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An examination of the relationship between the generation a teacher is born into, teaching style, and high school student engagement

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AN EXAMINATION OF THE RELATIONSHIP BETWEEN THE GENERATION A
TEACHER IS BORN INTO, TEACHING STYLE, AND HIGH SCHOOL STUDENT
ENGAGEMENT

by

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Dissertation

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DOCTOR OF EDUCATION

Dissertation Committee:

Dr. Ronald Williamson, Chairperson

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Dr. Jaclynn Tracy, Committee Member

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Ypsilanti, Michigan

DEDICATION

This dissertation is dedicated to my daughter, Tacey Looze,

in whom I would like to instill the gifts of perseverance and

lifelong learning.

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ABSTRACT

Educators across America are attempting to prepare students for a world of rapid change, including globalization and the move from industrialization to the Age of Information (Marx, 2006). Dynamics of change include teachers, who encompass a wide range of generations and experiences (Marx, 2006). Each generation includes a set of value and belief systems (Oblinger, 2003). Each generation has been engaged in their learning experiences in differing ways.

The primary purposes of this study were to determine if there were relationships between teacher generation and teaching style, teacher generation and student engagement, and teaching style and student engagement. A survey of 53 teachers in five large Michigan high schools identified teachers' generations and analyzed their preponderance towards five different teaching styles. Close to 3000 ninth and tenth grade students in the same high schools were also surveyed regarding nine different constructs related to student engagement.

A quantitative, non-experimental, correlational design determined relationships using the Pearson Product Moment statistical test. Five low relationships were found – teacher generation and the delegator teaching style, facilitator teaching style and three constructs of student engagement, and the delegator teaching style and two-student engagement constructs. Further research into these two teaching styles and student engagement constructs should be conducted. The more we learn about effective teaching practices and how they relate to the engagement of students, the more effective we can be in our teacher professional development and continuous learning programs.

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CHAPTER I – INTRODUCTION AND BACKGROUND

Current research defines the differing generations by the major, shared life experiences that have shaped their belief and value systems (Coates, 2007). Other research suggests that a teacher's belief and value systems affect his or her teaching style (Yero, 2002). Thus, this researcher examined the relationship between the variables of teacher generation, teaching style, and differing constructs of student engagement in select Michigan high schools.

Futurist Marx (2000) partnered with the Educational Research Service to define sixteen societal trends that impact all industries, including education. Although all sixteen trends affect the research questions, for the purpose of the conceptual and theoretical frameworks that will be defined, four trends will be highlighted:

1. For the first time in history, the old will outnumber the young.

2. The Millennial Generation will insist on solutions to accumulated problems and injustices, while an emerging Generation E will call for equilibrium.

3. Standards and high-stakes tests will fuel a demand for personalization in an education system increasingly committed to lifelong human development.

4. The release of human ingenuity will become a primary responsibility of education and society (Marx, 2006, pp. 6-7).

Several significant factors influence education and public school systems today. One factor is the perception that our nation's schools, including Michigan schools, are failing to prepare students for post- secondary education and sustainable employment. A second factor is the way schools are organized in a rational system. The rational organization of schools is explained by Parsons and Thompson's conceptual framework of the technical, managerial, and institutional levels of responsibility and control within the educational organization (Thompson, 1967, 2006). A third factor is the economic shift from an Industrial Age to the Age of Information. With these factors as background, examining the possibilities of a relationship between a teacher's generation, his or her teaching style, and the varying constructs of student engagement, educational leaders may better understand what the public school systems need to do to best address societal trends and the needs of students today and tomorrow (Marx, 2006).

Moving from the Industrial Age to the Age of Information

"Educational institutions are caught in extraordinary crosscurrents of change" *(*Senge, Cambron-McCabe, Lucas, & Kleiner, 2000, p. 32). Due to the federal policy of No Child Left Behind (NCLB, 2001), the State of Michigan's high school reform legislation, and the federal and state's economic forecast, public school systems face many political and economic challenges. Some believe that American high schools are broken, flawed, and underfunded (Gates, 2007; National Commission, 1983). According to Senge et al. (2000) and others, schools today were designed as industrial age institutions, put together much like assembly lines, in which children are segregated by age and ability level. The input of information is standardized so that schools may

graduate all students and addresses the challenges of society after graduation (Brunner, Grogan, & Bjork, 2002; Senge et al., 2000). Today's school calendar was designed more than a hundred years ago to meet the needs of an agrarian society (Gates, 2005). Schools are charged with preparing students for post-secondary training, yet 63% of the high school student population are tracked into low-level classes, and a mere 33% of high school graduates are ready for college, work, and citizenship in today's world. The United States has the highest drop-out rate in the industrialized world (Gates, 2005).

Standards-based reform requires schools to respond to what policy-makers say students should know and be able to do. There is an accountability factor that undermines the local governance of education because policies require individual schools to be held accountable for specific student learning (Elmore, 2000). The criterion for this accountability challenges the concepts of loose coupling and the logic of confidence because it requires management of student learning as it relates to specific standards and benchmarks (Elmore, 2000). This, in turn, requires focus on the conditions of student learning, teaching strategies, and processes that affect learning, which have largely been unknowns.

Oblinger (2003) provided an educational reform perspective. She believes that an essential component to facilitating learning is to understand the learner. Between the Nation at Risk Report (1983), the No Child Left Behind legislation (NCLB, 2001), Michigan's high school reform legislation, and easy access to data, accountability standards across America have risen dramatically. There is a need for schools to be more successful with the increasing diversity among students. All of these changes and accountability factors contribute stress to an industrial system that has been primarily

unchanged for centuries (Senge, 1999). The traditional curriculum in our schools today

does not engage the generation of students who are immersed in a digital culture, which

assumes that teaching the same content in ways it has always been taught makes learning

the traditional curriculum irrelevant (Gates, 2007). The tools that students are using and

what influences them have also changed dramatically (Kambon, 2008). Students today

are connected 24 hours a day, seven days a week through instant messaging, PDAs,

Blackberries, and smart phones (Oblinger, 2003). Students have the capability of

receiving their grades on submitted assignments as soon as the grades are posted

(Oblinger, 2003). To give these learners information by lecture or textbook is to ensure

boredom and lack of engagement (Gardner, 2008).

Generational Diversity

Another change occurring in our work force involves employees. For the first

time in our nation's history, many industries, including educational organizations, are

beginning to employ workers from four differing generations (Coates, 2007; Marx,

2006). Industries could employ workers who are in their 70s or in their teens (Coates,

2007). Researchers are beginning to study the areas of generational diversity among

workers in all industries including education (Oblinger, 2003; Richardson, 2008; Dede,

2005). For the purpose of this study, Richardson (2008), Coates (2007), and Marx (2006)

defined generational diversity and each generation by the years in which people were

born. These generational cohorts are found to have similar personality traits and values

on the basis of the experiences they shared during their lifetimes (Coates, 2007). In order

for the life events to begin shaping the cohort values, the events must have had some

social consequence that affected society. These common experiences then become the glue that bonds the age clusters and separates them from other age clusters (Marx, 2006).

