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CREATING A PERSONALIZED, LEARNER-CENTERED ENVIRONMENT FOR STUDENTS: ONE MIDDLE-LEVEL LANGUAGE ARTS TEACHER'S JOURNEY

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CREATING A PERSONALIZED, LEARNER-CENTERED ENVIRONMENT FOR STUDENTS: ONE MIDDLE-LEVEL LANGUAGE ARTS TEACHER'S JOURNEY

A THESIS APPROVED FOR THE
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BY

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…and to my past, present, and future students.
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ABSTRACT

Teachers create conditions within the classroom that strongly shape the nature of their students' academic performance and future success. The purpose of this study was to describe and systematically analyze the changing beliefs, practices, and challenges of a middle level English language arts teacher's journey from a traditional classroom environment, one that often lacks relevance to the real world and in which students sit passively for teacher-driven activities and curriculum, to a personalized, learner-centered environment rich with active engagement, student motivation, and relevance. Personalized, learner-centered classrooms have been tied to students developing skills that are associated with deeper learning such as improved collaboration and communication skills, academic engagement, self-regulation, and perseverance. These deeper learning skills are positively related to student attainment (National Research Council, 2012). While small pockets of innovative, learner-centered classrooms exist today, the vast majority of U.S. classrooms remain traditional.

The researcher collected autoethnographic data within a six-year timeframe using personal memory data, instructional unit plans, and fieldnotes. She examined her educational development including changing teaching beliefs, practices, and shifting classroom culture. Findings that have guided her changing beliefs and practices included: the curriculum being natural rather than forced; the need for student-driven process and assessment; and the acceleration of student-centered teaching through authentic collaborations. These findings and related epiphanies were examined through the lens of the Jobs for the Future and the Council of Chief State School Officers' *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon,

2015). The researcher described each competency that she made progress on and how shifts in her beliefs and practices could stimulate additional thought and future examinations of competencies by others interested in developing personalized, learner-centered environments.

CHAPTER 1

INTRODUCTION, PURPOSE, AND RATIONALE

During my first year of teaching, I felt anxious that I might not be fully prepared to teach. My university preparation was excellent, with an overarching theme of professional learning community and strong disciplinary content, and I am generally a very confident person; however, I felt anxious in a new state with no reference to the culture or expectations. I was the first person to arrive at school each day, often ahead of the custodial staff, the last person to leave, and spent much of my weekends in my classroom. Unknown to me, the school administration was able to track my time due to the electronic key swipes. At one point my principal suggested kindly that I chill a bit and not burn myself out. I had just completed my student teaching in a different state the year before and found myself in my first teaching position in a new state that seemed to be on steroids regarding new policies impacting teachers, both beginning and veteran. My new state was the first nationally to adopt the new Common Core State curriculum for language arts and mathematics. I arrived during the implementation year. All the teachers had spent two years working with professional development teams consisting of teachers, university professors, school district cooperatives, and local schools and communities. I felt new and very behind in many respects. Not only was the curriculum impacted but also my first-year, state-required internship program that all first-year teachers must successfully complete reflected the new curriculum and assessments. Looking back now, I value the state's early adoption of these higher standards for students and the carefully planned two-year implementation process. This occurred before the Common Core became politicized. I benefited tremendously from being in a state that valued global higher learning standards for all students with teachers being engaged throughout the process in writing, implementing, and evaluating the standards. I might have been a bit stressed at the time, but the stress was good for me as I grew into my teaching role. These higher standards became so ingrained in the state's curriculum that now as politicians try to abolish the Common Core, teachers, schools, and communities protect the standards. Basically, we don't care what the standards are called (i.e., they have a new name for the standards in the state), but the high standards, thankfully, remain intact. Now the challenge becomes helping each and every student achieve the standards. Erica Friis, 2017

Background to the Problem

Jennings (2012) outlines the results of three significant U.S. school reform movements: equity-based, school choice, and standards-based. He cites how each reform effort has fallen short of its initial promise.

> The most noteworthy shortcoming of these movements is that they mostly sought to influence what went on in the classroom – the heart of education – through *external* means. Greater equity was to be secured by adding on services. Choice was to be a market force sifting out bad schools. Test-driven accountability sought to use test results as a lever for change. The exception to that pattern is the academic standards portion of that last movement which sought to define better what should be taught (Jennings, 2012, p. 6).

Sustainable, significant change in America's schools and classrooms may only occur through *internal* means that places teachers and learning at the center of reform. Internal means refers to what teachers do each day in the classroom. Concentrating on ways of producing meaningful research grounded in personal experience of a teacher would help with the understanding of the internal context.

Statement of the Problem: Lack of Learner-Centered Classrooms

Teachers create conditions within the classroom that strongly shape the nature of their students' academic performance and future success. Gone are the days of a teacher standing in front of students seated neatly in rows, assigning the same textbook pages to everyone, and administering the same quiz on the same day to the entire class, with the expectation of a 'normal distribution' of achievement along a bell-shaped curve (Wolfe & Poon, 2015, p. 1). Rose and Gravel (2012) help make the distinction between the traditional or conventional classroom and the personalized, learner-centered classroom by focusing on the curriculum.

> Historically, most classrooms have been "curriculum centered" rather than "student centered." The core elements of the curriculum in most schools – textbooks and related print materials – are fixed, standardized, uniform, one-size-fits-all, but students, on the other hand, are anything but uniform or standardized. As a consequence, teachers, and the students themselves, must adapt or accommodate the curriculum as best they can in order to meet the challenge of individual differences. Or more commonly, many students must simply endure the extra hurdles and inefficiencies of trying to learn from a curriculum that is neither designed for them nor accessible to them. This is not a promising foundation for student-centered learning. (p. 1)

To move away from tradition/conventional classrooms, teachers today must strive to create learner-centered classrooms that focus on personalized learning to meet individual student needs, while assisting all students to meet rigorous global standards.

Learner-centered or student centered is a term that is synonymous with personalized learning which results in 'deeper learning', learning that involves deep processing (Winne, 1996) to master core academic content, think critically and problem-solve, use effective communication, develop academic mindsets, and demonstrate the ability to transfer what was learned in one situation to new situations (Cator, Lathram, Schneider, & Vander Ark, 2015; Zeiser, Taylor, Rickles, Garet, & Segeritz, 2014). Personalized, learner-centered approaches are competency-based; takes place anytime, anywhere, and represents learning environments in which students have agency and ownership over their learning (Wolfe & Poon, 2015). Results of personalized, learner-centered classrooms result in students developing skills that are associated with deeper learning such as improved collaboration and communication skills, academic engagement and perseverance. Opportunities that develop these deeper learning skills are positively related to student attainment (Huberman, Bitter, Anthony, & O'Day, 2014; National Research Council, 2012; Zeiser et al., 2014).

Needless-to-say, it is much easier knowing about personalized, learner-centered classrooms, often through professional development and/or reading professional journals, than implementing personalized, learner-centered practices daily in the classroom. As a result, classrooms vary greatly from school to school with pockets of innovative, learner-centered practices occurring at some schools but rarely implemented at scale across a school, much less a district.

Learner-centered approaches are not new and have captured the interests of educators since Dewey (1938) and the Progressive Movement. According to researchers (Duke, Halvorsen, & Strachan, 2016; Guthrie, McRae, & Klauda, 2007; Puzio & Colby, 2013), literacy develops more quickly in students when they are in learner-centered contexts that allow them to:

- Read and write for purposes beyond school
- Read and write materials they see as relevant to their lives
- Read and write texts similar to those found outside school
- Read and write texts on topics of interest to them
- Make choices about what they read
- Write for an audience beyond a teacher
- Have the opportunity to collaborate (Duke et al., 2016, p. 16)

The problem that teachers and schools are facing today is not engaging all learners in the practices described above, rather many continue to teach in traditional "curriculum centered" ways. While small pockets of innovative, learner-centered classrooms exist, the vast majority remain traditional/conventional classrooms. In order to engage all learners, teachers must create learner-centered classrooms that focus on personalized

learning to meet individual student needs, while helping all students meet rigorous global standards.

Purpose of the Study

The purpose of this autoethnography study is to describe and systematically analyze personal experiences of a middle level English language arts teacher to help understand the cultural change from a traditional classroom, one that often lacks relevance to the real world and in which students sit passively for teacher-driven activities and lectures to a personalized, learner-centered environment rich with active engagement, student motivation, and relevance. Autoethnography is an approach to research and writing that seeks to describe and systematically analyze (graphy) personal experience (auto) to understand in-depth cultural experience (ethno) (Ellis, 2004; Ellis, Adams, & Bochner, 2011; Holman Jones, 2005). The teacher-researcher provides a 'thick description' of this cultural change to help facilitate understanding of her changing beliefs, practices, and shifting classroom culture. These experiences or "epiphanies" highlight remembered moments perceived to have significantly impacted the trajectory of the cultural change. As an autoethnographic researcher, the teacher-researcher intermingles her writing and voice usually in third-person as she establishes the context for the experiences and reports on the theoretical and research literature, and usually, in first-person as the person who lived-through these experiences (Caulley, 2008). Occasionally, the teacher-researcher may use second-person to 'bring readers into a scene, to actively witness, with the author, an experience, to be a part of rather than distanced from the event' (Ellis et al., 2010; Glave, 2005).

Research Questions

The essential question for the teacher is not how to change students to improve their behavior but rather how to create contexts that better support students in developing critical attitudes and learning strategies necessary for their academic and long-term success. Thus, teaching adolescents to become learners may require teachers to shift their own beliefs and practices as well as to build their pedagogical skills and strategies to support student learning in new and different ways. The following questions are most pertinent to these goals.

1. How does a middle level English language arts teacher's beliefs and practices shift from a traditional teaching style to a personalized, learner-centered approach?
2. What are the key challenges facing the teacher during the shift from a traditional teaching style to a personalized, learner-centered approach?

Researcher's Perspective

I am a sixth-year teacher certified grades 5-9 in "English and Communications." I have taught at the same school for my entire teaching career. The school is a Title 1, a 52 percent low-income, free and reduced lunch school. Racial demographics include one-third African-American, one-third white, and one-third other. Also, the school has a growing English Language Learner (ELL) population with many refugee Swahili speaking students from The Republic of the Congo. The school is also one of two middle schools in a large, urban district to offer the Gifted and Talented cluster program—GT students from across the district attend. The district has 13 middle schools, 7 high schools, and 36 elementary schools. It is the second largest district in

the state. My school serves one of the three lowest income areas and is on the state's list of lowest performing schools.

My first year, I taught 6th grade English Language Arts and Reading Response to Intervention classes. The following four years, I taught eighth grade English Language Arts and Reading Response to Intervention classes. This year, I applied for the new Design Literacy and Communications position. Also, I serve as the department chair for English Language Arts.

Design class has been known by many names through the past several decades. In the 1970s and 1980s, it was known as "Shop" class, which usually had an emphasis in woodworking and automotive repair. That was replaced by the term industrial arts and began to include more trade-like skills including electrical engineering and set design. With the technology boom of the 1990's, Shop class transformed into a focus on technology in many forms: software development, graphic design, and robotics just to name a few. In the past 5-6 years, there has been a surge in the concept of the "Maker's Space," a dedicated time and place for students to make and "tinker" with products and technology for a variety of purposes.

At our school, the Design program is relatively new. It was proposed and funded under the assumption that it would be a more traditional woodshop-like class with the argument that there needs to be a tie to more specialized, technical, trade-like schools in the public school forum. The teacher who proposed and passed the idea at our school immediately fell ill and retired once the program officially came to fruition, mere months after acquiring large power tools such as table saws, drill press, sander, edger,

lathe, etc. By the time I took over, I had also inherited a 3D printer, several robotics kits, and a significant donation of arts and crafts supplies.

I approached my administration about my taking over the program because creating, in every sense of the word, has always been a huge passion of mine. I wanted to develop a student-centered, project-based class that would incorporate classic STEM and arts components, while still keeping the focus on real world problem-solving using critical reading and writing skills.

Next Chapters

Chapter 2 begins by reviewing the literature with emphasis on a synthesis of the research connected with the problem being studied and the study's purpose. Specifically, the researcher links the study back to the origins of personalized, learner-centered practices through constructivism and social constructivist theory. Non-cognitive factors, project-based learning, and the design cycle are common patterns arising from the literature on creating learner-centered environments and are discussed. Chapter 3 provides a review of autoethnography and its use in this thesis and delivers in-depth details regarding the research design and setting. It also outlines the analysis procedures used. In Chapter 4, the researcher describes the findings, including researcher's epiphanies and emerging themes. A discussion and implications for future research and practice are provided in Chapter 5.

