participants took part in book studies and even integrated book studies into their leadership teams. Another important aspect of leadership that was discussed was resolution. Change within a school or district is not easy. Participant 10 brought up the leadership trait of courage. He said, “When you do something new like this, it takes an awful lot of courage to stick with it because it's really easy just to quit after a year or two.” Risk taking and trust are two more leadership traits that were discussed. Participant 2 said that leadership must be willing to take some risks. He further suggested that leadership move away from an attitude of enforcing tight processes and compliance. He said leaders need to provide permission and support and recognize that not everything that is tried is going to work. A final aspect of leadership that was discussed was that of systems thinking. Many participants felt like the leadership in their school or district followed a type of systems thinking. Participant 4 talked about how the leadership within her school followed a very systematic approach. She said developing personalized learning was not chaotic or “in the middle of the night.” It was a planned, well thought out process.
Grounded Theory

The grounded theory that emerged from this study was titled Personalized Learning Integration Systems Approach. Within this theory, the following themes developed: (1) strategic planning, (2) modeling, (3) collaboration, (4) communication, (5) organizational culture, and (6) flexibility. Figure 1 illustrates the six themes that encompass integrating personalized learning. These six themes can be thought of as a continuum, in which each theme is revisited and continuously addressed not only during the implementation phase, but during maintenance and review phases as well. These themes also intersect with one another and all must be present for the most effective integration approach.

Figure 1

*Six Themes of Personalized Learning*
Strategic Planning

Like the systems thinking approach that was discussed under leadership traits, strategic planning is an integral part of implementing personalized learning. Most participants discussed the importance of goal setting and strategic planning. Participant 3 talked about goal setting with the school’s Personalized Learning Team. Participant 4 discussed integrating personalized learning with her district’s strategic plan. She said, “We’ve brought action to [personalized learning] in a very strategic fashion, not a haphazard fashion.”

Chapter 2 presented case study findings done by Leadbeater. He also found that staff in personalized learning schools shared a clear vision (Gardner, 2012). In Bergeson’s (2004) study on improved school districts, he stated that improved districts maintained a focus on learning goals and removed programs that interfered with reaching those goals. Kotter’s (1996) model on change theory also supports strategic planning. In chapter 2 his model for change is explained. Within this model he presented two key facets: creating the guiding coalition and developing a vision and strategy.

Participant 5 talked about a shared vision for personalized learning. This vision is shared in a district document and states that “at the heart of the District’s Vision is the desire to provide all learners with a personalized learning experience enabled by universal access to education through technology, wherever and whenever they choose. The provision of a personalized experience for each individual will drive students’ motivation to learn.” Participant 9 also discussed the importance of a shared vision. In the initial planning stages in her district, the Steering Committee got together and created a
vision focused on the following questions: What do we want our district to, our students to be able to do? And what do we want to be all about?

**Modeling**

Many schools have also developed personalized learning process by finding other schools to model. Participant 3 brought up the concept of watching other schools and districts via teacher videos and YouTube. Participant 5 also models what personalized learning looks like when he presents on the topic to teachers. Tyack & Cuban (1997) presented similar results and encouraged school reforms to be adapted by educators working together and taking advantage of their knowledge of their own diverse students and communities.

**Collaboration**

Collaboration was another key piece when it came to integrating personalized learning. Participant 2 discussed an action network that was created in his community of individuals who were frustrated with previous practices. Participant 5 talked about meeting with a variety of stakeholders and hosting a range of workshops prior to implementing personalized learning.

Through Leadbeater’s studies on personalized learning, he found that schools found new ways of organizing through collaboration with other schools or agencies (Gardner, 2012). Participant 2 talked at length about the importance of collaborating with other schools or agencies. In the initial planning stages of personalized learning, experts were brought in to learn from. His action network now provides resources and modeling of their own to other districts looking to learn more about personalized learning. Participant 5 also discussed the importance of collaboration. He said,
“Collaboration is so key because you’ve got to learn…you’ve got to…set up an environment for kids to collaborate.”