The differing generations have been bound by the years in which they were born along with the widespread, life-altering experiences within those years. Thus, the oldest Veteran Generation includes those people who were born between the years of 1920 and 1932 (Coates, 2007); the Silent Generation includes those adults born between the years of 1933 and 1945 (Coates, 2007); Baby Boomers came into the world between the years 1946 and 1963 (Coates, 2007); Generation X was born between the years of 1964 and 1979; and Generation Y members, who are sometimes referred to as the Millennials, were born between the years of 1980 and 2000 (Coates, 2007). The children in schools today are given many different names such as Generation E, the Neo-Millennials, or Generation Z (Coates, 2007; Dede, 2004; Marx, 2006). For the purpose of this study, the researcher will use the terms Generation Y to describe teachers and students born between the years of 1980 and 2000, and Neo-Millennial to describe students born after 2000.

Recent research is beginning to address how to recruit and retain Generation X and Y teachers as Baby Boomer teachers retire from the profession (Coggins, 2008), and job-hopping Generation Y teachers as they begin their careers (Richardson, 2008). Other research questions the ethics and values of differing generations (Carey, 2008). Never before have so many generations of workers had to work together in one business or organization (Marx, 2006). The National Staff Development Council indicated that we need to utilize technology more in the educational profession to retain the Generation Y teachers and to engage the Neo-Millennial learner (Oblinger, 2003). Another recent

study questions whether Generation Y teachers leave the profession because they aren't comfortable dealing with Generation X parents, commonly referred to as *helicopter parents,* who have a tendency to hover over every aspect of their children's lives, which could presume a misunderstanding between the differing generations (Richardson, 2008).

Significance of the Study

There has been much research in the areas of learning styles, learning modalities, and brain compatible learning (Pajak, 2003). Many educational theorists will argue that the most effective teacher will teach to all learning styles and use brain-based techniques when teaching his or her students (Silver, Strong, & Perini, 2000). Little research was found, however, that addressed differing teaching styles based on the generation of teachers.

The present research focused on the attributes of three different generations: Baby Boomers, Generation X, and Generation Y teachers and students. Furthermore, the research determined if there was a relationship between varying constructs of engagement of the Generation Y student and the generation a teacher was born into. The research also determined if there was a relationship between each construct of engagement of the Generation Y student and varying teaching styles, as it may or may not relate to the generation a teacher was born into.

Although there is little research regarding the generation a teacher is born into and his or her teaching style, there is research relating generational cohorts sharing similar value and belief systems (Coates, 2007). When there is a better understanding of what helps make a teacher more effective in relation to student engagement, then the retention,

recruitment, and professional development of the younger generation of teachers can be addressed as more and more Baby Boomers retire.

The transition from the Industrial Age to the Informational Age is an evolution in progress (Marx, 2006). Researchers have discovered that factors such as an increase in our life span, current economic struggles, and personality traits of the differing generations impact the workers in our schools. Educators, who also encompass multiple generations, must prepare students for a process-oriented world (the Information Age) rather than a product-oriented world (the Industrial Age). This need has never been more urgent (Coates, 2007; Marx, 2006; Merriam, Caffarella, & Baumgartner, 2007).

There has been much research in the area of a student's learning style. Many learning styles have been created, and educators understand the importance of teaching to the differing learning styles in their classrooms in attempts to engage the learner. This study looked deeper into student engagement of the learner today. Technology is changing the world and classrooms on a daily basis (Oblinger, 2003). Many teacher preparation programs are not keeping up with the current learner (Oblinger, 2003). This research looked into the attributes of student engagement in the Generation Y learner.

Finally, this study examined the relationship between teacher generation and student engagement. The Baby Boomer generation wishes to continually learn (Coates, 2007; Marx, 2006). Because the life span continues to increase and medical knowledge grows, the needs of the adult community are changing. More colleges and universities are seeing multiple generations in college classes, including teacher preparation (Coates, 2007). We now are seeing three, and sometimes four, generations working (and learning) together (Marx, 2006). Just as each generation has identifying belief and value systems,

they also have similar preferred learning situations (Coates, 2007). The more we learn

about these differences, the more effective we can be in teacher professional development

and continuous learning programs.

Statement of the Problem

Educators across America are preparing students for a world of rapid change,

which includes globalization and the transition from the age of industrialization to the age

of information. They are also charged with preparing students for careers that do not

exist today (Dede, 2005). The generation of students in schools today has a differing

value and belief system than their teachers (Kambon, 2008). Students are also using

technology tools, which improve in efficiency on a daily basis and offer an enormous

amount of information that is not contained in the textbooks that their teachers use as a

basis for instruction or a resource (Dede, 2005).

On the other hand, teachers encompass a wide range of generations and

experiences. Each generation includes a set of value and belief systems (Coates, 2007).

Each generation has learned and been engaged in learning experiences in differing ways

(Coates, 2007). Never before have as many as four different generations of teachers been

employed in school systems (Marx, 2006).

Student engagement in any given class is a result of several interacting factors

such as teaching style, relationship between teacher and student, years of teachers'

experience, and so on (Renzulli & Reis, 2008). Of all the factors that influence student

engagement, the generation into which a teacher was born has received the least attention

by researchers. Because each generation is defined not only by birth years but also by the

shared experiences and the belief systems those experiences have shaped, it is important to understand if there is a relationship between a teacher's generation, his or her teaching style, and the level of student engagement. It is imperative that educational systems best prepare students for this information age, and researchers must add to the body of knowledge about teaching and learning. This research furthers a better understanding of a teacher's belief and value system as it correlates to his or her teaching style. If schools are required to meet the stringent accountability standards, then a better understanding is needed about teaching and learning at the technical core. This study provides a better understanding of the technical core to assist administrators in developing themes and activities for professional development (Coates, 2007). This research will also help teachers gain a better understanding of how to engage high school students.

Conceptual Framework

Shown in Figure 1, the Parsons and Thompson's conceptual framework of the technical, managerial, and institutional levels of responsibility and control within the educational organization informed the research design (Thompson, 1967, 2006). The purpose of this research study is to better understand the technical core of teaching and learning. In this study, the heart of the technical core is the generational diversity, teacher belief system, teaching pedagogy or teaching style, and student engagement. The concept of generational diversity leads to the defining generations of the Baby Boomer Generation, Generation X, and Generation Y. Explanations of these defining concepts are included in the literature review in Chapter II.

Technical Core
of
Teaching and Learning

Technical Core

Teachers and Students
Teacher Belief System
Teaching Style
Student Engagement
Teacher Generation
Student Generation Y

Cultural

Globalization
Age of Information
History of Loose Coupling
Differing Generations in Schools

Managerial

Building Principal
Professional Development
Smaller Learning Communities Grant
Technology and Learning Tools

Figure 1. Parsons and Thompson's (1967) Model of Organizational Levels

This complexity of environmental factors tasking the technical core and changing the organizational structure begs public school systems to do things differently. To address the accountability standards and meet the needs of the generation of learners we have in school today, it is imperative that leaders take an intimate look at the technical core of teaching and learning so that it can be improved and made relevant (Elmore, 2000). For this critical innovation to occur, there are tasks specific to improving instructional pedagogy. What is also important is the leader's knowledge of instruction and his or her beliefs and values about teaching and learning (Spillane, et al., 2004).