CHAPTER 2

LITERATURE REVIEW

Introduction

Today's students face a very different world than their counterparts from previous generations. With the rapid evolution of technology, the global expansion of jobs and businesses, and the diverse governments and societies, new graduates must navigate an environment that is rapidly and continually changing. They must use their minds well to innovate and create new jobs and industries of the future or else face the prospect of limited economic opportunities, often much different than their parent's generation. It's not so much about what learners know anymore, but rather how quickly they can grasp and apply new and ever-changing knowledge that is key to learning in the 21st century (Wagner, 2012; Wagner & Dintersmith, 2015).

The work of educators must shift from preparing students for an industrial society to preparing students for success in work, life, and citizenship in this new global, knowledge-based, technology-rich, culturally-diverse, rapidly changing world in which they live (Wolfe & Poon, 2015). Teachers must work to create new learning content, teaching approaches, assessment practices, management strategies, and technology tools to best serve the students of today and tomorrow (Wolfe & Poon, 2015).

In this chapter, a synthesis of the professional literature on personalized, learner-centered teaching is provided. Specifically, the origins of personalized, learner-centered teaching dating back to constructivism and social constructive theory which dates back to Dewey (1938) and (Bandura, 1986) along with a synthesis of common

patterns to the literature including the interaction of cognitive and non-cognitive factors (i.e., academic behaviors, perseverance and mindsets, and self-regulated learning); the teacher's role in developing learner-centered classrooms; teaching processes to enhance personalized, learner-centered environments, including project-based learning and design thinking; and the Jobs for the Future and the Council of Chief State School Officers' *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon, 2015). A synthesis of the challenges teachers face in transforming traditional to learner-centered environments concludes the chapter.

Origins of Personalized, Learner-Centered Teaching

Constructivism

At the heart of personalized, learner-centered classrooms is constructivism. Constructivism is not an instructional approach, but rather a theory of how students gain knowledge. Constructivists believe that learning is an active process, where students use their background knowledge of the topic to construct new ideas (Sharma, 2014). According to Piaget (1990), humans are born with schemas that individuals can add to through the process of assimilation or accommodation. Learner-centered education contexts assist with this process. Constructivism integrates the learner within his/her own observations in a cycle of creation and observation (Scheer, Noweski, & Meinel, 2012).

Social Constructivist Theory

While constructivist and social constructivist perspectives share a strong resemblance in terms of how the learner is said to construct knowledge through the interpretations of ongoing events, actively making sense of language and life, the

socioconstructivist perspective also includes the cultural/social/historical settings of the learner (Schallert & Martin, 2011, p. 34). Bandura's Social Constructivist theory posits that people learn from one another, via observation, imitation, and modeling and focuses on a model of emergent interactive agency (Bandura, 1986). Agency refers to intentionally making things happen by one's own actions. Bandura (2001) describes agency as the process that "embodies the endowments, belief systems, self-regulatory capabilities and distributed structures and functions through which personal influence is exercised, rather than residing as a discrete entity in a particular place. The core features of agency enable people to play a part in their self-development, adaptation, and self-renewal with changing times" (p. 1). Nieto (1999) summaries the socio-cultural perspective as "learning emerges from the social, cultural, and political spaces in which it takes place, and through the interactions and relationships that occur among learners and teachers" (p. 2). The learning environments created by teachers are critical to these interactions and relationships.

Learner-centered classrooms are consistent with constructivism and Social Constructivist theory. Teachers promote active, not passive learning; encourage collaborative work among groups of students with an understanding of cultural, social, political, and historical similarities and differences; integrate learning experiences that occur outside the classroom (i.e., anytime and anyplace); and foster learner independence and student voice and choice, or student agency.

Interaction of Cognitive and Non-Cognitive Factors

Student learning and academic performance are complex enough much less when you focus on the problem at hand – designing personalized, learner centered

classrooms to accelerate student learning and academic performance. In addition to cognitive factors, often referred to as the "substance" of what is learned such as content knowledge and academic skills, non-cognitive factors such as persistence, grit, communication skills, are equally important to the immediate and long-term success of students. Researchers find the interaction between the cognitive and the non-cognitive factors to be essential for learning to occur and that changes in cognition are unlikely to happen in the absence of this interaction (Bransford, Brown, & Cocking, 2000). Considering cognitive factors in isolation such as the intelligence quotient (IQ) as a fixed and quantifiable amount of intellectual capacity has not withstood scientific inquiry over time. Capacity for learning is not fixed but rather "an interplay between cognitive and noncognitive factors and that intelligence is embedded in both the environment and in socio-cultural processes" (Farrington et al., 2012, p. 2).

These non-cognitive factors help to explain the socio-cultural context of learning and are related to academic performance. They include academic behaviors, academic perseverance, academic mindsets, learning strategies, and social skills (Farrington et. al., 2012). Each are described through the research literature and linked to personalized, learner-centered classrooms.

Academic Behaviors

Academic behaviors are those behaviors associated with being a 'good' student such as completing course assignments on time, arriving to class prepared and ready to work, paying attention and participating in class. In some schools, particularly International Baccalaureate schools, refer to these academic behaviors as "approaches to

learning." These approaches are the cornerstone of the other non-cognitive factors impacting academic performance.

Academic Perseverance and Mindsets

Academic perseverance or 'grit' is a non-cognitive factor that is defined as determination and passion for long-term goals and entails working strenuously toward challenges, maintaining effort and interest over time despite failure, adversity, and plateaus in progress (Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087-1088). While academic perseverance is important non-cognitive factor, additional research is needed to better understand how students persevere across multiple contexts and academic disciplines.

Academic mindsets are thought to impact academic perseverance. Mindsets refer to the beliefs, attitudes, or ways of perceiving oneself in relation to learning and intellectual work that supports academic performance (Farrington et al., 2012). Students who have a sense of belonging in an academic setting, see their efforts improve their academic standing, have the attitude that they can succeed, and believe that their work has value for themselves both within and outside the classroom are demonstrating academic mindset.

In reviewing the research on school belongingness, Osterman (2000) found that students "who experience belongingness have more positive attitudes toward school, classwork, teachers, and their peers…they invest more of themselves in the learning process (p. 343). Conversely, students who do not feel connected and lack school belongingness, have a lower interest in school and often exhibit negative behaviors that decrease academic performance and increase dropout rates.

Students who see their successes increase with their efforts and the development of an 'I can succeed' attitude are more likely to continue and persevere towards their academic goals. Bandura (1986) stresses that individuals tend to engage in activities that they feel confident in their ability to complete, and they avoid those activities in which they lack such confidence. This is referred to as one's self efficacy. Students with high self-efficacy tend to complete challenging tasks and persevere rather than giving up. Researchers have examined this phenomenon through self-efficacy research.

Lastly, students who see value in what they are learning or doing beyond the immediate grade tend to preserve and accomplish the task. They make connections between the content and the real world and see value in their work. Farrington et al., (2012) summarize academic mindset:

> When students feel a sense of belonging in the classroom community, believe that their efforts will increase their ability and competence, believe that success is possible and within their control, and see work as interest or relevant to their lives, they are much more likely to persist at academic tasks despite setbacks and to demonstrate the kinds of academic behavior that lead to learning and school success (p. 29).

Unfortunately, students with low academic mindset are just the opposite. They feel unconnected, unwanted, unsuccessful, and tend to demonstrate their low self-efficacy through poor behaviors and choices resulting in lower participation, grades, and overall success.

Classroom contexts have powerful influences on students' feeling of belonging, self-efficacy, and value of school. Personalized, learner-centered contexts help to increase these factors discussed above.

Self-Regulated, Deeper Learning

Understanding school and classroom practices that support positive mindsets and academic performance are important. Successful practices utilize learning strategies that help to connect the cognitive and non-cognitive factors discussed previously in this chapter to one's ability to monitor and adjust one's own learning referred to as metacognition. Researchers have studied many concepts and processes involving metacognition over the years and agree that critical to academic and life successes are metacognitive strategies such as planning, monitoring, and regulating one's learning by organizing time and resources. Zimmerman (1990) defines self-regulated learning as consisting of self-evaluation, organization and transformation, goal setting and planning, information seeking, record keeping, self-monitoring, environmental structuring, giving self-consequences, seeking social assistance (peers, teacher, or other adults) and reviewing (p.7). Dweck, Walton, and Cohen (2011) found learning strategies that enhance academic tenacity and performance involved: establishing trusting relationships that instill a sense of belonging, holding high expectations for students, and scaffolding challenging work so that the students reach high standards.

While there is considerable evidence that students learn more when they have better metacognitive strategies and use them to facilitate and self-regulate their learning, there are several limitations in the research on metacognition and self-regulated learning (Lennon, 2010). First, little information exists about how self-regulated learning may change during adolescence making it difficult to link specific learning strategies to

academic performance. Also, we have very little information on personalized, learner-centered classrooms which focus on "deeper learning".

Deeper learning involves what Winne (1996) described as "deep processing" that relies on "retrieving concepts and ideas relevant to materials currently being studied, monitoring relationships between new information and prior knowledge, assembling propositions into elaborated structures, rehearsing and transforming information into meaningful schemata, and metacognitively monitoring and adapting learning tactics per the requirements of a task" (p. 344). Deeper learning includes the following dimensions: mastery of core academic content; critical thinking and problem-solving; effective communication; ability to work collaboratively, learning how to learn, academic mindsets, and ability to transfer what was learned in one situation to new situations.

Recent studies on deeper learning examine the relationship between deeper learning and student outcomes. These studies not only highlight the improved collaboration and communication skills, academic engagement, and perseverance but also report that exposure to opportunities that develop these skills are positively related to student attainment (Zeiser, Rickles, & Huberman, 2016; Zeiser, Taylor, Rickles, Garet, & Segeritz, 2014).

Teacher's Roles in Developing Learner-Centered Classrooms

Teacher's roles are changing rapidly. They are tasked with preparing today's learners to engage in jobs and careers that have not yet been invented, requiring skills that are hard to measure and often not defined, and working with people who may be very unlike themselves and located anywhere in the world. Wilhoit, Pittenger, and

Rickabaugh, (2016) suggest that states, districts, and schools must better "support teachers in developing deeper learning skills and their own agency to unlock their potential and increase effectiveness. Both students and teachers need exposure to experiences that are unstructured, unfamiliar, and offer the opportunity for choice. They must be skilled learners, not just good students. They need to come to see themselves as leaders of themselves as well as others" (p. 15).

In developing deeper learning contexts, middle-grades language arts teachers must look for ways to support students' developing abilities but also consider how to design experiences to which young adolescents can relate to and see the value in what they are learning (Many, Ariail, & Fox, 2011). Consequently, when instruction does not address students' needs and interests, motivation and engagement are likely to decline (National Council of Teachers of English, 2006). Without motivation and engagement, it is difficult for students to master core content knowledge and build critical skills to communicate their ideas effectively, think creatively, work collaboratively, and manage their own learning (Zeiser et al., 2016).

Teaching Processes for Personalized, Learner-Centered Classrooms

Two promising and complementary teaching processes linked with helping teachers move from traditional teaching to personalized, learner-centered teaching designed to enhance positive mindsets and academic performance are project-based learning and the design cycle. Both methods work together with each other and help to connect reading and writing in content-area instruction which is better than separating them as demonstrated in traditional classrooms. These learner-centered approaches have been well substantiated in the literacy research (Duke et al., 2016; Goldschmidt &

Jung, 2011; Guthrie et al., 2007; Vitale & Romance, 2011), as well as education in general.

Project-Based Learning

Project-based learning (PBL) is defined as "a teaching method in which students gain knowledge and skills by working for an extended period to investigate and respond to an engaging and complex question, problem, or challenge" (Ravitz, 2003, p. 1). Typically, students have a choice of topic, develop and justify a need for the issue/project, identify authentic questions, research answers to their questions, design and complete projects that focus on their findings, and present completed projects to an audience beyond the classroom that provide feedback and critique.