Tyack & Cuban (1997) discussed school reform efforts and stated that efforts started by policymakers with remote control rarely worked. Instead, school reform should be adapted by educators working together and using their own knowledge of this students and communities. Participant 2 talked at length about his action network and how a group of superintendents who were unsatisfied with current learning conditions came forward to engage in a learning process that would provide a better experience for students. Through their research and collaboration, they developed practices and ideas for personalized learning.

**Communication**

Communication was also found to assist in the implementation process. Communication was discussed in terms of how personalized learning was presented to the community. Participant 4 said that community members need to understand the why and what of personalized learning. She also said that “quick wins” need to be shared with the community. Her district created handouts, newsletters, and provided information on their website about personalized learning. Participant 9 also commented on the importance of internal communication. She said her team would have weekly meetings in which they could come and get advice or just have time to vent about struggles.

Kotter’s (1996) model on change theory also includes a step on communication: communicating the change vision. Gladwell (2000) also presented findings on change theory. He stated that having a story, or narrative, that can be retold helps the change initiative stay. He also suggested that it is important that the change leader’s story is not
underestimated and the same message is repeated in a variety of ways. The story must have meaning, address the identity of the organization and its members, move people to action, and communicate values (Gladwell, 2000). Depending on the scientific orientation of members, the research may need to be presented in a rigorous and persuasive manner. For other members, the research does not have to be as formal (Gardner, 2004).

Tyack and Cuban (1997) also discussed the importance of involvement on behalf of parents and community members, as the goal of reform should not be improved test scores, but improve the learning process. Participant 4 commented on the goal of improving the learning process. She said, “We had pretty good scores before, so it wasn’t like we were looking to fix something, but we were really wanting to engage kids more.” Several other participants talked about involving the community through the process of initiating personalized learning. Participant 9 talked about having community meetings and ways in which her district got out the message on personalized learning. She said it was also important for the community to be aware of the results that were occurring so they could see that “nobody’s hurt.” Participant 7 discussed “building capacity” within the community so they could begin to see that kids could organize themselves around learning.

**Organizational culture**

Organizational culture was another important facet in integrating personalized learning. In chapter 2, Kotter’s arguments on change theory were presented. Within this theory, he suggested anchoring new approaches in the culture. Participant 10 said it can be difficult to maneuver and change school culture. He said it is one of the things that can
stop great programs or initiatives. Labaree (2005) suggested a similar pattern. He believed the problem with school reform lies in each group’s unique social and cultural world. Participant 5 also talked about how teacher attitudes and culture can have a negative impact on change. In his district he came across teachers who believed that they had kids who could not succeed regardless of the program initiatives. This hindered the process of integrating personalized learning.

**Flexibility**

A final aspect of the Personalized Learning Integration Systems Approach is flexibility. Flexibility ranged from reworking or eliminating bell schedules to scheduling to having the mindset that personalized learning in itself should be adaptable. Participant 9 discussed the importance of flexibility. She said it is important to be able to say, “Ok, you’re right. That didn’t work out the way we thought it was going to work. Let’s change it up.”

Several researchers addressed the organization of current school structures and encouraged processes that allowed for the learning environment to be more flexible. Clarke et al. (2003) expressed discontentment with the fact that many schools are still designed to support mechanical, uniform and impersonal. Hargreaves (2006b) further argued that the organizational structure of schools should be reorganized so that learning is decentralized and information is shared. Wolf (2010) also suggested that a typical school day should have restructured schedules.

Many participants discussed organizing their schools in different ways. Participant 4 illustrated this point by stating that the middle schools in her district are now bell-less. Participant 5 talked about reorganizing the learning space. He said when it
comes to teacher’s classrooms he thinks differently. “Let's really make different seating, let's use the walls differently, let's use space differently. Let's make this a part of the kids' learning space than the teachers' teaching space.” He also saw current schedules as a barrier to personalized learning. He said the lower performing schools in his district are the ones where more things are mandated, like schedules. He said we often see doing math for a certain minutes a day or working on a software program a certain amount of times a week as good instructional practices, but we need to change our thinking to be centered on student needs.