Price and Burton (2004) offered advice about creating an organization that focuses on the technical core. They suggested that the leader gather information and data surrounding staff, students, building, and community, and to collect and analyze data where students are not achieving to proficiency. These data would include the

generational diversity factors that this research suggests. Some of these factors would include the beliefs and value systems of the constituents that help to shape their perceptions (Price & Burton, 2004). Having a better understanding of these differing generations involved in the school organization will give the leader more insight into improving student achievement.

The teaching and learning profession is undergoing some major changes which involving organizational, institutional, and environmental influences, which include the historical loose coupling between the technical core of teaching and learning and the instructional management and improvement of the technical core (Elmore, 2000). Environmental influences include accountability standards and high stakes testing, globalization of the economic world, the Age of Information, technology advances, and the generational diversity occurring in all industries.

Reference to the belief and value systems of generational cohorts and their identities linked to the events they shared (Coates, 2007) is important because there are presently up to four generations of teachers working in our schools today (Marx, 2006). A teacher's style of teaching can be shaped by his or her belief and value system, teacher preparation, learning style, and years of experience (Coates, 2007).

Educational organizations are being called upon to develop new structures and relationships to improve student achievement (Marx, 2006). Accountability pressures are forcing organizations to focus intensely on analyzing, structuring, and managing schools to satisfy policy-specified goals to maintain adequate yearly progress (Supovitz, 2006). Further, environmental changes such as generational diversity and the impact of the information age is forcing managers to, once again, change structures and leadership

styles to better analyze instructional pedagogy and help foster interdependence and relationships of all constituents (Marx, 2006).

Guiding Research Questions

The following questions and null hypotheses guided this study and the statistical analysis of the data gathered:

Q 1. Is there a relationship between the generation a teacher was born into and specific constructs of student engagement in ninth and tenth grade students? The constructs of student engagement include the following: Personalization, Valuing Diversity, Efficacy Beliefs, Student Centered Culture, Rigorous Academic Program, Instructional Practice, Support for Learning, Parent Involvement, and Post-Secondary Options (CES, 2007).

Null Hypothesis –There is no relationship between the generation a teacher was born into and the specified constructs of student engagement in ninth and tenth grade students as defined by the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value.

Q 2. Is there a relationship between the generation a teacher was born into and specific teaching styles? The teaching styles include the following: Expert, Formal Authority, Personal Model, Facilitator, and Delegator.

Null Hypothesis – There is no relationship between the generation a teacher was born into and specified teaching styles as defined by the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value.

Q 3. Is there a relationship between each teaching style and each construct of student engagement in ninth and tenth grade students?

Null Hypothesis – There is no relationship between each identified teaching style and each identified construct of student engagement in ninth and tenth grade students as defined by the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value.

Overview of the Methodology

This study is a correlational, non-experimental, quantifiable design. The purpose of a correlational research design is to determine the presence of a relationship between two or more variables (Charles, 1995). This non-experimental research was not about manipulating variables to determine if there was a cause and effect among the variables, only whether a relationship existed (McMillan, 1996). The study determined if there was a relationship between the varying constructs of student engagement, the generation a teacher was born into, and his or her teaching style. To determine the strength of the relationship between the variables, the researcher calculated the Pearson Product Moment Coefficient *r* utilizing the OMR Remark software. This statistic analysis was used to test the null hypotheses.

The study was conducted in five large comprehensive high schools in the State of Michigan; each high school enrolled over 1000 students in grades 9 – 12: Traverse City West Senior High School, Traverse City Central High School, Marquette High School, Muskegon High School, and Grand Rapids Creston High School. All five schools are also participants in a Smaller Learning Community Grant coalition. A federally funded, five-year grant was awarded to this coalition, which includes a partnership with the Michigan Coalition of Essential Schools (CES).

To determine levels of student engagement, the Coalition of Essential Schools' (CES) student survey was given to ninth and tenth grade students in all five high schools. Select questions from the survey were related to nine different constructs of student engagement. The survey, one the students have seen before, is given to all students each spring, with the results being used as evidence for the Smaller Learning Community grant requirements.

Teaching style was determined by the Grasha-Riechmann's Five Teaching Styles Survey, which was designed to identify the following five teaching styles: expert, formal authority, personal model, facilitator, and delegator (Montgomery & Groat, 1998). A teacher's generation was self-reported on the teaching style survey as well.

Limitations and Delimitations

McMillan (1996) defined the limitations in a study to be "those factors or variables that need to be considered" in the study (p. 273). The researcher should consider whether it is reasonable to expect the results of the study to represent a general pattern, should a similar study be conducted (McMillan, 1996). The researcher found

five primary limitations to this study, which are described below, along with conditions that were placed by the researcher to minimize the limitations.

1. All five high schools in this research study have been involved with a federally funded Smaller Learning Community grant. This involvement has required both teachers and students to be surveyed a number of times. Because both sets of populations have been surveyed, it might have affected the responses unless the timing and conditions of the surveys were well planned and timed appropriately.

2. The amount of time, effort, and resources spent in all six high schools toward professional development surrounding the technical core of effective teaching strategies. This focus was due to the work of the Smaller Learning Community grant.

3. The number of teachers in each generation teaching ninth and tenth grade students was diverse but limiting. Participation in the study was voluntary for both teachers and students. If teachers chose not to participate in the study, then the students they taught were not able to participate either, as it was a direct correlation. The purpose of including two grades and five schools was an attempt to make the study more generalizable to other high school settings.

4. The researcher was an administrator who worked in one of the high schools. She evaluated members of the teaching staff and was the administrator in charge of the Smaller Learning Community grant. She had a personal connection to those surveyed, and students and teachers could have taken more time and care with their survey responses.

5. Each construct of student engagement might have been limited to other confounding variables such as how many years a teacher has been teaching, the professional development he/she participated in, or a student's socioeconomic factors.

Delimitations

Charles (1995) indicated that delimitations are the boundaries the researcher brings to the study. The delimitations of this study included the following:

1. Only five comprehensive high schools in four Michigan school districts were surveyed.

2. All five high schools are part of a coalition that received a five-year federally funded grant to create smaller learning communities in their high schools.

3. Generational data of only 9th and 10th grade English and math teachers were collected.

4. The Grasha Riechmann Teaching Style Inventory and the Coalition of Essential Schools' Student Survey were used.

Definition of Relevant Terms

Terms that should be defined prior to the literature review are those vocabulary words that are either new to the profession, used ambiguously, or used in a special way as it relates to a particular study (Glatthorn & Joyner, 2005). The terms that relate directly to this study include the following:

Baby Boomer Generation: Adults who are dubbed as the Baby Boomers were born between the years of 1946 and 1963 (Coates, 2007; Marx, 2006; Richardson, 2008).

CES Student Survey: The Coalition of Essential Schools created a student survey to identify baseline data and growth in various constructs (CES, 2007).

Grasha-Riechmann Teaching Style Inventory: Teachers complete this survey that identifies one of the five identified teaching styles (http://web.indstate.edu/ctl/styles/ 5styles.html, March 4, 2009).

Industrial Age: This term refers to the late 18th and early 19th century when a manual labor economy was replaced by one based upon machine manufacturing (Hargreaves, 2003).