French (2016) observed and interviewed middle school language arts and social studies teachers who implemented PBL and found that there was an increased amount of motivation and positive attitudes towards PBL classrooms as well as a shifting role between the teacher and the students. She recommended that teachers should engage in professional development on PBL before planning and implementing a project, focus on student interest, and be mindful of the importance of project authenticity or connection to the real world (French, 2016). In addition, middle-level language arts teachers must be knowledgeable about the changing literacy demands of middle-grades years and continue to develop students' ability to navigate complex texts (Many et al., 2011). Students are often motivated by PBL and willingly choose to tackle complex texts because they offer just-in-time knowledge to make progress on their projects.

Overall, the research literature on PBL supports that students in PBL environments are experiencing greater success than their peers from traditional

classrooms. Specifically, PBL students are intrinsically motivated to succeed due to the authentic nature of the projects (Catapano & Gray, 2015; French, 2016). Also, PBL students exert increased effort and engagement as well as produce higher quality of work (Damon, 2015; Larmer, 2014).

Design Thinking

Design thinking moves beyond problem solving and project-based work described above by including a human-centered approach (Kwek, 2011). This process contributes to different levels of creative knowledge, creative skills, and creative mindsets that can be achieved by design thinking education, culminating in a capability called "creative confidence" (Carroll, Goldman, Britos, Koh, Royalty, & Hornstein, 2010).

Design thinking fosters iterative problem solving and solution generation, making it relevant to projects in academic subjects while adding an inventive imperative highly consistent with 21st century skill sets (Kwek, 2011). Dweck (2006) found that students with a growth mindset seek out learning, develop deeper learning strategies, and strive for an accurate assessment of their weaknesses so that they can work to improve them. Also, students can apply or transfer their problem resolution process across contexts and issues. Key components of the design cycle process involve (1) human-centered; (2) action-oriented, and (3) focused on process (Hasso Plattner Institute of Design, 2007). Communities of practice provide an excellent venue for understanding the design thinking process and problem solving in that "communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger, 2011, p. 1).

A well-developed design thinking process is also included in the International Baccalaureate (IB) Design Cycle. The IB design cycle is defined as a "tool, which provides the methodology used to structure the inquiry and analysis of problems, the development of feasible solutions, the creation of solutions, and the testing and evaluation of the solution" (International Baccalaureate, 2014, p. 4). A successful student of the IB Design Cycle would be able to effectively adapt and transfer this problem-solving approach to a variety of different situations for a variety of purposes. Meaning that, even though they are working on a product, design, or issue for class using the design cycle, they would be able to apply the approach, and not necessarily the design to flesh out an appropriate plan of action no matter the context with the goal "to become actively involved in, and to focus on, the whole design process rather than on the final product/solution." Focusing on the process and not necessarily the product is essential to ensure that students are strengthening their abilities to "develop not only practical skills but also strategies for creative and critical thinking" (International Baccalaureate, 2014, p. 4).

Educator Competencies for Personalized, Learner-Centered Classrooms

In addition to understanding learning theories and processes to facilitate personalized, learner-centered classrooms, a clear understanding of an innovative, learner-centered teacher is needed as well. The *Educator Competencies for Personalized, Learner-Centered Teaching* provide a rich description of the teacher competencies and are organized into four domains: (1) Cognitive or need to know; (2) Intrapersonal or need to process; (3) Interpersonal or need to relate; and (4) Instructional or need to do (Wolfe & Poon, 2015).

In the Cognitive Domain, the focus is on what teachers need to know to create personalized, learner-centered classrooms. The cognitive competencies include:

1. Utilize in-depth understanding of content and learning progressions to engage learners and lead individual learners toward mastery.
2. Have knowledge of the sub-skills involved in effective communication and apply it to instructional strategies that develop learners into effective communicators.
3. Understand and employ techniques for developing students' skills of metacognition, self-regulation, and perseverance (Wolfe & Poon, 2015, p. 8-9).

The researchers use the term 'mastery' which is closely related to competency-based, proficiency, and performance based and the term 'learning progressions' to highlight the scaffolds needed to build students' rich understanding of the subject or discipline (Wolfe & Poon, 2015). The cognitive competencies are closely connected to the previous literature review on academic behaviors, self-regulation, perseverance resulting in deeper learning.

In the Intrapersonal Domain, the focus is on what teachers need to process. The intrapersonal competencies include:

1. Convey a dedication to all learners—especially those historically marginalized and/or least served by public higher education – reaching college, career, and civic readiness.
2. Demonstrate an orientation toward and commitment to a personalized, learner-centered vision for teaching and learning.

3. Engage in deliberate practices of adapting and modeling persistence and a growth mindset.
4. Facilitate and prioritize shifting to and maintaining a learner-centered culture.
5. Demonstrate an orientation toward and commitment to lifelong professional learning.
6. Analyze evidence to improve personal practices (Wolfe & Poon, 2015, p. 10-12).

Embedded within these intrapersonal competencies are developing student choice or agency and the use of project-based learning, design thinking and other continuous improvement approaches.

In the Interpersonal Domain, the focus involves the need to relate. The interpersonal competencies include:

1. Design, strengthen, and participate in positive learning environments (i.e., school and classroom culture) that support individual and collaborative learning.
2. Build strong relationships that contribute to individual and collective success.
3. Contribute to college and career access and success for all learners, particularly those historically marginalized and/or least served by public higher education due to differences in background, demographics, learning style, or culture.

4. Seek appropriate individual or shared leadership roles to continue professional growth, advancement, and increasing responsibility for student learning and advancement (Wolfe & Poon, 2015, p. 13-15).

In the Instructional Domain, the focus is on the need to do, with successful educators in a personalized, learner-centered setting about to

1. Use a mastery approach to learning.
2. Use assessment and data as tools for learning.
3. Customize the learning experience.
4. Promote student agency and ownership with regard to learning.
5. Provide opportunities for anytime/anywhere and real-world learning tied to learning objectives and standards.
6. Develop and facilitate project-based learning experiences.
7. Use collaborative group work.
8. Use technology in service of learning (Wolfe & Poon, 2015, pp. 16-19).

Each domain and its competencies has a set of indicators designed to assist in assessing a teacher's progress in developing personalized, learner-centered teaching and are supported through the research literature (Cator et al., 2015; Cervone & Cushman, 2012; Conley, 2010; Duckworth, 2007; Dweck, 2006; Zeiser et al., 2014; Zimmerman, 1990). Also, the competencies are consistent with the Interstate Teacher Assessment and Support Consortium (inTASC) Model Core Teaching Standards (Wolfe & Poon, 2015).

Challenges

The literature highlights several challenges in transforming traditional classrooms to personalized, learner-centered. First, change requires some risk that often makes teachers feel uncomfortable and unprepared. Secondly, the shift in culture is difficult to manage in a traditional school with limited models and support for learner-centered classrooms. In addition to the teacher competencies for learner-centered classrooms describe above, similar competencies are needed for school administrators and policy leaders. Third, parents want to see classrooms that they experienced as students and understand how to navigate. Fourth, trends in technology offer challenges to some teachers, particularly those who have limited technical skills. For example, in personalized, learner-centered classrooms, teachers must grasp different methods of employing technology in teaching; such as flipped classrooms, guided learning pathways, educational gaming, adaptive learning to name a few. These new platforms and formats require teachers pursue learning environments that capitalize on new technologies that support deep learning and literacy skills such as comprehension (Coiro & Dobler, 2007; Wohlwend & Lewis, 2011).

Summary

In this chapter, the theoretical frameworks guiding this research were examined with a critical focus on constructivism, Social Constructivist Theory, and cognitive and non-cognitive factors interaction. Learning processes, approaches, and challenges were also addressed. Understanding the teacher's role in creating learner-centered environments; the previous research on constructing positive learning behaviors, persistence, and mindsets; and the new emerging teacher competencies for personalized,

learner-centered environments help to provide a foundation for this study involving one teacher's journey to create a personalized, learner-centered environment for students.

In Chapter 3, the researcher describes the autoethnography methodology including the analysis procedures. Utilizing the lens of the *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon, 2015), the researcher focuses primarily on personal experiences and "epiphanies", i.e., remembered moments perceived to have significantly impacted the teacher's journey or trajectory (Bochner & Ellis, 1992) from a traditional to learner-centered approach. A description of the results, including emerging themes is provided in Chapter 4. Chapter 5 concludes the thesis with a discussion of the findings and implications for future practice and research.

CHAPTER 3

METHODS

> We do not learn from experience. We learn from *reflection* on experience.
> John Dewey, 1938

The purpose of this study is to describe and systematically analyze personal experiences of a middle level language arts teacher to help understand the cultural change from a traditional classroom to a personalized, learner-centered environment. Based on the rationale provided in the previous chapter, the researcher's approach involves the examination of a middle level language arts teacher's personal beliefs and practices in developing self-regulated, deeper learning in students. The understanding of the interaction between cognitive and non-cognitive factors is critical to understanding this process.

In this chapter, the researcher reviews the research questions, defines and describes the autoethnography methodology used in the study and the results. The research design, including the collecting and managing of autoethnographic data, is described along with descriptions of the analytic and interpretive strategies used and the role of the researcher.

Research Questions

The research questions guiding this study address teaching adolescents to become learners and to better understanding a teacher's shifting beliefs and practices as well as the experiences and challenges of building new pedagogical skills and strategies to support personalized, learner-centered environments. The two research questions are:

1. How does a middle level English language arts teacher's beliefs and practices shift from a traditional teaching style to a personalized, learner-centered approach?
2. What are the key challenges facing the teacher during the shift from a traditional teaching style to a personalized, learner-centered approach?

To adequately address the research questions, the researcher uses theoretical frameworks, research literature, and methodological tools to analyze her lived experiences as a teacher, specifically to illustrate facets of the personalized, learner-centered journey she experienced and the challenges she faced. Ellis, Adams, and Bochner (2011) encourage researchers to take an additional step to consider ways others may experience similar epiphanies and to use personal experience to illustrate aspects of cultural experience, and in so doing, make characteristics of a culture familiar for both insiders and outsiders.

To answer the research questions and accomplish the purpose of this research, the researcher both compares and contrasts personal experience against existing research (Ronai, 1996) as well as examines relevant cultural artifacts (Boylorn, 2008; Denzin, 2014), such as unit plans, field notes, and notes from department meetings and professional learning activities. As described in Chapter 2, the *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon, 2015) will help serve as one of the lenses for the researcher to compare/contrast the researcher's personal lived experiences as described in her personal narratives and "epiphanies", i.e. remembered moments perceived to have significantly impacted her journey or trajectory (Bochner & Ellis, 1992) from a traditional to a personalized, learner-centered approach.

Autoethnography Methodology

This study uses autoethnography to address the research questions. Autoethnography was chosen as a methodology to assist the researcher in describing a personal journey in transforming a traditional classroom to a learner-centered environment designed to prepare students for success in work, life, and citizenship in the global, knowledge-based, technology-rich, culturally-diverse, and rapidly changing world in which they live. As noted in Chapter 1, U.S. education reform movements have fallen short because they involved mainly an external approach to impacting schooling. This study is designed to provide a deeply personal "internal" approach to educational reform.

Purposes of autoethnography when used as a research method are what define and make autoethnography a unique and compelling approach to capture personal experiences such as the personal journey experienced by the researcher. Adams, Jones, & Ellis (2015, p. 1-2) describe autoethnography as a research method that:

- Uses a researcher's personal experience to describe and critique cultural beliefs, practices, and experiences (Ellis, 2004)
- Acknowledges and values a researcher's relationships with others (Adams, 2008; Barton, 2011)
- Uses deep and careful self-reflection – typically referred to as "reflexivity" – to name and interrogate the intersections between self and society, the particular and the general, the personal and the political (Berry & Clair, 2011)

- Shows “people in the process of figuring out what to do, how to live, and the meaning of their struggles” (Bochner & Ellis, 2006)
- Balances intellectual and methodological rigor, emotion, and creativity (Ellis, 1991)
- Strives for social justice and to make life better (Denzin, 2014)

Historically, the formation of autoethnography research emerged from four interrelated trends: (1) a recognition of the limits of scientific knowledge and a growing appreciation for qualitative research; (2) a heightened concern about the ethics and politics of research; (3) a greater recognition of and appreciation for narrative, the literary and aesthetic, emotions and the body; and (4) the increased importance of social identities and identity politics” (Jones, Adams, & Ellis, 2017, p. 25-26). The first references of autoethnography was in the mid-1970’s with a focus on cultural members giving accounts of their culture (Heider, 1975). Researchers in the 1980’s from the disciplines of sociology, anthropology, communication, performance, and women’s and gender studies began using personal narrative, subjectivity, and reflexivity in their research (Jones, Adams, & Ellis, 2016). Today, autoethnography research is widely used across multiple disciplines. It illustrates a new perspective on personal experience and epiphanies by finding and filling a “gap” in existing, related research and storylines (Ellis, Adams, & Bochner, 2011).