Case studies presented in chapter 2 also reflected the importance of flexibility. One of the aspects of schools labeled as strong personalized learning schools was that of having a flexible curriculum (Sebba, Brown, Stewart, & James, 2007). As part of a study done by Jenkins & Keefe (2002), Thomas Haney Secondary School was analyzed. Part of the school’s goals are what allowed the school to effectively personalize the learning environment. One of the school’s goals was students learn in a variety of ways and at different rates (Jenkins & Keefe, 2002).

Each participant discussed their own adaptation of personalized learning and fitting the strategies into their community and school. Due to the fact that personalized learning is not currently a mandated program, schools and districts have freedom to manipulate the program as they see fit. Participant 3 even discussed how at her school she takes into consideration teacher comfort level when implementing personalized learning. Not all of the classrooms in her building utilize personalized learning services. She said, “[Personalized learning] is based on teacher comfort and…how confident they feel
integrating…standards into their lesson.” Participant 9 talked about starting with pilot programs and then integrating personalized learning in a more gradual way.

**Application of the Theory**

The graphic titled “Personalized Learning Integration Systems Approach” (found in Appendix E) presents the application of the grounded theory. It presents each of the six steps and provides a short description of each step. School leaders are encouraged to incorporate these steps when implementing personalized learning services within their school or district.

**Additional Findings Related to the Literature**

There are many findings from this study that can be connected to the literature review presented in Chapter 2. During the researcher’s literature review, she discovered several themes that continued to reoccur throughout the literature. These themes were (1) individualization, (2) student voice, (3) technology, (4) curriculum, (5) assessment, and (6) organization. Correlations between participant responses were found within each theme. Further, the researcher found information related to the literature within the content presented on school reform and change theory.

The first theme addressed in the literature in regards to personalized learning was individualization. Participant 2 discussed the importance of focusing on the individual learner. He said to create more capacity, individuals need “to engage in redesign that focused more on the individual learner; that moved us from this sort of batch processing approach that’s been traditional in American education, into a much more customized, personalized environment.” In the literature review, information from Gardner (2012) was presented that discussed his beliefs that schools should not be about teaching the
masses, but the individual learner. Hargreaves (2003) also suggested that individualization was critical, as it focuses on each student and teaching is designed around pupil need.

The second theme presented in the literature was student voice. Hargreaves (2004b) described student voice as including ways in which students are encouraged to voice their preferences. Participant 1 elaborated on this concept by discussing how his students were allowed to voice their predilections. Through the independent open courseware offerings at his school students choose the course they are interested in taking. He said, “They take the course, through online lectures provided for free. And then they demonstrate what they’ve learned…in an exposition of learning where they actively apply the concepts and skills they’ve acquired.” Hargreaves (2004b) further discussed the importance of student voice. He said students then feel that they are taken more seriously, which promotes engagement. Participant 1 solidified these sentiments when he described feedback he received from his students. He said they have found that “once students are able to chart their own courses based upon what they find value and what they’re interested in, the level of effort that goes into create a product that’s meaningful increases.”

Technology was another theme that was explored in the literature. Technology provides a way for students to learn when they want and have unlimited access to information (Richardson, 2012). Participant 7 discussed moving information online. “We’re trying to get as much content online so it’s readily available to them 24/7. Participant 10 also discussed opportunities for students to learn with the incorporation of technology. At his high school, learners can access teacher lectures anytime through
school issued technology. Participant 9 also talked about the ways technology can increase learning. She said it was her school is trying to afford enough technologies “so that our kids can get on and look at videos or take pretests or take assessments online.”

Participant 10 highlighted the importance of creating a curriculum that incorporates personalized learning. He said the first step was to make sure everyone was on board, next they honed in on their curriculum by establishing content and matching it to state standards. From here, team members were able to create lesson plans. Participant 5 further addressed curriculum by describing it as a potential barrier when people see it as something that is mandated. He believes educators need to be flexible with their pace and content specific to their student needs. Hargreaves (2006a) also suggested that ownership in the curriculum should be shared and opportunities for students to be engaged should be adapted.