Information Age: This label was given to the current time period, which began in the latter part of the 20th century as the economic base became more dependent upon the instant access of knowledge (Hargreaves, 2003).

Generational Cohort: A generational cohort includes individuals who were born between certain years. In general terms, they share the same life experiences which shaped their value and belief statements. This, in turn, has shaped their work ethic, learning styles, and personality tendencies (Coates, 2007).

Generational Diversity: Because four generations are working and learning together for the first time in history, this term refers to the differences in those generations.

Generation X: Generation X includes those individuals born between the years of 1964 and 1980 (Coates, 2007; Marx, 2006; Richardson, 2008).

Generation Y: Generation Y includes those individuals born between the years of 1980 and 2000 (Coates, 2007; Marx, 2006; Richardson, 2008).

Globalization: This term refers to four conditions: the movement of capital around the world, the movement of human beings across continental borders, the movement of information through cyberspace, and the movement of popular culture across continental borders (Gardner, 2008).

Neo-Millennials: The Neo-Millennials are sometimes also referred to as the Generation E, which stands for Equilibrium or Generation Z – those individuals born after the year 2000 (Coates, 2007; Marx, 2006; Richardson, 2008).

Silent Generation: The Silent Generation is sometimes also called the Veteran Generation and includes those individuals born between the years of 1933 and 1946 (Coates, 2007; Marx, 2006; Richardson, 2008).

Student Engagement: Engagement is a psychological process, which involves the attention, interest, investment, and efforts students put forth in the work of learning (Klem & Connell, 2004).

Teaching Style: This term is given to the operational behavior of a teacher's philosophy (Merriam et al., 2007).

Summary and Organization of the Study

        This study was implemented to further understand ways to engage today's learners and to determine if there is a relationship between when teachers were born, their teaching style, and student engagement. Although there is much research surrounding the variables of student engagement and the topic of teaching style as it relates to student engagement, and also some research about teachers' belief systems and teaching style, the research around teachers' generation, belief systems, and student engagement is

limited. Schools are on the precipice of many profound changes, and gaining a better

understanding of the dynamics of teaching and learning will help to move the industry

forward.

Chapter I provided a background and a conceptual framework for the study, with

an outline of the research questions. A review of literature and methodology will follow

in Chapters II and III. Analysis of the data, conclusions, implications for educators, and

suggestions for further research will be presented in the final two chapters.

CHAPTER II – LITERATURE REVIEW

Five important concepts are interwoven in this study – generational diversity, the Parsons-Thompson's model and the Industrial Age, the Informational Age, teaching pedagogy, and student engagement. The crux of this study is the diversity between the generational cohorts and how that relates to teaching style and student engagement. The differences and characteristics of each generation will be outlined in this chapter. The Industrial Age and Informational Age are discussed as they relate to the trend of generational diversity that is present in all industries including the educational industry today (Marx, 2006). Teaching pedagogy and student engagement are both complex concepts that are defined in a myriad of ways. For the purpose of this study, the researcher has chosen to examine data about these concepts that were gathered in two separate surveys – one survey about the differing teaching styles and the other survey that determined levels of varying constructs of student engagement. Teaching style of each generation of teacher was self-reported on the Grasha-Reichmann Teaching Inventory (Grasha, 1994). Student engagement was measured with the Coalition of Essential Schools Student Survey (CES, 2007).

Generational Diversity

Four generations are beginning to be found in workplaces – the Veteran Generation, Baby Boomers, Generation X, and Generation Y, who are sometimes referred to as the Millennials (Coates, 2007). High schools educate members of

Generation Y (Coates, 2007). The generation in our elementary schools today is referred to as the Neo-Millennial Generation (Coates, 2007; Marx, 2006).

The Baby Boomer generation is defined as those born between 1946 and 1963. It is a large cohort with a birth rate up to 4 million babies a year and includes many teachers and parents of present-day students (Coates, 2007). The Generation X population was born between 1964 and 1980 (Coates, 2007). Generation Y is sometimes referred to as the Millennials and includes people born between 1980 and 2000. Children born after 2000 have been called Generation E for *equilibrium* (Marx, 2006), the Neo-Millennials (Dede, 2005), and Generation Z (Coates, 2007). The one thing that the various authors appear to agree upon is that this generation has qualities and values similar to those who were born into the Veteran Generation (Coates, 2007). For the purpose of this literature review, the researcher will refer to this last generation as the Neo-Millennial Generation.

The veterans include those who survived the depression, won a world war, and shaped the world as we know it today through post-war policies (Coates, 2007). During their lifetime, they witnessed the first man on the moon and the introduction of vaccines, which wiped out life threatening diseases. Post World War II was the time when our country was making the transition from an agricultural society to an industrial society. After the war, waves of immigrants came to the Unites States from Europe. Progressivism emerged from great change, giving the nation public parks and playgrounds, child labor laws, and compulsory attendance laws (Coates, 2007). The veterans were the generation of heroes who saw the turn of the millennium and expansion of radio, television, and air travel (Marx, 2006). They were able to turn a wartime economy into the most powerful peacetime economy (Marx, 2006). One of the greatest

investments in higher education came from the GI Bill proposed during this time period (Marx, 2006).

The baby boomer generation, now adults, was born between 1946 and 1963. A baby boomer's life experiences include the space race, the civil rights movement, the Vietnam War, and Watergate (Richardson, 2008). Coates (2007) noted additional experiences of this group, including events such as the first nuclear power plant, student protests and shootings at Kent State University, assassinations of John F. Kennedy and Martin Luther King, Jr., initiation of the polio vaccine, Sputnik, and Woodstock. In the work place, employers know baby boomers for their hard work, long hours, commitment, and dedication. It is not uncommon for a baby boomer to work in the same organization for 30, 40, or 50 years. They are dedicated, extremely loyal and self-reliant (Southard & Lewis, 2004).

The baby boomers had to work hard for their learning and subsequent lifestyle. They enjoy learning for learning sake; however, when it was time for them to head to college, there weren't enough college seats. The same was true if they wanted a good paying job, so the baby boomers learned to be competitive (Coates, 2007). Words describing this cohort include sensitivity, entitlement, process-oriented, judgmental, over-confident, fair-minded, driven, relationship-oriented, and team player. In the classroom, these traits translate to students who enjoy interacting, enjoy learning, and appreciate skill-building via practice (Coates, 2007). It would help if the teacher of these adult students knew their names, allowed them to share experiences, treated them as equals, treated them as if they were young, and asked them a lot of questions so they had the opportunity to share and talk (Coates, 2007). Even as the baby boomers approach

retirement age, they wish to continue to learn in many different avenues, whether to earn a degree or learn a skill they have always wished to acquire (Coates, 2007).

Baby boomers were and are working parents. However, they have a strong desire to be active in their children's and grandchildren's lives. They wish to have the flexibility to manage their time and workload (Southard & Lewis, 2004). The top five influences of the baby boomer generation included home, school, church, peers, and television (Kambon, 2008).

Most of the baby boomers were organized for group interaction and learned best through open-ended discussions using personal examples. They liked learning in environments that were well-organized, including case studies, icebreakers, and team-building activities. They wanted to participate in setting agendas. A baby boomer in the classroom worries about looking foolish in front of peers, about content that doesn't apply to their current assignment, and about knowing that there is work piling up back at school or the office (Lovely & Buffman, 2007).