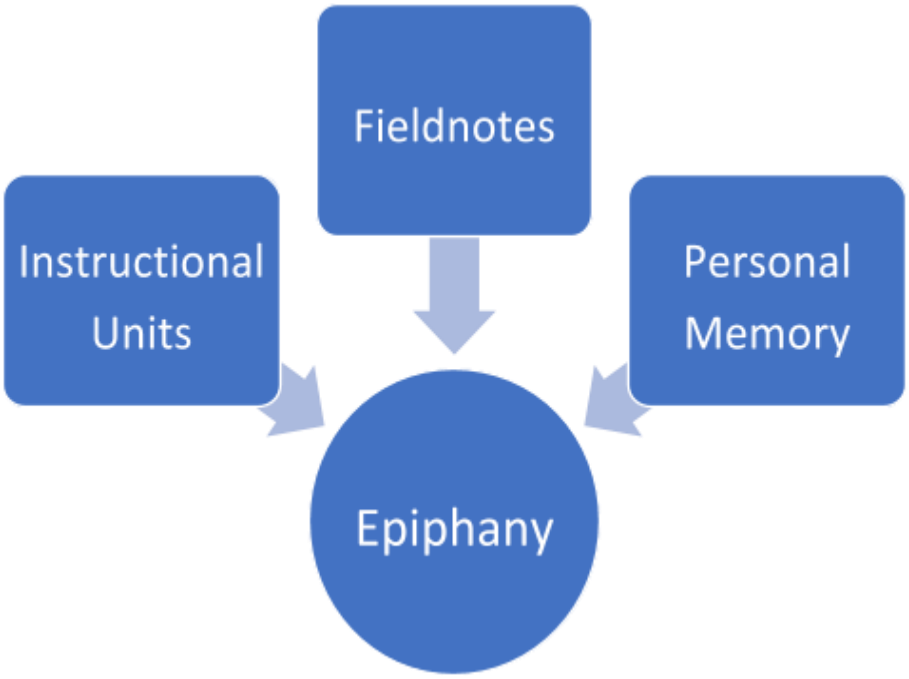
In this thesis, the researcher used autoethnography research methods described by Chang (2008). Specifically, the researcher (1) collects autoethnographic data with a focus on personal memory data, instructional unit plans, and field notes; and (2) turns data into autoethnography with discussion on managing, analyzing and interpreting data

(Chang, 2008). Constant threads throughout this chapter include understanding self, others, epiphanies, and ethics.

Collecting Autoethnographic Data

In this study, the researcher collects data using personal memory, instructional unit plans, and field notes. These data sets combined help the researcher discover epiphanies that help to highlight the teacher's shifting beliefs and practices from conventional/traditional to personalized, learner-centered approaches (see Figure 1). Unlike ethnographers who rely on informants' personal memory and their own recent personal memory of what they observed, the autoethnographer values and acknowledges her own personal memory as a primary source of information (Chang, 2008, p. 71).

Figure 1: Creating Epiphanies



Personal Memory Data

The researcher relied on her personal memories of the journey from conventional/traditional teaching to learner-centered approaches. In defining the context of autoethnographic research, it is important to realize that personal memory is the "building block of autoethnography because the past gives a context to the present self and memory opens a door to the richness of the past" (Chang, 2008, p. 71). Autoethnographers value self-reflection and recognize personal memory as a primary source of data for their research (Jones et al., 2016). While personal memories may be altered by the immediate emotions (positive or negative) surrounding the event, often a time gap between the event and when the autoethnographer remembers an event tend to "smooth out details, leaving a kind of schematic landscape outline" (Clandinin & Connelly, 2000).

In this study, the researcher used a thematically focused timeline to manage the autoethnographic research process. Specifically, the researcher examined her educational development including changing teaching beliefs, practices, and shifting classroom culture within a six-year timeframe. She divided the timeline into beginning/early-career teacher (Years 1-3); and advancing teacher (Years 4-6). The researcher's personal memories during this timeframe provided a foundation to understanding the cultural change from a traditional classroom to a personalized, learner-centered environment. Through 'thick description' of these time segments, the reader has a glimpse into understanding the cultural change from an 'insiders' perspective.

In addition to the thematically focused timeline, the researcher used a 'self-inventory' technique to guide and focus her collection of data (Chang, 2008). Beginning with Wolfe and Poon (2015), the researcher used the research-based teacher competencies as a starting point. The researcher then dug through the storehouse of her memory, picked up relevant bits of information on themes/competencies, and gave an order to the thematically collected bits… ever expanding the topics and other information (Chang, 2008, p. 76).

Reflections from Field Notes and Instructional Unit Plans

To assist in collecting personal memory data, the researcher used reflections from field notes and instructional unit plans over a six-year period to examine her personal growth in creating/designing, implementing, evaluating, and thriving in a personalized, learner-centered environment. Also, she highlighted challenges faced along the way. During the researcher's first year of teaching, she participated in the state-required teacher internship program and has included internship data in Year 1 reflections.

Managing Data

In accordance with autoethnography research process, the researcher used techniques designed to organize the many forms of fragmented information bits found in personal memory recollections and reflections from instructional unit plans and field notes. As Chang (2008) notes, "periodical organization of data steers the subsequent collection process effectively toward the research goal. While organizing collected data, the researcher can see deficiency (where more data need to be collected), redundancy (where more than sufficient data have already been accumulated), and

irrelevancy (where collected data need to be trimmed and discarded) in the data set" (p. 115).

During data collection, the researcher used labeling to quickly identify how the data set was collected. Specifically, she focused on the collection timeframe (beginning/early career and advancing), the collection source (personal memory, field notes, instructional plan), the contextual information (geographic location, people involved, communication, metacognition, etc.), and the content (topic). After the data organization and initial data analysis, the researcher used a data refinement process to keep the focus on the research questions.

Analyzing and Interpreting Data

Jones, Adams, and Ellis (2016) write about the dynamic process among data collection, management, and analysis. They confirm that the process is not linear, but rather research steps overlap and often intertwine with data analysis and interpretation. The process is circular and dynamic. Chang (2008) stresses, "the data collection activities also help researchers examine the validity of their criteria and revise them accordingly which then informs the analysis and interpretation" (p. 122).

Writing an Autoethnography Thesis

In writing this autoethnographic thesis, the researcher used the theoretical and methodological tools and research literature to help analyze her personal experiences from traditional/conventional teaching to personalized, learner-centered teaching. In addition to comparing and contrasting personal experience against existing research (Ronai, 1996) and examining relevant cultural artifacts (Boylorn, 2008), the researcher

sought to make characteristics of her teaching journey and culture familiar, not only for cultural insiders, but also for outsiders to the culture of teaching in middle school.

Throughout each chapter, the researcher brought "readers into the topic or scene" particularly into thoughts, emotions, and actions (Ellis, 2004, p. 142) in order to "experience an experience" (Ellis, 1993, p. 711; Ellis, Adams, & Bochner, 2010). As first described in Chapter 1, the researcher did this through intermingling her writing and voice as an autoethnographic researcher, usually in third-person as she established the context for the experiences and reported on the theoretical and research literature, and usually, in first-person as the person who lived-through personal experiences (Caulley, 2008). Occasionally, the researcher used second-person to 'bring readers into a scene, to actively witness, with the author, an experience, to be a part of rather than distanced from the event' (Glave, 2005; Ellis et al., 2010, p. 4).

Role of the Researcher

The researcher was the sole investigator in this study. The researcher has six years' experience as a middle-level language arts teacher in one school in an urban, diverse, low-income setting. Over the years, the researcher has grown to understand and feel comfortable in her school context, working with students, colleagues, administration, parents, and the community but that was not always the case. Each year she conducts home visits before school begins and invites parents and the community to multiple events throughout the year such as literacy night, plays, and design community nights. She also participates in community activities such as community theatre, beginning entrepreneurs, preparing Halloween costumes for low-income elementary children, etc.

Along with being the primary instrument for data collection and analysis, the researcher applied her previous experience as a teacher and learner to find common patterns and emerging themes across this autoethnographic study. These patterns and themes are provided in the following section.

Procedures

The researcher organized six years of instructional unit plans including her field notes. In addition to unit plans and field notes, she used personal memory writing prompts (Chang, 2008) to help her create personal memory data and to identify epiphanies that assisted in understanding her changing beliefs, teaching practices, and challenges faced. The researcher used Dragon transcription app to record and transcribe her personal memories and epiphanies. After transcription, the data was analyzed to inductively locate themes related to the researcher's beliefs, practices, and challenges in developing personalized, learner-centered classrooms. The inductive data analysis outcome was intended to help the researcher understand past and current beliefs, practices and challenges and to accelerate the researcher's journey in providing every student with a high-quality, personalized learning experience leading to future attainments in high school, college, careers, and life in general.

Data Analysis

Data analysis begins with coding and sorting (Chang, 2008, p. 119). The first step the researcher took in the coding and sorting process was to enter her personal memory and epiphanies transcripts into a word cloud generator (see Figure 2) and magnify recurring topics, which revealed trends in the data. Coupled with her research questions, she assigned different colors to each topic and initial trends found. Also, the

researcher searched through each of the timeframes and data sets and underlined where she found instances of that particular trend. Through constant comparison of her data, trends and categories that she highlighted evolved throughout the analysis process. After reading and coding each personal memory, she also wrote a memo to herself that included a summary of what the personal memory and/or epiphany was about as well as what stood out in the memory or epiphany. Throughout the analysis process, the researcher found that she was often comparing her initial trends and findings with ones found in similar studies outlined in Chapter 2: Literature Review.

Figure 2: Word Cloud



As the researcher was coding and developing themes for the data, she kept in mind her research questions and discovered that several findings to her first question were a result of challenges she encountered. These challenges or 'bumps in the road' helped her to described more thoroughly a theme as well as provided a response to her second research question. Taking this into account, the researcher developed her findings by examining how the two questions were interwoven and built upon each other.

Summary

Autoethnography as a research method was described in this chapter along with how the researcher collected and analyzed data. Specifically, the researcher focused on personal memory data, instructional unit plans and field notes to create epiphanies with discussions on managing, analyzing and interpreting data. In Chapter 4, the researcher highlights the findings and supporting epiphanies. A discussion of the findings and implications for practice and future research are provided in Chapter 5.

CHAPTER 4

FINDINGS

The researcher discovered the following overarching themes in response to her changing briefs, practices, and challenges faced: (1) The curriculum should be natural, not forced; (2) A student-driven process and assessment (choice and voice) are critical; and (3) authentic collaborations accelerate student-centered teaching.

The researcher describes each finding by providing two epiphanies that have guided her changing beliefs and practices. Table 1 provides a preview of the findings and supporting epiphanies discussed below. One epiphany is from her first few years of teaching and the other is more recent. Most of the epiphanies have been memorable due to multiple challenges faced by the researcher at a particular time and are described naturally by interweaving the challenges faced into each epiphany.

Table 1

Findings and Supporting Epiphanies

Findings	Epiphanies
1. The curriculum should be natural, not forced	1a: Writing for a real purpose and a real audience 1b: Authentic vocabulary development
2. Student-driven process and assessment are critical (choice and voice)	2a: Interdisciplinary instruction gone wrong 2b: Don't be afraid of failure!
3. Authentic collaborations accelerate student centered teaching	3a: Don't over plan. Encourage authentic discussions 3b: Peer writing collaborations – natural balance

Finding 1: The Curriculum Should Be Natural, Not Forced

Epiphany 1a: Writing for a Real Purpose and a Real Audience--"Thought Logs"

When I was in middle school, my English teacher gave each student a marble-covered composition notebook and required us to write at the beginning of class every day in it. We were expected to write in a first person, narrative style-- much like a diary or journal entry, and the prompt would be anything from a personal question to a reaction to the content. This was our opportunity to respond in our own way to whatever we were doing, reading, or experiencing. Everything was always opinion-based.

When I became a teacher, I followed this model under the impression that it "killed many birds with one stone." It built writing stamina. It had the opportunity to focus on the previous day's work therefore offering a "flashback" or reflection activity of sorts. It allowed students to see their writing progress (in one spot) over time.