Surprises

One of the surprises discovered through this study was the flexibility in the definition of personalized learning. Prior to the participant interviews, the researcher believed a standard definition of personalized learning would benefit the education community. The researcher discovered, however, that there was a reason for having a loose definition for personalized learning. Part of the benefit of incorporating personalized learning into a school or district is that it does not have to look the same. Due to the flexible nature of what personalized learning looks like, it is imperative that one definition does not inhibit personalized learning and its impact. With that being said, the researcher still finds it critical to begin with a loose working definition that schools
and districts can manipulate to best fit their needs. An all-encompassing definition from participant responses was included in Chapter 4.

Another surprise was that of cost. Going into the research, the researcher had heard from other educators that personalized learning would be difficult to implement because of the assumed cost. Many participants did not believe this was an issue. Participant 1 said the open courseware programs offered at his school are free of cost. Participant 2 also discussed how personalized learning has not been cost prohibitive. He said, “Our promise from the beginning was there isn’t going to be long-term outside money; that this needs to work. We do with the resources essentially that we have.” Participant 4 also said cost was not a factor when it came to integrating personalized learning. She said, “I don’t look at it as an economic piece, so I would not say its costs us anything. It’s never been something that I’ve said, ‘Wow! This is so expensive we can’t do this.’ It’s just a different way of utilizing the resources we have. It’s not cost us anything. I don’t refer to it as an economic initiative in any way, shape, or form.” Participant 9 talked about applying for and receiving grant money to accomplish some of their goals. She said the grant money helps offset the cost of professional development time and paying for subs. The grant her building won was a state grant for a hundred thousand dollars.

**Implications for Action**

The grounded theory Personalized Learning Integration Systems Approach would be useful for school or district’s initial planning stages when beginning to integrate personalized learning. These six steps provide a framework for success and potentially faster results. It is important for change agents to realize, however, that their endeavors
will most likely be met with barriers. The barriers presented in this study should be reviewed by each team and participants should turn back to the Personalized Learning Integration Systems Approach and analyze leadership best practices to create a plan on how to overcome those barriers.

**Recommendations for Future Research**

Personalized learning is a relatively new practice. During this study, it was difficult to find participants who had integrated personalized learning for more than a couple of years. Future research could look at how schools have maintained personalized learning after five, ten, twenty years. Further, as time goes on and more schools integrate personalized learning, more participants can be included in the process. Additionally, many schools that had already integrated personalized learning services were charter schools. The researcher chose to focus on public schools for this study. An additional study that looks at how charter schools integrated personalized learning would benefit others working with charter schools. A comparison could also be made looking at differences or similarities between how charter and public schools integrate personalized learning. Another area to explore within personalized learning is the quantitative side. Very few studies have been done in the U.S. that incorporate student data. Studies could be done that compare results based on students enrolled in personalized learning or non-personalized learning environments. Much of the current personalized learning environment in the U.S. has been modeled after programs that were referenced in Britain or Australia. Future research could also take an international approach and analyze best practices or implementation strategies from a global perspective. Another area future researchers could explore is focusing on specific participants. For this study, a range of
change agents were included, like superintendents, principals and personalized learning coordinators to name a few. Future research could focus on each role individually and analyze their impact or leadership practices on personalized learning. The field for research on personalized learning is wide open and could take on so many different paths, as each district, school is not exactly the same and incorporates different aspects of personalized learning, whether that is implementation in several classrooms or an entire school, or it could be the incorporation of different learning management software programs or assessment practices. Each of these things could be researched on an individual level and added to the current literature on personalized learning.

Concluding Remarks

This study presented a comprehensive literature review, collected valid data, and thoroughly analyzed information collected on the topic of how personalized learning services were integrated in public schools. The population of this study provided insights to where the personalized learning community is in terms of development, integration, and leadership. The recommendations from this study are unique as the researcher interviewed a variety of change agents who work in several different capacities. Each of these individuals played an integral role in developing and implementing personalized learning services. Due to the variety of roles, the researcher gained a wider perspective on personalized learning. Therefore, the researcher was able to make evident conclusions on how personalized learning is integrated in public schools, and is able to make specific recommendations on how to implement personalized learning. For change agents trying to integrate and sustain personalized learning within their school or district, this study will hopefully serve as a roadmap for effective implementation strategies in their journey.
The Personalized Learning Integration Systems Approach will help schools and districts with a framework for implementation as they embark upon the initial planning stages of personalized learning. An awareness of potential barriers and leadership best practices provide a context of concepts that need to be discussed prior to implementation. Essentially, this study provides support for the positive rhetoric surrounding personalized learning and may help continue the process of integrating and sustaining personalized learning services.