Generation X, born 1964 to 1979, is a smaller cohort than those before and after it (Coates, 2007; Richardson, 2008). This generation has experienced the fall of the Berlin Wall, the women's liberation movement, the Exxon Valdez oil tanker spill in Alaska, protestors killed by the Chinese government in Tiananmen Square, the Chernobyl nuclear accident, terrorists at the Munich Olympics, explosion of the Challenger space shuttle, the Watergate scandal, the energy crisis, mass suicide in Jonestown, Bill Clinton and the Monica Lewinski affair, the emergence of AIDS, a soaring national debt, homelessness, holes in the ozone layer (Coates, 2007), the stock market crash and recession of the

1990s, and the World Wide Web. It was in this generation that the first computer disk was sold (Oblinger, 2003).

Generation X has an entrepreneurial spirit (Oblinger, 2003). They are more independent and goal-oriented than their predecessors, which sometimes translates into loyalties that are less strong and more likely to initiate their moves from job to job (Southard & Lewis, 2004). Gen X employees wish to make their own decisions and determine how and when they will get the job done. This generation wishes to control their schedules so that they might have the freedom and independence to work, play, and spend time with family as they deem appropriate (Southard & Lewis, 2004).

Generation X was raised in non-traditional families. They are considered to be children of divorce and grew up in an era of disillusionment about the role of family and community (Marx, 2006). This cohort wishes to live comfortably, believing that carrying debt is the norm. They work for money and quality of life, become educated to get ahead, and family and community is very important to them (Coates, 2007).

The Generation X parent has some identifying characteristics. Richardson (2008) has described them as the helicopter parent. Having grown up with the baby boomer parent who worked long hours, helicopter parents waited longer to have children and had fewer children so they had more time to focus on their smaller families. They are more involved with their children's lives and view their children's achievement as their own personal achievement (Richardson, 2008).

Generation X attitudes affect school and teachers from a younger generation because the Gen X parent is more demanding and less respectful of educators and the educational process (Richardson, 2008). The younger generation, or the Millennials, are

not used to conflict because they were raised by a Generation X parent who rescued them from difficult situations (Richardson, 2008). This situation adds stress to the younger teacher whom schools wish to recruit and retain.

Although it is the most educated cohort, the current (and past) pedagogy of the Industrial Age does not accommodate well the style of learning of Generation X. As a result, there was a steady increase in males dropping out of formal education (Coates, 2007; Kambon, 2008). Brain research during the time period of Generation X discovered that the body has the same physiological response to anxiety whether a tiger is attacking or the student is experiencing anxiety in the classroom (Coates, 2007). The brain will not be available for learning if there is anxiety. Things that cause anxiety in the classroom include the reward and consequence organization of many classrooms, and Gen X students feel like they are attempting to jump through the hoops of the educators instead of learning for their own purposes (Coates, 2007).

The Gen X learner likes the learning environment structured so that they are better able to work at their own pace. They appreciate both on-the-job training and participating in independent study (Coates, 2007). They like presenters and teachers who get right to the point, are informal and fun, earn their respect, and give lots of feedback (Coates, 2007). Different from the baby boomers, Gen X learners like to role-play and don't mind looking silly or foolish. They appreciate bulleted points, lists, and reading headlines. This generation doesn't want to be taught in the same manner they were taught as children. They are easily bored (Lovely & Buffman, 2007).

The final generation Coates (2007) described is Generation Y or the Millennial Generation who were born between 1980 and 2000. These are the youngest adults in

college classrooms and workplace training rooms. For the purpose of this research proposal, those who were born between the years of 1980 and 2000 are called Generation Y (Coates, 2007; Richardson, 2008).

The Generation Y employee is less committed than the earlier generation to making a career out of teaching or other area of employment, but they do expect a lot of themselves and are expert multi-taskers. Generation Y isn't afraid of change or innovation. In fact, it is expected that the millennial worker will make numerous career moves and place a high value on moving up the ladder quickly (Richardson, 2008).

Life for Generation Y was very structured, as they were parented by the overscheduled Gen Xers (Fogg, 2009) and were required to fit in violin and soccer and dance lessons along with everything else within the day-to-day activities (Richardson, 2008).

Generation Y people are not afraid of accountability. They had to pass a high school exit exam in order to graduate and a state test to become certified in their chosen field (Richardson, 2008). They will be life-long learners and appreciate being in a position where they are able to contribute and collaborate (Lovely & Buffman, 2007).

Generation Y grew up thinking they were special. They were loved and nurtured by their parents. They don't appear to be as rebellious as earlier generations and, in fact, share their parents' values (Richardson, 2008). They very much welcome mentoring by an older and more experienced teacher. They were raised with a lot of intense structure and supervision and feel most comfortable with one-on-one coaching (Richardson, 2008). Generation Y gravitates towards group activities, shares a close relationship with their parents, spends more time doing homework and believes that it is preferred to be smart,

are fascinated by new technologies, and are racially and ethnically diverse (Oblinger, 2003). In fact, one in every five Generation Y learners has at least one immigrant parent (Oblinger, 2003).

It has also been determined that the Generation Y student has distinctive learning styles. They prefer learning experientially, being a part of a team, using technology, and being provided with structure for a learning task. They wish to learn in communities and have their talents be utilized (Coates, 2007). Some of their identified strengths include multitasking, setting and adhering to goals, exhibiting positive attitudes, and collaborating with others (Oblinger, 2003).

The Generation Y learner likes environments that are versatile. They appreciate combining teamwork with technology and the ability to get up and move around when tasks are completed (Coates, 2007). They listen most to presenters and instructors who listen and validate, who are positive, upbeat, and recognize them as life-long learners, and who have a sense of purpose (Lovely & Buffman, 2007). They enjoy learning through music, art, and games (Coates, 2007). Presenters or teachers will quickly lose a Generation Y learner if they are moving too slowly, lecturing, using out-of-date technology, or are too critical (Lovely & Buffman, 2007).

Kambon (2008) posited that the top five influences of Generation Y altered from previous generations – home, peers, television, school, and church. Coates (2007) believed this generation has many things in common with their grandparents' and great grandparents' generations – they were born at the end of one century and the beginning of another; are witnessing the movement of one age to the other, such as Industrial to Information; are experiencing radical and world changing technology; and experienced

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educational systems that lagged behind societal change. Generation Y was born into a very child-focused world. Some of their shared experiences include the Oklahoma City bombing, stress, the demolishing of the Berlin Wall, terrorist attack of the World Trade Center on 9/11, and the war against terrorism (Marx, 2006). They are bigger than the baby boomer generation, comprising 26% of our population (Coates, 2007). Due to technology, Gen Y people have weak interpersonal skills but are perceived to be activists supporting social causes (Coates, 2007). They are impatient and wish to make changes, hold strong views, and are close to their families (Marx, 2006).