So, at the beginning of every year, I had students bring in a notebook in the hopes it would be a true "interactive notebook." I even gave it a fun name—"Thought Log" which I considered clever because it seemed casual and natural—just a spot to drop your thoughts. The concept was simple and easy and why I think I returned to the idea year after year, always revamping or changing the structure a bit to fit the goals for that year or improve functionality. I always had high hopes that it would be a successful "interactive notebook" that would contain several different sections: grammar, language acquisition, vocabulary, mechanics, and literary analysis. However, despite its best intentions, those ambitious pursuits never came to fruition.

No matter how streamlined I attempted to make the process, it always ended up being a burden-- an onerous pursuit we abandoned around November. Looking back, I believe this was the case for several reasons:

1. It was a very forced style of writing. They knew it and I knew it. Whether the topic was on-topic and curriculum centered, or off-topic and personal, they knew they were just writing for writing's sake. Even compiling a list of "fun" prompts and letting them choose what to write about each day still seemed trite.
2. They were a hassle to grade. Time consuming and not always standards-based.
3. They didn't contain or require any real-world perspective; they were not writing to accomplish anything specific or significant.
4. They were not writing for a real audience. They knew the only pair of eyes that would read their entries would be me, and that seemed to hinder their writing.
5. They were monotonous. Every single day they wrote the same way for the same audience in the same format.

I reasoned the Thought Log benefits outweighed its disadvantages because I assumed they would never have the opportunity in any other class to write about themselves so openly and so personally. I wanted to take the pressure off the writing process and prove that composition can be used as incredibly therapeutic, guaranteeing an introspective study of the self; a meta-cognitive approach to whatever analysis we were engaging in. Instead, they engaged in a purposeless pursuit.

Epiphany 1b: Authentic Vocabulary Development —"In the Ghetto"

Vocabulary development has always been a crux of the teaching profession. Teachers and students alike are aware of how important it is, but very few vocabulary acquisition practices seem to be both natural and effective.

This became most clear to me the first time I taught a unit focused on the Holocaust. One day, I happened to mention that most Jewish people went to ghettos before being deported to concentration camps, and I remember hearing a bit of an uproar in the classroom. A good uproar. The kind of reaction you get when you can tell there is a genuine interest in the content.

The students were fascinated by the term "ghetto" and how it related to what we were already learning. They asked questions about its historical significance and demanded details about the particulars concerning the living conditions. Many students seemed convinced that the term "ghetto" was a more recently developed concept, one they were familiar with in many facets. When asked to define the term in 2013, they rattled off several definitions including:

- Someone who knows how to fight
- Someone who is considered trashy
- Someone who is unnecessarily loud in conversation or is verbally aggressive
- Someone who has an "urban" accent; also, is known as "ratchet"
- Is a particular neighborhood where houses are not nice and there is a much higher crime rate than surrounding areas; an area of a town where there is a lot of illegal drug activity
- An act of resourcefulness, though deemed negative

Example: Using an iron for clothes to toast a piece of bread

- Someone who continues to use an everyday item that is sorely outdated to save money

Interestingly, the students were quick to also mention that the term "ghetto" is also considered to be a compliment, despite its negative definitions. They mentioned that only certain people are allowed to call others "ghetto," and that in many ways it is considered a badge of honor; someone that is respected in their own right and "not to be messed with."

Once I taught them the definition of a Jewish ghetto from the Holocaust of the 1930's, they took it upon themselves to make connections and comparisons to their use of the word. They found deep associations with the idea that Jewish people were *forced* to be poor because the Nazis didn't allow them to work outside the ghetto; likewise, the students found it interesting that those in power did everything they could to ensure the environment of the ghetto was dirty, overpopulated, and disease-laden. The suspicions surrounding the motives of police and those in power were common threads they instantly illuminated and discussed among themselves.

Finding 2: Student-driven Process and Assessment are Critical (choice and voice)

Epiphany 2a: Interdisciplinary Instruction Gone Wrong —"Zebra Mussels"

An administrator came in one day during collegial planning and announced that as a school a lack of interdisciplinary efforts exists in all subject areas. She suggested that all content areas begin planning in an interdisciplinary way as soon as possible. I interpreted that to mean that an entire project or unit of study should center on this approach. I found out later that the administrator just meant that teachers should be

having conversations about what is being taught in other subjects to help students make natural connections when those connections naturally presented themselves.

The instruction of these connections can be a little bit more informal; not necessarily a large project where all content areas were weighing in equally. So, I approached this concept for the first time thinking, "I wonder what other subject areas are doing right now and how might that fit within the unit that I was already working on?" I was already knee-deep in *The Giver* unit focusing heavily on the idea of utopian societies. The science teachers on my team were teaching their ecosystems unit, focusing on the "part to whole" concept. We found a commonality in asking the essential questions of: "How dependent is the individual on the community and how dependent are communities on individuals?"

We thought this would be a great basis for an interdisciplinary unit. We would take the main character of *The Giver*, Jonas, who lives in a very homogenous "perfect" society who needs individuals to "play their part" in order for the society to function and compare that to one entity of the "Lake St. Clair Food Web" called the zebra mussel as a type of an example of how everything in an ecosystem is interconnected and reliant upon each other in order to survive.

In our minds, we were making this really cool connection between two different content areas that are not normally linked together, especially not with a literary novel that has nothing to do with an ecosystem or scientific perspective. We really thought we were being as groundbreaking as possible by ensuring students could see ties between literature and science. We decided the project would cumulate in a LDC (Learning Design Collaborative) research paper where we would ask students to compare Jonas'

role in his society to a zebra mussel's role in its ecosystem. The actual prompt of this paper was: "After reading *The Giver* and ecological texts, write an essay that addresses the question and analyzes interdependence. Provide examples from both content areas to clarify your analysis. What conclusions or implications can you draw?" Also, rephrased on some handouts as: "In a well-developed essay, explore how the role of an individual affects the community in both *The Giver* and scientific ecosystems. Compare and contrast how the idea of 'part to whole' is meaningful to both concepts/texts."

What was fascinating, and also incredibly frustrating and disappointing, about this unit was the fact that it essentially failed even before it took off. It died before it had a chance to come alive because everything about it was forced. We forced the content, the concepts, the themes, and the assessment. Even the adults that were involved in the planning process could not easily write a strong example of what a solid paper would look like. Still, we pressed on in the name of the almighty "interdisciplinary unit," assured that things would work themselves out as we went, the kinks would be resolved, and everything would fall into place accordingly.

Finally, the teachers came together and wrote what we thought was a really great example of what this research paper might look like. It was the only example we had and as students began drafting their own, it became very apparent that the prompt or example paper did not lend themselves very well to variations or inclusion of any sort of original thought for students. There was certainly no opportunity for students to take ownership of this prompt and write in any type of "real-world" direction by using their own knowledge, interests, and strengths to decide the direction that the paper could take.

The prompt and product were so incredibly narrow. I laugh now as I look back at my frustration at the time. For the life of me, I couldn't figure out why the essays were so difficult for students to write and why all of them ended up sounding not only the same, but eerily like the example we provided. I know now that it is because there was no chance for any real-world, meaningful connections to their everyday life. There was no choice at all: not in style, format, audience, or content. It didn't lend itself well to research. As a matter-of-fact, it didn't lend itself well to the content we were trying to teach, and it offered little opportunity for students to develop a deeper perspective of either zebra mussels or Jonas as a character. We forced them to make a forced connection, and the product was inevitably forced, formulaic, and dull.

It was such a missed opportunity to teach about the concept of interdependence, which is a very fascinating subject. The idea that this "ripple effect" or "butterfly effect," as it's been coined by other sources-- the idea that no one can do one thing without it affecting everything and everyone else around you. The idea that even small changes have a larger impact could have been an incredibly meaningful theme or concept to middle schoolers who often believe that they "are an island," devoid of any consequences other than the ones they are personally involved in.

Epiphany 2b: Don't be afraid of failure!

Though it was profoundly disappointing that the Zebra Mussels attempt at interdisciplinary instruction failed miserably, it offered invaluable lessons to the teachers involved. In addition to using it as an example of what not to do in regards to authentic interdisciplinary instruction, it also afforded the students an opportunity to see failure on an adult level—a level they assumed never or rarely failed.

At the end of the unit, once all cookie-cutter essays were turned in and graded, I asked my students to reflect and evaluate the strengths and weaknesses of the lessons. I told them forthrightly that I considered many aspects of the unit, namely the ones I was in charge of—planning, organizing, and scaffolding—a failure in many ways. We had a candid discussion about their perceptions of the tasks and I showed them my unit planner and explained step-by-step the teachers' thought processes and reasons for the decision that were made. I was as honest as possible in that discussion and in many ways, I realize now, I was also asking for forgiveness for stretching what should have been a two-week assignment into a long, frustrating, arduous, five-week long odyssey of nonsense. Students appreciated the admittance of guilt and especially of my frank approach to failure. I realized then and there how powerful the transparency of failure is and how easy and natural it seemed to expose its power.

I started admitting fault as often as possible, even with little things. There is an unsubstantiated sense of equality when you foster an environment that is a truly safe place where you give both people and ideas the benefit of the doubt. They loved me for it. Instead of viewing me as rigid, unrelenting tyrant, they actually began respecting me *more*. I immediately started implementing this notion of failure, or being comfortable with not knowing something, into my instruction. For example, when teaching text annotation, I told students to find their own idiosyncratic ways of note-taking just as I had found my way during high school and college. Then, instead of modeling this note taking on a predetermined text (one I would have rehearsed the notes and implications of in advance), I googled a brand new text, one I had not truly read before, and modeled, out loud, my thinking, annotation choices, thought process, contextual

analysis, and most importantly: any authentic "failures" or "unknowns" I felt while reading it. If there was a word I did not know the meaning of, I admitted it quickly, and showed them how I would infer the definition by looking at the prefix or suffix or would simply looking up the denotation online.

This practice evolved into readily admitting inexperience with many different types of technology when I began teaching Design classes. When the school bought a 3D printer, I told students that I had never seen one in my life, so it was silly to assume that *I* would be teaching *them* about it. Instead, I said that we had two jobs to do—(1) figure out how to use it properly and effectively, and (2) figure out what we could make that would be worthwhile.

My teaching style began to reflect the exact standards I was now teaching—the design cycle. We identified the problem (What the heck is a 3D printer and what can we do with it?), we researched possible solutions, we came up with a plan, we executed the plan, we failed miserably several times and wasted lots of filament plastic, we reflected on why the plan had failed, then we started all over again in the hopes of creating something cool. I was a cog in the wheel, the same as every other student. I was in the trenches of exploration right along with them. My comfort with failure seemed to encourage students to become comfortable with theirs.

Finding 3: Authentic Collaborations Accelerate Student-Centered Teaching

Epiphany 3a: Don't over plan. Encourage authentic discussions.

In my first year of teaching eighth grade English Language Arts, I was really excited about teaching *The Giver* because it is a book that contains profound themes using a dystopian lens: the concept of a truly perfect society, norms like manners,

stigmas of racism and stereotypes, and the concept of point of view. I really wanted to tackle these important issues and prove to students that those things are best shown, represented, dissected, and analyzed through literature--the classic form of human nature analysis, the finest form—storytelling.

The major flaw in the way that I chose the course of our analysis was leading students to themes that I had already identified in the book.

My process was:

1. Teacher picks book. Makes sure it is a "traditional" eighth grade text.
2. Teacher finds themes in advance.
3. Teacher leads students to predetermined themes when reading.
4. Teacher facilitates discussion of themes when they predictably arise.

[Side Note: I also remember not truly "getting" the concepts in *The Giver* in eighth grade because they are incredibly advanced and deep. Ideas of morality and homogeneity and the dystopian perspective of being unsure what would happen to the human race if we continued on the path we are on].

A common practice and expectation in the teaching field is the notion that every lesson or unit must be very, very planned, organized, and thought-out in advance. If you want your instruction and lessons to have any real impact, every angle must be considered, every resource considered, every item strategically timed. A great unit of study has been likened to a well-oiled machine: greater than the sum of its parts, but equally reliant on the parts' quality.

To have a real impact, it seems, teachers must plan in multiple ways, looking at every lesson in isolation as well as how they combine to facilitate the "big picture"

ideas. Before a teacher steps foot in the classroom of the first day of teaching a new unit, there have been countless hours of planning, research, and holistic scrutiny.