Personalized learning is more than a catch phrase or educational reform effort that will be gone tomorrow. It is about transformation. It is redesigning the current educational landscape into a system that meets the needs and interests of today’s learner and prepares them for tomorrow. The researcher’s journey into personalized learning began by watching news clips on the School Of One in New York. The level of personalization that was happening at this school seemed unprecedented. The opportunities for learning and reaching students at their current levels in order to help them advance to the next level seemed immeasurable. The researcher then began investigating articles and books on the topic, only to find many schools and districts were incorporating many of the same techniques and having successful results. Yet their stories were not broadcasted on primetime news. Their stories were not shared during teacher training or development programs. One had to look for the information to find it. As the researcher continued on her journey of discovery on personalized learning, she realized that the network of change agents and educators who had been diligently working with personalized learning were a unique group of educators. Participants were eager to be interviewed and many requested results from the study to further their own
knowledge on the topic. Participants for the study also seemed excited to have someone ask about what they were doing and how they were doing it. The researcher also realized that this network of personalized learning educators was hopeful that the work they were doing would be shared. They believed in what they were doing. So much so that their belief transcends the work they are doing within their current school or district. So it is the researcher’s hope that the initial work that those in the personalized learning community have worked so hard for is read, heard, understood, and taken back to communities with a passion and enthusiasm that all of my participants shared. It is the researcher’s hope that the message of personalized learning is shared, so as not to put those individuals who have come before on a pedestal, but to enhance the educational experience of as many students as possible.
References


Hargreaves, D. (2004b) *Personalising Learning 2: Student voice and assessment for*


Labaree, David F. (2010). *Someone has to fail: The zero-sum game of public schooling*. 
Cambridge: Harvard University Press.


Appendix A: Participant Informed Consent Form

Implementation of Personalized Learning

Invitation
You are invited to take part in this research study. The information in this form is meant to help you decide whether or not to take part. If you have any questions, please ask.

Why are you being asked to be in this research study?
You are being asked to be in this study because you have knowledge of integrating personalized learning services in a public high school.

What is the reason for doing this research study?
This research is designed to better understand the implementation strategies of schools that decided to pursue personalized learning approaches.

What will be done during this research study?
You are asked to participate in a taped interview lasting approximately 30 minutes but no longer than one hour and confirm a transcript of your interview. You may be asked follow up questions if needed but no more than one time and for no more than 30 minutes.

What are the possible risks of being in this research study?
There are no known risks to you from being in this research study.

What are the possible benefits to you?
You are not expected to receive any benefit from being in this research study.

What are the possible benefits to other people?
A possible benefit to school administrators includes a better understanding of procedures necessary to integrate personalized learning.

What are the alternatives to being in this research study?
Instead of being in this research study you can choose not to participate.

What will being in this research study cost you?
There is no cost to you to be in this research study.

Will you be paid for being in this research study?
You will not be paid or compensated for being in this research study.

What should you do if you have a problem during this research study?
Your welfare is the major concern of the researcher. If you have a problem as a direct result of being in this study, you should immediately contact the Creighton Institutional Review Board.

How will information about you be protected?
Reasonable steps will be taken to protect your privacy and the confidentiality of your study data.

The only persons who will have access to your research records the researcher, the Institutional Review Board (IRB), and any other person or agency required by law. The information from this study may be published in scientific journals or presented at scholarly meetings but your identity will be kept strictly confidential.
What are your rights as a research participant?
You have rights as a research participant. These rights have been explained in this consent form. If you have any questions concerning your rights, talk to the investigator or call the Institutional Review Board (IRB), telephone (402)-280-2126.