The Neo-Millennial student was born after 2000 (Coates, 2007; Marx, 2006; Richardson, 2008). They achieve more sophistication at a younger age than any other generation (Richardson, 2008). For them, technology is assumed to be a part of the natural environment. Frand, as cited in Oblinger (2003), makes assumptions about this generation of learners such as the idea that computers do not encompass all of technology, learning is much like playing a video game, television is becoming obsolete with the ever-expanding internet, and so on.

The number one influence for the neo-millennial generation is the media (Kambon, 2008). On a potential downside, the neo-millennial learner has less practice at playing than previous generations; they spend the majority of their time on the computer. However, they will still collaborate. The social groupings and collaboration will be more virtually bounded (Dede, 2005).

Because the neo-millennial student is fluent in multi-media, active learning should be based on real or simulated experiences, which include frequent opportunities for reflection (Dede, 2005). Learning experiences can and should be more

individualized. Individualized learning takes us full circle; it is what all teachers from all

generations have strived to achieve. Dede's research indicated that it will be easier to

individualize the learning with the use of technology.

Parsons-Thompson's Model and the Industrial Age

Schools today are rational organizations where the focus on student achievement

is outcome- and goal-oriented. In a rational organization, people within the schools and

learning processes are lost. However, if student achievement is to continue to increase, it

is imperative that we gain a better understanding of these people – teachers and learners –

as well as the learning processes. The Parsons and Thompson's Model, shown in Figure

1, describes three distinct levels of any organization – the technical core, managerial

level, and the institutional level (Scott, 1981/2003).   The technical core of an

organization includes the actual work of that organization, and the managerial level is the

part of the organization that is responsible for controlling and designing the technical

core of the work. The institutional level is related to the external environment and also

establishes boundaries of the organization so that the technical core can do the job it is

supposed to do (1981/2003).

The challenges in schools across the country lay within this organizational

framework and the concept of loose coupling, which is a reference to the layers within an

organization that hide the technical work of the instructional core (Weick, 1976). Loose

coupling is the weak relationship between the technical core of the work of teaching and

learning and the levels of institutional and managerial tasks. Environmental factors, such

as the societal trends and federal and state legislation, are forcing education to change the

technical core of teaching and how it is managed. This loose coupling or disconnect from the technical core of teaching produced a logic of confidence, which describes an assumption that learning is taking place in the classroom without close inspection or management (Rowan, 1990).

The Industrial Age brought a need to better educate the country's students. In order to have more managerial control, efforts were begun to standardize the rational organization called school. Samuel Gridley Howe implemented the first standardized test in 1844 in Massachusetts (Elmore, 2000). The prevailing assumptions during that time were that children were deficient and that it was the schools' job to fix them; learning took place only in the mind; everyone learned in the same way; learning took place in the classroom; and there were smart children and not-so-smart children (Elmore, 2000). These assumptions led to an assembly line school structure in which the students were separated by grades defined by their age, and subjects were taught in isolated units (Elmore, 2000; Smith & O'Day, 1991). School bells, which rang in incremental time units, rigidly determined time allotted for each subject (Coates, 2007; Elmore, 2000). This rational, bureaucratic organization, designed to better educate our young, further isolated the technical work of teaching (Meyer & Rowan, 1978).

At the present time, other countries are gaining academic ground, and our country is on the precipice of economic hard times. Hargreaves (2003) outlined some beliefs regarding standardization in educational reform.

- There is an impending graduation crisis among vocational and special education students.

- Narrowing the curriculum is destroying essential classroom and experiential activity.

- Innovative schools are restricted in their capacity to make learning relevant.

- The learning gap continues to widen between the elite and other schools.

- The singular focused goal of raising test scores has encouraged manipulative strategies.

- Teachers have been devalued and are looked upon as incompetent.

- Teaching remains an isolated profession.

Elmore (2000) adamantly described how the logic behind standards-based reform puts pressure upon the historic structure of loose coupling. The lines between the managers of teachers and the technical core of teaching need to blur in order for teaching practices to be relevant, improve, and better prepare our students.

Rowan (1990) described a leadership theory and approach in which teachers are given more opportunities to make impactful decisions, and collegiality and collaboration amongst teachers is firmly integrated in the school organization and structure. He believes that in order to decouple the technical core of teaching, an organizational restructuring needs to take place in schools where lead teachers are given opportunities to make school-wide decisions or are given the opportunity to coach other teachers or new teachers to the profession.

Senge (2000) described learning organizations as places where teachers, students, and leaders alike are always looking to expand upon their desire to learn and grow. He believes schools should be places where new and innovative ways of thinking are nurtured and where we bring the whole together, as opposed to teaching and learning in

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isolation from each other. Prior learning theories and concepts focus on leadership traits or leadership style pigeonholing a leader into a prescribed set of traits and potential decision-making processes (Spillane, Halverson, & Diamond, 2004). These leadership theories also assume a hierarchical and rational organizational structure. What is needed in schools today is an upside-down hierarchy. Teaching needs to be scrutinized and looked upon with a critical eye in order to improve and grow. This should happen with collaboration between teachers and those managing or leading the teaching and learning in a school. This is done through shared or distributed leadership. The practice of teaching and student performance needs to be at the center of school leadership (Elmore, 2000). This changes the focus from leadership skills and traits to building capacity in people, the stakeholders of teaching and learning. Distributed leadership empowers others to build confidence in the skills and knowledge that they bring to the table (Brunner, Grogan, & Bjork, 2002). District and building leaders who share the power and decision-making are better able to improve the craft of teaching and, thus, the learning.

Many schools today are still organized in response from the move from the Agriculture Age to the Industrial Age. Students continue to move from class to class with the sound of the bell. Coates (2007) believes that what we are experiencing today parallels the changes in the transition from an agricultural society to an industrial society at the turn of the 20th century when people were leaving family farms to move closer to the city and work in factories for better-paying jobs. It was thought that the best way to educate the students to meet the needs of the industrial society was by organizing learning delivered in Carnegie Units and via a bell system (Coates, 2007).

Informational Age

For many reasons, including the NASSP's Breaking Ranks research (2004), more stringent accountability standards, the speed of technological advancement, and the need to produce more global learners, schools are restructuring to include more online learning. Generation Y and the neo-millennial students are online 24 hours, 7 days a week through email, blogging, podcasting, smart phones, and other technology devices (Oblinger, 2003). However, a student's interest in taking a class online doesn't ensure a more enriching or more rigorous educational experience than a face-to-face interaction.

Online learning and teaching isn't something that just happens. Students still have differing learning styles that need to be addressed, and teachers have differing teaching styles that should be incorporated into the technological tools of today. The older generation of teachers needs to be taught how to incorporate these tools into their repertoire of strategies. Selfe (2008) gave four reasons for this expansion:

- We learn about, live in, and understand the world using many modes of communication.

- Reading and writing are not static; reading is not just about picking up a book any longer; and writing isn't only done with a pencil and paper.

- The changing workplace demands and evolving industries.

- The changing networks of the global communication.

An unprecedented impact of medical advances and increased longevity is that there are multiple generations of workers in industrial organizations (Marx, 2006). As enriching and exciting as this concept is, it also presents challenges. There are differing values and beliefs amongst the generations, which stem from differing experiences

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(Lovely & Buffman, 2007). These different generations need to learn to work together for the health of their organization. When the organization is school and the industry is education, the implications of a student benefitting from potentially four different generations can be enriching. It can be a learning experience in and of itself, especially if all four generations learn to effectively work together. In order to for that to happen, the industry needs to understand each generation to help them come together cohesively.