My *Giver* unit was no different. I tried to come up with what I thought would be a very well-rounded unit-- well-rounded defined as having all four strands of the English Language Arts standards equally represented: reading literature, reading informational texts, speaking and listening skills, and writing. The unit cumulated in the usual long writing piece called an "Extended Response Question."

I knew that the basis of the unit would be the book itself and that I would include other informational articles that were pertinent to the various themes found in the novel: genetic manipulation, career choices, discipline and child rearing, climate control, the concept of utopia-- basically what makes a perfect society—was really the question that drove most of the decisions that I made in terms of theme regarding this unit.

Not one to forget about the speaking and listening skills strand of my subject, I whole-heartedly planned for certain discussion days in the hopes that students would enjoy talking about their interpretations of the text on a deeper level.

THIS is really where I started to notice a shift in my own thinking about teaching because while I had developed 90% of the unit in advance, I knew that if I wanted to facilitate truly authentic discussion, I had to leave many of the discussion aspects up to them. I truly wanted my students to have a say in what we were going to discuss. So, though I knew the themes that I would lead them to in advance, I left control up to them in regards to generating particular talking points within those themes.

I assumed that they would come up with more poignant talking points, and I was right to an extent. The discussion's ebbs and flows naturally led to one significant moment after another and I could feel the difference between the "old" way of discussion (teacher-generated questions) and the "new" way. However, the overall vibe of the discussion still seemed inauthentic and stale. Students were required to generate questions about themes the teacher had chosen. They were still confined to particular topics, and though the exercise seemed to give them more freedom, it still narrowed the scope of discussion in a formulaic way.

So, I tried it another way the next time. I gave them complete freedom. I said something to the extent of, "Let's talk about major things we see in *The Giver*. Anything you want. Go!" The result was a lot of blank stares and "surface level" talk, mainly about character development, which we had already discussed in the first chapters.

I came to this defining moment, a true crossroads, of wondering how much teacher involvement is too much or too little in regards to literary discussion as well as the teacher-student balance in general.

Epiphany 3b: Peer Writing Collaborations – Natural Balance

As I continued to question the student-teacher balance of learning, and as I continued to attempt to foster an environment of authentic collaboration, I found a couple of epiphanies within the realm of student writing. I set up writing workshops much as my English teachers had set them up in the past.

The order of operations I generally followed:

1. Teacher gives students writing prompt based on reading.

2. Teacher models the writing process using excerpts of prewritten example.
3. Peer edits it as best they can.
4. Teacher gets draft, edits draft, and allows revision, grades final draft after revisions.

It became painfully clear to me that "the teacher" was the one doing the majority of the work, and therefore, gaining the majority of the benefits in this learning process. It was for this reason, and pure editing exhaustion, that I began experimenting a lot with peer collaboration within writing workshops. I started by putting two students together who were at about the same reading and writing level because I reasoned that they would get the most out of that. No one would outshine the other and they would be critiquing a paper that seemed similar to their own, therefore they would feel most comfortable with it.

What ended up happening is that the partnerships that contained my two highest students would, for the most part, correct each other's papers accurately and in-depth, however, my lower level students did not know what to do or even how to approach another student's paper editing. I ended up having to take over those lower level groups and then it seemed I was right back where I started: doing all the work while taking the student out of the revision process.

It was because of this that I decided to shift gears. I made the partnerships much more heterogeneous by partnering a "low" with a "high," but found that the high student wouldn't get as much critical feedback from the low. For a while I reasoned that the high didn't need as much, but still that seemed incredibly unfair and everyone needs

constructive feedback. This new system also made the low student more self-conscious to be paired with someone well above his or her ability level. They seemed embarrassed and exposed about the fact that they were with a high student (though it was never explicitly or even implied who was whom). They often took the critical feedback, but did not really understand the reason behind the feedback because they were eager for the session to be over.

Then I realized that a partnership might not be the best format for this type of critique. I decided to make the entire class participate so that there were as many different sets of eyes focused on as many papers as possible. Also, in doing so, I added in the new component of making all papers anonymous; giving each paper a number instead of a name. Each student knew what number they were so they were more receptive to feedback and criticism because they knew that no one really knew which paper was theirs (especially if they were typed, which helps significantly cut down on the "I can't read his handwriting" kind of thing). Then, I had each paper reviewed by several different types of students, so that way every paper went through multiple drafts. The student would then fix all of these little things and I would actually see the polished final draft.

When correcting other papers, students learn a lot about their own writing. Once they would identify revisions needed in someone else's essay, it naturally made them more aware of their own writing idiosyncrasies. This collaborative approach really taught students in a more personalized way—they became invested in each other. It was incredibly successful. Oftentimes, I would have an entire group of students come up and say something like, "should the comma go here or should it go here?" or "She thinks the

thesis statement makes more sense here, but I think it would go better there—who is right?"

Students were teaching *students* and my job was simply clearing up common writing misconceptions and making sure everyone was on task. They regulated themselves more efficiently than I could have and it was one of the first times that I saw success in the student-centered learning aspects of writing development, grammar critique, and a workshop collaborative environment.

Summary

The findings of this study and their supporting epiphanies focused on the curriculum being natural and not forced; the need for student-driven process and assessment; and the acceleration of student-centered teaching through authentic collaborations. While these findings may be expected, an overarching epiphany across the findings is that a personalized, learner-centered education approach does not replace what we already know about good teaching and learning from the literature and discipline-specific frameworks, rather it deliberately builds a bridge between previous knowledge bases and frameworks and how teaching must evolve to meet the changing needs of learners in today's world. In Chapter 5, each finding is discussed as well as implications for practice and research.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

> "In a way, teachers need the same things for themselves that students require in a truly student-centered learning environment. Strong relationships, choices, clear goals, appropriate challenges and feedback, a culture that fosters personal growth, opportunities to extend and apply their learning, autonomy – all these elements help teachers grow and thrive in their practice with students." (Cervone & Cushman, 2004, p. 40)

The complexity of teaching and learning makes educators feel that teaching is always a work in progress. Upon completion of this autoethnography study, the researcher realized that she had learned a great deal from her reflection on experience. Particularly, as the professional literature highlighted in Chapter 2, learner-centered teachers promote active, not passive learning; encourage collaborative work among groups of students with an understanding of cultural, social, political, and historical similarities and differences; integrate learning experiences that occur outside the classroom (i.e., anytime and anyplace); and foster learner independence and student voice and choice, or student agency (Wolfe & Poon, 2015). However, the researcher learned that as a teacher, she has a long way to go to demonstrate the *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon, 2015).

In this chapter, the researcher discusses the results with an emphasis on the educator competencies described in Chapter 2 that stretch educators to go beyond the best existing teaching competencies and standards to capture what teachers really need to know, do and create to thrive in personalized, learner-centered systems. Specifically, the researcher will discuss her findings as related to the four domains identified in the educator competencies: cognitive, intrapersonal, interpersonal, and instructional. Through the discussion, the researcher notes the competencies that she is making

progress on and those that she has yet to tackle. Implications for future practice and research are also provided.

Discussion

The teacher's progress on the *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon, 2015) were present in the following competencies. In this discussion, the researcher describes each personalized, learner-centered (PLC) competency that she made progress on as identified in the results section of Chapter 3 and how shifts in her beliefs and practices may stimulate additional thought and future examinations of the competencies by others interested in developing personalized, learner-centered environments. In Table 2, a summary of the findings and supporting epiphanies are provided.

Table 2

Personalized, Learner-Centered Competencies and Epiphanies

Competency	Epiphany
1. Promote student agency and ownership with regards to learning	The teacher enabled curricular choice and co-design after an epiphany when teaching the term 'ghetto' in a Holocaust unit. The teacher experienced an overall shift from a traditional sense (predetermined vocabulary word list), to a more student-centered approach (inquiry-based projects). The word 'ghetto' had a differing meaning for students in the local context.
2. Develop and facilitate project-based learning experiences	The teacher witnessed that once students have decided on a project or goal they are passionate about, that also has a real audience and real purpose, then content components like vocabulary acquisition, research skills, reading informational texts, and writing begin to improve naturally. Using design thinking helped her students engage in deeper learning and become creative problem-solvers.

3. Engage in deliberate practices of adapting and modeling persistence and a growth mindset	The teacher found the experience of her own failure uncomfortable in the beginning until she realized how powerful it was to all students to see her fail, to know she did not have all the answers, to see how she found answers or worked through problems in authentic ways.
4. Use collaborative group work	The teacher discovered that for collaborative work to be successful the following was needed: (1) the group should be heterogeneous; (2) members should receive explicit instructions for a discussion that facilitates accountability for all group members; and (3) the teacher must respect the differences among groups.
5. Use technology in service of learning	After completion of a game unit, the teacher found that the role of technology in the classroom had to begin with the teacher's goals, e.g. preparing students for 21st century life and citizenship. Otherwise, technology becomes a solution looking for a problem. She also discovered that while it is possible to teach for personalized, deeper learning without technology, it becomes difficult to innovate without the use of new digital tools and media.
6. Analyze evidence to improve personal practices	The teacher analyzed her personal practices through the lens of the *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon, 2015). She discovered that while she has made progress on some competencies, much growth is needed.

PLC Competency 1: Promote student agency and ownership with regards to learning

Student agency and ownership is very important in developing a learner-centered environment. One particular area that this study demonstrated was vocabulary and language acquisition. The concept of vocabulary development is as old as the subject of English itself. Significant research and countless studies have been conducted in the pursuit of the most effective approach for students over time in multiple content

fields, and most recently, for 21st century learners (Beck, McKeown, & Kucan, 2002; Fisher, Blachowiez, & Watts-Taffe, 2011; Graves, 2006).

The epiphany the researcher had when teaching the term "ghetto" was vital to her overall shift in thinking from a traditional sense (predetermined word list), to a more student-centered approach (inquiry-based projects). The researcher realized "while word lists have their place, the choice of which words to teach may sometimes be better contextualized in local curriculum, or even in local classrooms" (Fisher el al., 2011; Hiebert & Lubliner, 2008, p. 255). The topic of ghettos presented itself naturally in discussion/instruction; it wasn't forced as a "vocabulary word" necessary for a formal assessment like all other "vocabulary words" or "big ideas." Hiebert and Lubliner (2008) have suggested that using content-focused materials with real-world connections can actually be more welcoming to students from varying linguistic backgrounds.

The issue with the predetermined word list is that the teacher assumes what words student know and do not know. With the natural, discussion-led technique, students determine the words they know or do not know, oftentimes in an individual way, a different set of words for different students based on their prior knowledge.

In addition to enriching an authentic approach to vocabulary development, the researcher began to apply student agency and ownership of their learning to all other components of instruction much in the same way: with the students deciding the product, the process, and the instructional components necessary for every student to achieve their goal.

However, just as the findings in *The Giver* discussion, when the teacher realized she was making theme discussions too narrow and said, "Okay! Let's just talk about

The Giver! Go!" and found that students were even less likely to participate due to the vague and overwhelming nature of such a cumbersome task. It is important to offer key strategies or to help students illuminate the learning they may not realize they are engaged in. Vocabulary development, like all other instructional techniques, should reflect the importance of engaging students in interactive learning and be taught in context with students finding and making deeper connections of keywords and concepts (Fisher et al., 2011).