What will happen if you decide not to be in this research study or decide to stop participating once you start?
You can decide not to be in this research study, or you can stop being in this research study (“withdraw”) at any time before, during, or after the research begins.

You will not lose any benefits to which you are entitled.

If the researcher gets any new information during this research study that may affect whether you would want to continue being in the study, you will be informed promptly.

Documentation of informed consent
You are freely making a decision whether to be in this research study. Signing this form means that (1) you have read and understood this consent form, (2) you have had the consent form explained to you, (3) you have had your questions answered and (4) you have decided to be in the research study.

If you have any questions during the study, you should talk to one of the investigators listed below. You will be given a copy of this consent form to keep.

If you are 19 years of age or older and agree with the above, please sign below.

Signature of Participant: ___________________________  Date: ______  Time: ______

My signature certifies that all the elements of informed consent described on this consent form have been explained fully to the participant. In my judgment, the participant possesses the legal capacity to give informed consent to participate in this research and is voluntarily and knowingly giving informed consent to participate.

Signature of Investigator: ___________________________  Date: ______

Authorized Study Personnel
Lisa Spencer

402-201-7110  lisaspencer@creighton.edu
Appendix B: Participant Invitation for Qualitative Study

To Whom It May Concern:

My name is Lisa Spencer, and I am a student at Creighton University in the educational doctorate (Ed.D) program for Interdisciplinary Leadership. As part of my dissertation, I am completing a research study that satisfies the requirements for my doctoral degree. For this research, I am conducting a series of interviews in order to gain insight on how schools successfully transitioned from a traditional to a personalized learning environment. Your school is invited to participate in this study. The study will include an interview with the supervisor for the school. Each individual would be engaged in face-to-face or Skype interview with each interview lasting approximately 60 minutes.

As the researcher, I agree to meet the following conditions:

1. I will audiotape each interview with the permission of the participant and transcribe the tape for the purpose of accuracy. I will give each participant a copy of the transcript so that they may see that I have captured their words correctly. At the end of the study, the tapes will be erased or destroyed.
2. I will assign a fictitious name on the transcript or the interviewee may choose one. Real names will not be used at any point of information collection.
3. Every effort to maintain your anonymity and privacy will be made before, during and after the interview.
4. Each participant will fill out a consent form outlining the responsibilities of the researcher and rights of the participant.

As participant in this research, you are entitled to know the nature of my research. You are free to decline to participate, and you are free to stop the interview or withdraw from the study at any time. No penalty exists for withdrawing or choosing not to participate. If you are interested in participating, please contact me with a choice of dates and times, which I will add to the calendar. If none of the times or dates are convenient, please let me know and we will find a more suitable time to interview.

Thank you for considering participating in this interview. Please contact me at lisaspencer@creighton.edu, or 402-201-7110 with any questions or times you are available for the interview.
Appendix C: Communication via E-mail or Telephone for Interview Participants

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<tr>
<th>Interview Protocol: Title goes here</th>
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<td>Interviewee:</td>
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<td>Position of Interviewee:</td>
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(Briefly describe the project. Include statements of appreciation and introduction. Such as: Thank you for agreeing to be interviewed for this research project on personalized learning. I want to remind you that your comments will remain confidential and anonymous. Have them sign the consent form. Let them know they can take a break at any time and that they can ask you if they have any questions, etc.)

Questions:

1. Describe the aspects of personalized learning that have been implemented in your school.

2. What has been your role in integrating personalized learning at your school?

3. What has happened to student performance and engagement since personalized learning was adopted?

4. What has been the impact on student performance and engagement?

5. What have been the barriers in implementing change?

6. Describe the processes that have facilitated personalized learning to develop at your school.

7. How has personalized learning impacted the allocation of resources, such as money, personnel, facilities, time and energy?

8. What changes occurred in the roles and responsibilities of school personnel

9. Explain your perception of how personalized learning was implemented in your school?

10. What aspects of leadership enhanced this process?

11. If there is something more you’d like to add about personalized learning that I have not asked please describe that for me.

Additional questions for depth and breadth to the above questions:
Would you expound on that?
Tell me more.
How would you describe that in a different way?
I would like to hear more about that.
Would you clarify that for me?
What was the effect of that incident?
What were the consequences?
What was your reaction to that behavior?
Take me through your thought processes during that time.