Many industries are concerned about the baby boomer generation because many are approaching retirement age (Southard & Lewis, 2004). Struggles will ensue if industries aren't active in recruiting and retaining employees from later generations. The research has shown that this is a concern because, unlike the baby boomer generation, the values of Generation Y include their unwillingness to stay in one job for multiple years. (Richardson, 2008). There also aren't enough people in Generation X and Generation Y to replace the number of baby boomers who will retire (Marx, 2006).

In education, leaders felt they had two charges with the baby boomers reaching retirement age. The first was to recruit a new generation of teachers, and the second was to change the profession to meet the needs of the 21st century workers so they would stay (Coggins, 2008). Coggins also stated that there is a financial cost to teacher turnover, reaching $7.3 billion on a yearly basis, not to mention the cost in student outcomes and achievement. It has been documented that students of novice teachers perform at a lower standard than students of more experienced teachers.

Teaching Pedagogy

Coates (2007) gave a historical overview of teaching pedagogy. She began by noting that in the century from 1900 to 2000, the percentage of students who graduated

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from high school increased from 6% to 88%. However, students today are still learning

as in the 19th century. The Gary Plan, developed in Gary, Indiana, between 1908 and

1915 met the needs of the Industrial Age (Coates, 2007). Schools reflected what was

happening in society, took on socializing immigrant populations, and divided work into

contract units (Coates, 2007). Today, we are moving from the Industrial Age to the Age

of Information, and our learners are different. Yet structures and processes in place today

prepare everyone to be good factory workers instead of addressing the needs of today.

     According to Coates (2007), the pedagogy for the 21st century should be learner-

centered. Young men still abandon education because it is not relevant to them. Yet they

need the education and the degrees to survive. The author believes that learning should

be collaborative and not competitive. Our learning environments should be relevant,

interactive, appropriate to the times of today, customized to the learner, highly visual, and

have clear expectations.

     Lauer, as cited in Sphere Trending (2008), believes that there are now the "four

C's to education"— creative thinking, critical thinking, computers, and calculators (p. 1).

Considering the environmental devastation that occurred while Generation Y was

growing up, Lauer described the newest generation to be the environmental heroes. She

also indicated that, in response to the Information Age, neo-millennial students believe

they are smarter than their teachers (Sphere Trending, 2008).

     The importance of examining generational learning styles is that there are

potentially four generations of learners in the workplace and in learning environments.

As Coates (2007) mentioned, we need to take into consideration the learning styles of the

generations we teach. With technology, this should be easier. The teacher isn't the sage

on the stage or the dispenser of knowledge any longer. There is a need to revolutionize

pedagogy and how we teach the various generations that is different than the pedagogy

that addressed the learners of yesteryear. Teachers need to be facilitators of learning,

helping the student look for information and individualizing their instruction and the

learner's experience.

There is research that supports the concept that the manner of teaching is shaped

by the teachers' beliefs and learning style. A teacher will differentiate instruction based

upon the learners in his or her classroom, but each teacher has a dominant teaching style,

which he or she will employ most often (Grasha, 1994). Grasha developed a teaching

style inventory to determine a primary teaching style of an instructor in the classroom.

This survey helps a teacher to identify with one of five potential styles: expert, formal

authority, personal model, facilitator, and delegator (Montgomery & Groat, 1998).

Student Engagement

Student engagement includes individualizing instruction. Student engagement

can be defined as a student's willingness to participate in routine school activities

(Chapman, 2003). Much research has been conducted that has determined student

engagement as a "robust predictor of student achievement and behavior in school

regardless of socioeconomic status" (Klem & Connell, 2004, p. 262). Skinner and

Belmont (1993) also determined that students who are engaged in their learning show

sustained, behavioral involvement in learning activities with a positive emotional tone.

Students become more disengaged from school as they progress from grade

school to high school. Research has found that as many as 40% to 60% of students

become chronically disengaged from school, and that isn't counting the students who already dropped out of the educational system (Klem & Connell, 2004). The authors researched possible causes and consequences of engagement and identified two forms: ongoing engagement, which identified student behaviors such as time spent on class work, intensity of concentration, time on task, and the desire to initiate action when opportunities were represented; and a student's reaction to challenge, which included a student's coping strategies such as problem solving, effort, strategic thinking, and levels of engagement or desire to withdraw.

Researchers have measured student engagement in a variety of ways, by self-reporting surveys, checklists and rating scales, direct observation, work sample analysis, and focused case studies (Chapman, 2003). When students are engaged, they attend school on a daily basis, turn their work in on time, and exhibit on-task behavior. Disengagement can be measured by a high absentee rate or unverified absences, cheating or plagiarizing, and inappropriate behavioral tendencies, such as damaging school property or insubordination (2003).

Students' self-reporting check lists and surveys measure the level of attention a student has on a task, the mental effort spent on a task, the interest in and emotional reaction to a learning task, and the desire to know more about certain topics (Chapman, 2003). Teacher-reporting scales measure the teacher's perception of a student's willingness to participate in school tasks, his or her emotional reaction to learning tasks, the amount of willingness to direct his or her own learning, and other individual factors, such as distractibility or strategic problem solving (2003). Direct observations are usually used to confirm students' reported levels of engagement. One protocol that is

used includes five minutes of observational data on each student per lesson (2003). Another measurement tool used to determine level of student engagement is a focused case study. Case studies are used to record details in student interactions with other people and objects in the classroom. Those researchers who utilize case studies are interested in the processes associated with engagement (2003).

Ritchart (2007) defined student engagement as the conditions that result in a student's deep personal understanding of a concept. He identified seven common criteria of a lesson or activity that engage students in a deeper understanding: rigorous, real or authentic, includes a requirement of independence, rich in thinking, revealing, rewarding, and reflective. Renzulli (2008) described similar characteristics. He made a claim that in today's schools there is a heavy reliance on tests due to the accountability to No Child Left Behind (NCLB) legislation (U.S.D.O.E., 2002). However, he also believes that the pedagogy for today's economy in the informational age should focus on higher order thinking skills (Renzulli & Reis, 2008). Renzulli and Reis (2008) believe when planning for a learning task, the teacher should monitor student understanding by determining whether students are identifying patterns and relationships, generating reasonable arguments, drawing comparisons, forming meaningful questions, transforming factual knowledge to usable knowledge, efficiently accessing information, extending their thinking, finding the relevancy to their own world, and enjoying the learning.

Renzulli (2008) stated that with today's technology, teachers should be able to access their students' interests, learning styles, and preferred modes of expression. Teachers who are most successful in engaging students develop activities with the students' basic psychological and intellectual needs in mind (Brewster & Fager, 2000).

However, missing in current educational reform efforts is a substantial investment in teacher learning (David, 2008). High schools are failing students because educational programs were not designed to meet today's requirement of graduating all students. The modern high school system was established in the early 20th century, and classroom teachers are still trained to be the givers of knowledge as opposed to the facilitators of knowledge (Wise, 2008).