PLC Competency 2: Develop and facilitate project-based learning experiences

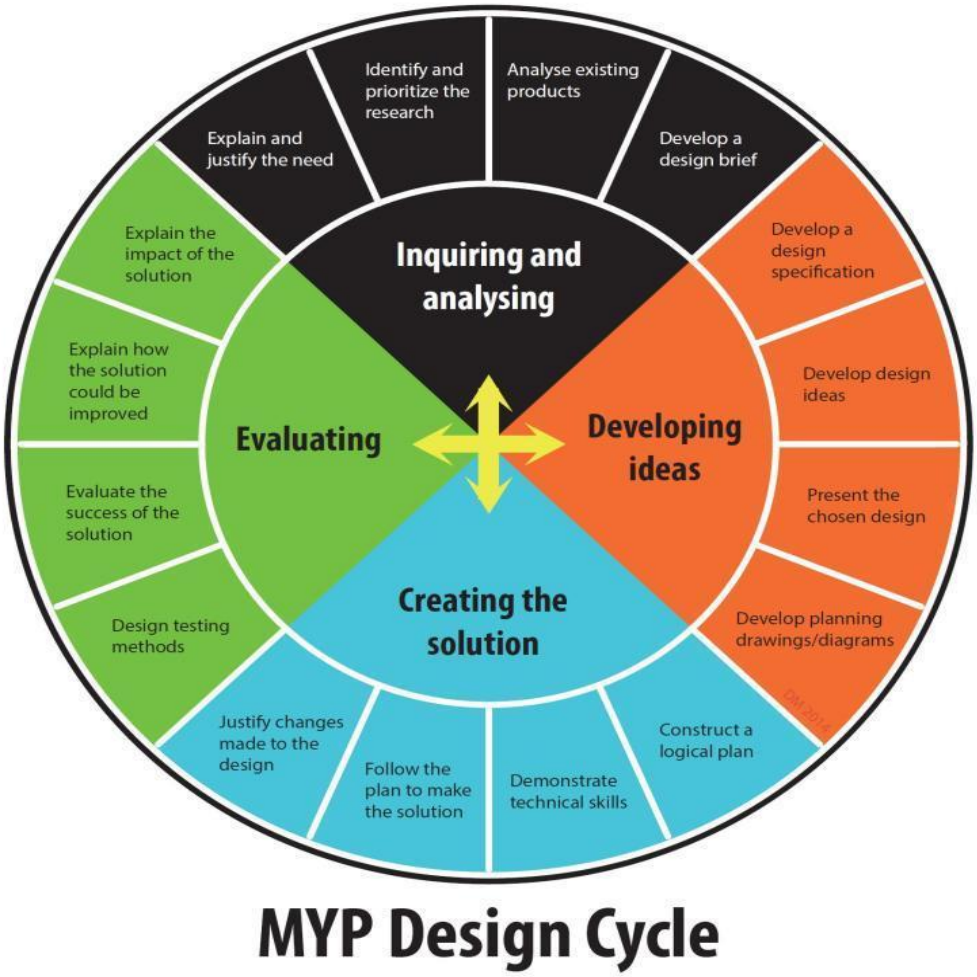
So how does a teacher successfully implement this style of personalized, learner-centered learning? How can the teacher let go of the direction of the instructional "map" of learning while still staying in control? The researcher has found success in doing so through a completely inquiry, project-based curriculum. Once students have decided on a project or goal they are passionate about, that also has a *real* audience and *real* purpose, then content components like vocabulary acquisition, research skills, reading informational texts, and writing begin to improve naturally (Coiro & Casker, 2011).

The beauty of this personalized, student-centered approach is that, much like the real world itself, those skills are interwoven as they build upon each other in a more organic way. Instead of teaching grammar in isolation (oftentimes using drills for sentence diagramming, as in the old days of English instruction), students begin to realize its importance when they must use grammar correctly to further their project's goals, e.g. when students decided to write a letter to our police chief asking for further research on gang violence in our particular neighborhood, or emailing the software

development company downtown to donate coding classes and equipment for game design, or writing a small business plan for funding supplies for an entrepreneurial craft fair.

Depending on the type of project the student plans to engage in, the teacher's primary role in project-based learning is to (1) help the student see the significance and interdependence of the steps of the design cycle (See Figure 3) and (2) offer supplemental help and reveal "real" interdisciplinary moments of instruction.

Figure 3: International Baccalaureate Middle Years Programme (MYP) Design Cycle (2014)



While the researcher is the most familiar with the IB Design Cycle, in that her school is an IB school, design thinking might look different in other schools and educational settings. What is important to remember is that "design thinking provides a powerful alternative to much of today's education system that focuses mainly on guiding students towards finding the correct answers to fill-in-the blanks on standardized test and streamline assessments to measure success or failure" (Goldman, Carroll, & Royalty, 2010, p. 371). However, design thinking provides a powerful and deeper learning alternative to this traditional model "by challenging students to find answers to complex and difficult problems that have multiple viable solutions and by fostering students' ability to act as change agents" (Goldman et al., 2010, p. 371). While multiple frameworks of design thinking, such as the IB Design Cycle, are available for teachers to use, it remains important to remember that the ultimate goals are to help students engage in deeper learning, become creative problem-solvers, and to use their minds well.

PLC Competency 3: Engage in deliberate practices of adapting and modeling persistence and a growth mindset

This cognitive competency is connected closely to the previous literature review in Chapter 2 on academic behaviors, self-regulation, grit, and perseverance resulting in deeper learning. Academic perseverance or grit (Duckworth et al., 2007) is defined as: courage, bravery, pluck, mettle, backbone, spirit, strength of character, strength of will, moral fiber, steel, nerve, fortitude, toughness, hardiness, and resolve. The heart of this notion is not just that failure in an academic context is acceptable, but actually necessary for success. The design cycle and project-based learning supports this idea.

Successful adults and entrepreneurs describe their rise to success as willing to take risk, fail often, learn from failure, and move forward rapidly.

Teachers must support this idea as well, both in practice and as an example. As shown in Chapter 3, the researcher found the experience of her own failure uncomfortable in the beginning until she realized how powerful it was to allow students to see her fail, to know she did not have all the answers, to see how she found answers or worked through problems in authentic ways. She realized that for students to be learning, teachers must be learning (Fullan, 1993; Dede, 2014), and perhaps it is even more powerful to be constantly learning together daily in the classroom.

PLC Competency 4: Use collaborative group work

Great things happen when people collaborate. Even better things happen when students effectively collaborate. The IB Design Cycle is best achieved when students are researching, testing, and tinkering together. Middle schoolers are especially social creatures and often work best in groups, if the conditions are right. The researcher has found that there are three very important rules to follow to ensure group success: 1) the makeup of the group should be heterogeneous, 2) students must be given explicit instructions in regards to discussion that facilitates accountability for all group members, and 3) the teacher must respect the ebbs and flows of different groups' work ethics and divisions of power and tasks.

Rule 1. After six years of teaching, and countless experiments and theories in groupings, the researcher has found after significant trials and errors that making groups the most heterogeneous as possible is the most successful way of grouping students. Combining as many different ability levels, reading levels, races, genders, cultures, etc.

provides the best opportunity for the group to focus on the goal. Before, the researcher assumed that groups of all girls or all boys would keep students more on task because they would not be as easily distracted by the opposite sex, however, the opposite tends to be true. The more comfortable the group is with each other at the beginning of its formation, the more easily the group becomes off-task with their common interests. Whereas a more diverse group initially feels uncomfortable, but tends to focus more on the project since there are fewer distractions, and therefore gets more done in a shorter amount of time.

Rule 2. Before allowing groups to explore their potential topic or choose their project, it is very important to set up expectations of how students will speak to one another directly and respectfully. The researcher refers to this as "Discussion Talk" and provides her students a menu of sentence starters they should use to navigate the work ahead and inevitable conflict that will arise. Some examples of these sentence starters are: "I agree/disagree with you because…," "I hear what you're saying, but maybe we could consider…," "Can you explain what you mean by…," "To add to what you were saying, I think/feel/wonder…" Modeling these discussion techniques and holding students accountable for using them when they collaborate does wonders for meaningful and productive discussion for every stage of the project.

Rule 3. There is an old saying, especially used in the teaching field, that says, "Fair does not mean that everyone gets the same thing, fair is everyone getting what they need." This is true of group work as well. In a perfect world, an outsider would observe each group looking cooperative, on-task, and engaged. Each member is not extremely introverted or extroverted, nor is any member lazy or too particular about

certain tasks. They work together harmoniously, come to consensus easily, and "divide and conquer" tasks efficiently. However, groups rarely appear this utopian to an outsider, even though there may be meaningful work taking place. Often, the introverts seem disengaged, when really they are pulling their weight beautifully behind the scenes. Every group is comprised of different individuals, so it stands to reason that every group will function in its own way. Thus, much like differentiated assessment, the teacher must not assume all groups will look alike or operate in the same fashion. Also, administrators must recognize when observing teachers that groups are differentiated based on a variety of factors.

PLC Competency 5: Use technology in service of learning

Living in a digital age means there is no shortage of technology at the teacher's disposal. What becomes the significant issue is how teachers and students use technology for learning. Dede (2014) concludes that "when considering the role of technology in learning, it is critical to begin with one's educational goals (e.g., to prepare students for 21st century life, work, and citizenship). Otherwise technology becomes a solution looking for a problem—never a good thing" (p. 5).

When the researcher began the journey into the design field at her school, she found that she had inherited several forms of technology—table saw, drill press, band saw, sander, planer, lathe, 3D printer, laptops, and robotics equipment. Since the program up until that point had been a classic woodshop curriculum, it was challenging to shift some people's thinking about the uses of technology and the reasons why the old program underwent significant changes to become a design and digital literacies program. In the past, students were involved in a very intense study of the technology

tools themselves. They came to class and were told they would make a picnic table and the teacher would show them how each power tool worked in order to make the picnic table. The project was predetermined, and frankly, unimportant. It lacked relevance to the local community. The goal was for students to become proficient in the tools themselves; under the assumption that once that happened, they would be able to make anything they wanted.

This approach to learning reminded the researcher of what often happens in English Language Arts classes when the teacher focuses on the class novel instead of the standards. The novel, like technology, should be the vehicle used for learners to successfully "arrive" at the standard or skill taught. And just like the English Language Arts teachers who are prone to over analyzing the details or themes of particular novels that they love, so are technology teachers who focus too heavily on the tools themselves and not what they are intended to achieve. The important distinction is between using technology to do conventional things better and using technology to do better things (Roschelle et al., 2000). While some may argue that there is value in doing some types of conventional instruction better (i.e., more efficiently and effectively) using technology, "the real value in technology for teaching lies in rethinking the enterprise of schooling in ways that unlock powerful learning opportunities and make better use of the resources present in the 21st century world. Above all, doing better things means preparing students to be more responsive to the opportunities and challenges of a global, knowledge-based, innovation-centered civilization" (Dede, 2014, p. 5).

When students focus on the goals of the project, they naturally begin seeing technology as merely the tools necessary to achieve those goals and not the goals

themselves. This would have been more successful in the traditional industrial arts approach had they allowed students to choose their own projects and ensured the project was for an authentic purpose and audience. Otherwise, the picnic table is as seemingly arbitrary as a teacher prompted five-paragraph essay.

The researcher has found a lot of success in using the spherical, app-controlled robot called Sphero as an introduction to the design cycle. Students were asked to design obstacle courses in groups for other students to race the Sphero robots through. They were required to identify flaws (components that were too easy or too challenging or competitive) and modify the design to improve function. As they tried and retried, the researcher explained how they were achieving an entire design cycle within a matter of minutes. It is a powerful, fun way to introduce the design cycle as well as to have students see that technology is just part of the process of mastery and not the end goal itself.

Brown and Thomas (2011) highlight the importance of playful learning, which includes learning in ways that we formally recognize as play (such as games), but also the broader culture of learners sharing information and pushing boundaries (Dede, 2014). Brown and Thomas (2011) make "distinctions among 'learning about,' which is the traditional province of school-based learning; 'learning to do,' which is often represented in formal education through problem-based and project-based pedagogies; and 'learning to be' or 'becoming,' which is currently centered in informal learning, fundamentally about identity formation, and generative for deep engagement as well as the formation of intrapersonal and interpersonal skills" (Dede, 2014, p. 4).

This robot exercise also inspired one of the researcher's more successful units of study in her first year of teaching design. Knowing how popular games are—for fun *and* learning—the researcher decided to have students work collaboratively in groups to create a board or digital game to bring awareness to or inspire change in a social, political, or environmental issue. Students' games were showcased at a community event so that community members could evaluate the games. The unit was the first time the researcher combined several different types of technology—some new and old—to achieve a common goal. Student cut their own board games out of wood (See Figure 4) using the shop's power tools, they designed and printed game pieces and decorative elements out of plastic on the 3D printer, and they used the coding program Scratch in order to create digital games. And, true to PBL, some groups decided their topic or issue was not best represented in the format of a game and so they chose to create a documentary film instead, using camera and editing software.

Figure 4: Example of Student-Designed Board Games



Today, empirical studies (Cobbo & Castek, 2011; USDOE, 2010) have highlighted the importance of media texts, digital teaching platforms, and immersive authentic simulations technologies that can be used in the service of deeper learning. The researcher is interested in exploring in-depth with her students, colleagues, and principal opportunities to utilize technology in pursuit of personalized, learner-centered classrooms. Dede's (2014) argument that "a transformation to a technology-based, deeper-learning-driven model of 21st-century education is absolutely necessary, and we are now beginning to see new technologies used in ways that promote deeper learning" (p. 4). The researcher agrees with Dede (2014) that while it may be possible to teach for personalized, deeper learning without technology in the classroom, it becomes difficult in today's education world to scale and support innovation in the classroom without the use of new digital tools and media.