Appendix D: List of Schools in the Literature that integrate Personalized Learning Services

- Alpha Public Schools: Blanca Alvarado Middle School (San Jose, CA)
- Aspire Public Schools: CODE Aspire (Public charter schools in CA and TN)
- Cornerstone Charter Schools: Cornerstone Charter Health High School (Detroit, MI)
- Da Vinci Schools: Da Vinci Innovation Academy (Los Angeles, CA)
- Education Achievement Authority: Nolan Elementary-Middle School (Detroit, MI)
- Fayette County Public Schools: The STEAM Academy (Lexington, KY)
- Foundations College Prep (Chicago, IL)
- Franklin Central Supervisory Union: Academy 21 (rural Vermont)
- Generation Schools Network (Brooklyn, NY)
- West Generation Academy (Denver, CO)
- Whittemore Park Middle School (Conway, SC)
- Intrinsic Schools (Chicago, IL)
- KIPP Chicago: KIPP Create College Prep Middle (Chicago, IL)
- Leadership Public Schools: Oakland R&D Campus (Oakland, CA)
- Matchbook Learning (Memphis, TN)
- Match Education: Match Next (Boston, MA)
- Schools for the Future: SFF Detroit (Detroit, MI)
- Summit Public Schools: Summit Denali (Sunnyvale, CA)
- Touchstone Education: Merit Prep Newark (Newark, NJ)
- University of Southern California: USC Hybrid High (Los Angeles, CA)
- Venture Academy (Gates) (South Minneapolis, MN)
- Harlem Children's Zone (Harlem, NY)
- Providence (RI) Metropolitan Career and Technical School: Big Picture Model
- North Reading High School (North Reading, MA)
- Fenway High School (Boston, MA)
- Wyandotte High School (Kansas City, Kansas)
- Brighton High School (Brighton, MA)
- Rex Putnam High School (Milwaukie, Oregon)
- Malden High School (Malden, MA)
- Kingwood High School (Houston, TX)
- Noble High School (North Berwick, Maine)
- South Boston High School (Boston, MA)
- Poland Regional High School (Poland, Maine)
- Roosevelt High School (Yonkers, NY)
- Souhegan High School (Amherst, MA)
- Cambridge Ringe and Latin School (Cambridge, MA)
- The New York City Lab School (New York, NY)
- Boston Arts Academy (Boston, MA)
- The Metropolitan Regional Career and Technical Center “The Met” (Providence, RI)
- Champion Charter School (Brockton, MA)
- Sir Francis Drake High School (San Anselmo, California)
- The Urban Academy (New York, NY)
- Mount Abraham Union High School (Bristol, VT) (Clarke, et al. 2003; Wolf, 2010)
Appendix E: Personalized Learning Integration Systems Approach

Personalized Learning Integration Systems Approach

Steps for school systems transitioning from a traditional model to a personalized approach

Six Steps for Change

1. Strategic Planning
   Create an action plan for your school or district. Be sure to share it with stakeholders, including board members, principals, teachers, parents, and community members.

2. Modeling
   Work with other schools and districts that have already incorporated personalized learning. Invite them to your school or send your own representatives out for site visits and trainings.

3. Collaboration
   Collaborate with a variety of stakeholders. Invite them to be part of the planning process and continued communication on personalized learning.

4. Communication
   Develop and disseminate information about personalized learning programs your school or district will implement to all stakeholders. Continue to host conversations to educate others on the process.

5. Organizational Culture
   Be aware of your current culture. Create an environment where teachers believe in the change and the process. Try to reach out to those who may have concerns or questions.

6. Flexibility
   Remain flexible in your approach. The process doesn’t look exactly the same in every district or school. Also be mindful that you will have barriers that you’ll have to overcome.

CONCLUSION OF THE FLOW:

PERSONALIZED LEARNING INTEGRATION SYSTEMS APPROACH
By following these six steps, schools and districts will be following approaches that have already been utilized by school districts that have successfully implemented personalized learning.