PLC Competency 6: Analyze evidence to improve personal practices

This study provides an attempt to identify competencies listed above that the researcher has made progress on regarding shifts in her beliefs and practices. Perhaps just as important as the progress made by the researcher are the personalized, learner-centered competencies that she has yet to make progress on and that remain challenges in her daily practice. Specifically, in the cognitive domain competencies, the researcher is continually challenged in "utilizing in-depth understanding of content and learning progressions to engage learners and leading individual learners towards mastery" and "understanding and employing techniques for developing students' skills of metacognition, self-regulation, and perseverance" (Wolfe & Poon, 2015, p. 8-9).

In the intrapersonal domain competencies, the researcher is most challenged by "conveying a dedication to all learners – especially those historically marginalized and/or least served by public higher education – reaching college, career, and civic readiness" (Wolfe & Poon, 2015, p. 10). While the researcher believes strongly in the importance of conveying a dedication to all learners, it is often very difficult to fully achieve when extreme language barriers are involved. The researcher's school has seen an influx of an African refugee population, most speaking various dialects of Swahili that is not easily translated using translation technologies, such as Google Translate. This barrier, as well as the barrier of most refugees either coming from a culture of no formal education at all or an overly traditional type of education (lecture style, lots of drills) has made for some confusion in class. In addition to having to prove the importance of the PBL style of learning—messy process, chaotic seeming, collaborative, unpredictable—the researcher is also having to find creative ways to explain the big picture *and* the fine details that are required.

In the Interpersonal Domain, the researcher has made some progress on the competencies involving "designing, strengthening, and participating in positive learning environments (i.e., school and classroom culture) that support individual and collaborative learning;" "building strong relationships that contribute to individual and collective success;" and "seeking appropriate individual or shared leadership roles to continue professional growth, advancement, and increasing responsibility for student learning and advancement (Wolfe & Poon, 2015, p. 13-15). Particularly, in developing positive learning environments that support individual and collaborative learning successes. The researcher has attempted to provide as many "real world" opportunities

for students to develop and hone 21st century skills as possible. Over the last year, the researcher has completed the following projects:

- **Repurpose Project**—Take something old and give it new life using technical skills to improve its aesthetics and function. Examples: VHS tape into iPhone speakers. Student projects were displayed for evaluation at Back-to-School night for parents and other students to formally evaluate.
- **Custom Work Project**—Students had to design and improve various objects following the preferences of a "customer." Example: Reupholster fabric office chairs for a counselor whose "clients" bring in a lot of dirt and grime. Revamp an old podium for a science teacher. Audience—the customer.
- **Halloween Costume Challenge**—Design and create Halloween costumes for at-need (underprivileged) elementary school kids in the area following the design preferences and size of the child. Audience- kids.
- **Holiday Market Entrepreneurial Fair**—Design and create items to sell at a market paying attention to trends, consumerism, pricing, marketing, and advertising. Audience- real, live customers that either bought or did not buy items based on their own individual preferences.
- **Game Design**—as described previously.

While the researcher is making progress on the interpersonal domain and has a waiting list of students signed up to take her nine-week, digital literacy and design course, she has much 'fine tuning' to do in order to build students' ability to engage in self-directed learning and emphasize opportunities for student voice and choice, such as

learning from peers, co-designing their own learning paths, providing constructive peer feedback as well as their own self-assessment and reflection.

Of the four domains in the *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon, 2015), the researcher has made the most progress overall in the Instructional Domain. As discussed earlier in the chapter, she has made significant progress in the following instructional domain competencies: promote student agency and ownership with regard to learning; develop and facilitate project-based learning experiences; use collaborative group work; and use technology in service of learning. Her challenges lie with the remaining instructional domain competencies involving the use of a mastery approach to learning; using assessment and data as tools for learning; and customizing the learning experience.

Interdisciplinary vs Content Standards

An additional discussion area beyond the researcher's progress on the Jobs for the Future and the Council of Chief State School Officers' *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon, 2015) includes a large systemic challenge the researcher encountered on her journey to create a learner-centered classroom and involves interdisciplinary versus content standards. Project-based, design thinking is easier said than done in an educational setting where everything begins and ends with content standards. The standards-based system has made it difficult to see natural connections across content areas. The state standards themselves are divided into precise, specific skill sets for one particular content area with no explicit connections or allusions to other subject areas. The researcher's school implemented standards-based grading four years ago, and in doing so, there has been an

even more intense focus on each content area in isolation as teachers focus heavily on their own standards.

A standards-based grading atmosphere, without adequate collegial planning time that has an emphasis in natural cross-content analysis of patterns and trends, may end up much like the researcher's epiphany on "Interdisciplinary Instruction Gone Wrong - Zebra Mussels" described in Chapter 3. Curriculum will be forced and trite with no real connections of value. What complicates this notion even more is the fact that not only have educators left the task of finding meaningful interdisciplinary connections up to the student, they have also neglected to teach students that most "real-world projects" require skills found in multiple content areas. Instead, English teachers often hear complaints from other content area teachers like: "They won't write science lab reports! They say writing is an ELA thing!"

Often, classroom instruction in the new millennium require learners to weave their knowledge of core subjects (e.g. science, math, history, and language arts), and appreciation of diverse perspectives, into the context of interdisciplinary issues such as global health, civic literacy, and economic stability (Trilling & Fidel, 2009). Thus, "valid assessments of online literacy and language arts should engage students in digital reading, writing, and communicating tasks contextualized in problem-based, interdisciplinary, real-world issues" (Coiro & Castek, 2011, p. 317).

Another reason why interdisciplinary efforts fail in a standards-based environment is due to lack of teacher self-efficacy in regards to teaching a content area that is not technically or officially "theirs." Bandura (1977) found that a teacher's sense of efficacy is not necessarily the same across the different types of professional tasks

that teachers perform, nor across different subject matter. Often, teacher self-efficacy is context-specific, so that teachers who feel efficacious in one context many feel inefficacious in another. This lack of confidence, or lack of experience, leads teachers to doubt their level of effectiveness; and therefore, they do not fully explore the parts of interdisciplinary instruction students need to begin making real-world connections.

Implications for Practice

The researcher discovered the following implications for her practice. Perhaps some may be useful for other teachers and future teachers as they consider developing personalized, learner-centered environments with students.

Focus on being partners in the learning process.

Teachers do not have to know all the answers or be the expert in a formal, 'sage on the stage' way. Teachers and students gain so much more by being partners in the learning process. Taking a backseat does not mean the teacher is not involved, it simply means the teacher is allowing students to be the driving force in their journey (Cervone & Cushman, 2012). Through learning partnerships, teachers learn ways to connect their students' lives with curriculum and pedagogy. Also, the importance of constant dialogue connected with local cultural contexts helps to co-construct teaching with students as partners and to develop links with other significant people in their lives (Goldman et al., 2010; Schallert & Martin, 2011).

Foster authentic collaborations for students and teachers.

Authentic collaboration is best accomplished when students are working toward a common, real-world goal and determine what strengths of theirs would be best suited for the tasks needed to accomplish the collective goal (Catapano & Gray, 2015; French,

2016; Zeiser et al., 2016). The same applies to teachers. Teachers are motivated to work together when they see the benefits to student learning from their collaborations and they personally are learning from interdisciplinary pursuits (Cator, Lathram, Schneider, & Vander Ark, 2015). Students naturally delegate work in groups when motivated by a common passion. Teachers also learn how to best organize themselves using the talents and skills of each individual team member when working towards a shared purpose and goal. It is okay for the teacher to allow peers to see them struggle through a concept or key component needed to move forward with a project, particularly when interdisciplinary and/or real-world knowledge and skills are needed (Wagner, 2012). Also, students should see their teacher struggle just as they struggle, and more importantly, see the teacher model deep learning and the persistence, grit, and creativity that is needed to make progress towards the project goal and to learn from the 'uncomfortableness' or struggle encountered (Bochner & Ellis, 2006; French, 2016). Gerber and Carroll (2012) describes this process as a prototyping mindset. They stress that when individual tries something and it doesn't work they simply learn from it and try again… it's all about failing fast and failing forward, reframing failure as an opportunity for learning and forward progress. Developing a co-collaboration among students and teachers from multiple disciplines to solve a real-world issue, particularly within a local community context, accelerates personalized and meaningful collaborations.

Consider the *process*, not the product.

Keeping in mind the process will be messy and seem haphazard at times (French, 2016). Often, it is the student's job to navigate the ship toward shore, but it is

the teacher's job to model skills necessary to get through the inevitable rough waters ahead. On a larger note, the process demonstrates what it is like to live in a democratic society. Perhaps, preparing students for a democratic society should be based on an epistemology that school itself is democratic and includes a respect for student agency/ownership of their learning as well as the constant interaction among students, teachers, academic and community-based knowledge (Apple & Beane, 2007; Zeichner, Payne, & Brayko, 2015).

Emphasize professional learning for teachers.

The researcher benefited greatly from professional learning opportunities offered to her such as PBL and IB Design conferences. Both focused on creating personalized, learner-centered environments before starting to plan and implement a project. If teachers and the school remain unexposed to project-based learning and design thinking, professional learning outside the school is required as it allows teachers and administrators to understand the challenges that accompany these approaches as well as how to tackle them (Catapano & Gray, 2015; French, 2016). Furthermore, professional learning allows teachers to better understand the components of learner-centered approaches which will help foster student success with PBL (English & Kitsantas, 2013) and design thinking learning approaches (Goldman et al., 2011).

Understand families, neighborhoods and needs where we teach.

One of the greatest challenges teachers face daily is how to intrinsically motivate their students. One way that the researcher discovered is through understanding the local communities and cultures of her students. Specifically, she believes to develop personalized, learner-centered classrooms, teachers must work more

closely with the families and neighborhoods where they teach (Morrell, 2011) and utilize the community and its resources in designing the school curriculum and in planning learning experiences (Zeichner, 2010).

One opportunity to understand better the local community is through home visits. Over the past six years, the researcher and another teacher would visit around thirty of their student's homes two weeks before school would start each year. The official purpose of the visit was to deliver back to school information to the students and their families; however, the visits really offered the teachers a unique perspective of the diverse communities and cultures that their students come from and that they teach in.

Implications for Future Research

In this study, the researcher examines her own beliefs, practices, and challenges as she seeks to develop personalized, learner-centered environments. Future autoethnographic researchers might expand their research methods by adding interviews and observations of other teachers who are seeking to develop these environments and of administrators who wish to support teachers by creating flexibility and interdisciplinary planning time in support of learner-centered environments. Lastly, interviews with students and parents would be helpful to corroborate findings from interview and observational data of teachers and administrators.

Summary

As educational researchers continue to study how to help all students, not just the elite few, reach and demonstrate deeper learning and master ambitious global standards, teachers such as the researcher will need to better understand how to make

personalized, student-centered environments a reality in their classrooms daily as well as on a larger scale across their schools and districts. The *Educator Competencies for Personalized, Learner-Centered Teaching* (Wolfe & Poon, 2015) will need to become common practice across disciplines and educational settings. Teachers along with students, parents and communities across the U.S. will need to transform education from the inside out rather than allowing external entities, such as for- and non-profits and politicians, control and dictate educational processes and outcomes. Perhaps soon we will no longer be talking about the last major transformation of American education occurring a century ago when, as part of its transition from an agricultural to an industrial economy, our nation invented a new model of schooling (Collins & Halverson, 2009). The century-old transformation "treats education as a routine, almost mechanical process analogous to the production of material goods on an assembly line, instead of learning at their own pace and according to their individual needs and interests, students are treated as interchangeable parts; they are sorted by age, grouped into classes of equal size, given identical instruction, tested at fixed intervals, and – provided they meet minimum standards – moved along to the next grade for more of the same" (Dede, 2014, p. 1). Perhaps, future historians will cite the next major transformation of American education as being led by teachers today who transformed their instructional practices, and eventually, their schools and districts to create and support personalized, learner-centered environments where every student acquires the academic knowledge as well as the attributes such as intrinsic motivation, persistence, and flexibility, to be informed citizens in a democracy and to compete and succeed in the global, knowledge-based, innovation-focused economy.

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