The increased use of technology and online learning confounds the concept of student engagement. Students still have differing learning styles, and online learning can and should be shaped around various student-learning styles. Educational institutions should not believe that students will be engaged simply because they are accessing information via technology. Online learning still needs to address differing learning styles in order to enhance student engagement to help students achieve optimum academic success.

Considering that the media has become the number one influence on the neo-millennial learner, Kambon (2008) made the following five assumptions: Students have shortened attention spans due to commercial breaks; students are accustomed to being entertained; because students are used to having remote controls in their hands, they also have remote controls in their heads and can choose to tune something out or in at will; students are accustomed to receiving information faster than we, as educators, are accustomed to giving it; and the neo-millennial students are primarily visual learners. Kambon concluded that due to the above, it is imperative that lesson design changes to meet the needs of the neo-millennial student.

Summary

      The five concepts of generational diversity, teaching pedagogy, student engagement, industrial age, and the information age lead to other important concepts to be researched, including a teacher's belief and value system. Research has indicted that the neo-millennial student has similar belief and value systems as the veteran generation (Coates, 2007). There were similarities in the transitions from the agricultural age to the industrial age and from the industrial age to the informational age (2007). It is important to examine how belief and value systems play a part in teaching pedagogy. Overall, this study is one that is relevant to what is happening in schools across America today.

CHAPTER III – RESEARCH METHODS

The move from the Industrial Age to the Informational Age, which changes the world of work and how information and learning is disseminated, continues to influence education today. Further, the phenomenon of multiple generations working (and learning) together in schools presents challenges for each generational cohort whose shared events helped to shape their belief and value systems and, in turn, impacts the content and delivery of today's curriculums (Coates, 2007; Dede, 2005).

This quantitative, non-experimental, correlational, descriptive research study searched for relationships between three independent variables defined as the generation a teacher was born into, the identified teaching styles the teacher employed, and the different constructs of student engagement of the Generation Y learner in five Michigan high schools. Correlational studies are conducted to determine the strength and direction of possible relationships between the variables (Glatthorn & Joyner, 2005) and do not indicate causality (Isaac & Michael, 1981).

Research Tradition

The two main approaches to formal research are qualitative and quantitative studies; each tradition comes with a set of defining components (Charles, 1995). Qualitative research employs inductive reasoning and is conducted when the focus is on developing a better understanding of a social phenomenon by looking at naturally occurring behaviors, events, and perceptions as they unfold. Qualitative research is about

understanding perspectives in isolated settings to construct new knowledge (McMillan, 1996).

The quantitative research tradition is based upon a positivist epistemology of generating new knowledge, and some quantitative research designs seek to establish relationships between variables. Researchers who engage in quantitative studies believe that facts can be quantified to explain a phenomenon and to predict potential outcomes through numerical findings (McMillan, 1996). This study followed a quantitative research tradition, which uses deductive reasoning. The presence or absence of a relationship between differing variables, and the result of each relationship, was determined by descriptive, numerical data (McMillan, 1996).

Research Design

This research study was based upon a non-experimental, quantitative, correlational design. Correlational statistical tests determine if the variations in one factor relate to the variations in another factor by producing a numerical coefficient (*r*), which determines the strength (or lack) of the relationships between the variables (McMillan, 1996). The Pearson Product-Moment correlational statistical test was used to determine if there was a relationship between the independent variables of the generation a teacher was born into and his or her teaching style and each construct of student engagement. This test was used because the variables studied weren't experimented upon and were determined in their own realistic settings (Isaac & Michael, 1981).

Each variable studied produced a number, which could be plotted in a scatter gram or scatter plot, which is simply a picture of the relationship between the variables.

In a scatter plot, the value of one variable appears on the horizontal axis, and the value of the second variable measured on the same individual is plotted on the vertical axis (Hinkle, Wiersma, & Jurs, 1988). The coefficient is calculated to determine direction, form, and strength in a numerical manner. The direction of the relationship can be either a positive or negative one. The form of the relationship could be depicted in a linear or curvilinear fashion, and the strength of the relationship is determined by how closely the points of the variables lie to the form of the line (Isaac & Michael, 1981).

The values of the coefficient r are correlated to determine their proximity to 1.0 or –1.0. The closer the value is to 1.0 or – 1.0, the stronger the relationship of either a positive linear or an inverse linear correlation (McMillan, 1996). Safrit and Wood (1995) developed a scale to interpret the correlation coefficients. These indicators determine the level of relationship in the present study:

- A positive or negative coefficient of 0.80 to 1.00 = a high relationship.
- A positive or negative coefficient of 0.60 to 0.79 = moderately high.
- A positive or negative coefficient of 0.40 to 0.59 = moderate.
- Coefficients below 0.39 = low relationship or no relationship.

Guiding Research Questions and Null Hypotheses

The following questions and null hypotheses guided this study and the statistical analysis of the data gathered:

Q 1. Is there a relationship between the generation a teacher was born into and specific constructs of student engagement in ninth and tenth grade students? The

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constructs of student engagement include the following: Personalization, Valuing Diversity, Efficacy Beliefs, Student Centered Culture, Rigorous Academic Program, Instructional Practice, Support for Learning, Parent Involvement, and Post-Secondary Options (CES, 2007).

Null Hypothesis – There is no relationship between the generation a teacher was born into and the specified constructs of student engagement in ninth and tenth grade students as defined by the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value.

Q 2. Is there a relationship between the generation a teacher was born into and specific teaching styles? The teaching styles include the following: Expert, Formal Authority, Personal Model, Facilitator, and Delegator.

Null Hypothesis – There is no relationship between the generation a teacher was born into and specified teaching styles as defined by the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value.

Q 3. Is there a relationship between each teaching style and each construct of student engagement in ninth and tenth grade students?

Null Hypothesis – There is no relationship between each identified teaching style and each identified construct of student engagement in ninth and tenth grade students as defined by the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value.

Participants

A detailed description of the participants and place of the study will give the reader a better understanding of the outcomes and will help to control for validity and reliability of the research (Glatthorn & Joyner, 2005). The participants in this study included teachers of primarily freshmen and sophomore students in five large high schools of four school districts in the State of Michigan. The decision to survey ninth and tenth grade math and English teachers was made in order to establish a direct correspondence to a teacher's teaching style and the constructs of student engagement. The students who participated in the engagement survey were enrolled in English 9, English 10, algebra, and geometry classes taught by the participating teachers in the same five high schools.

The four school districts and five high schools in this study included Grand Rapids Public Schools – Grand Rapids Creston High School, Traverse City Area Public Schools – Traverse City West Senior High School and Traverse City Central High School, Marquette Public Schools – Marquette High School, and Muskegon Public Schools – Muskegon High School.

All five high schools were in Year Three of the federally funded Smaller Learning Community Implementation Grant. Although they were from four very different geographical settings across the State of Michigan, all five high schools had a population of more than 1000 students in grades 9 – 12. They are part of a consortium because they all share a commitment to increase student achievement through structuring smaller learning communities within their comprehensive high schools (CES, 2007). The five high school communities are socioeconomically diverse, a characteristic that is reflected

in the diverse student populations (CES, 2007). Each community is home to a college or

university.

Accessibility added to the decision to survey freshmen and sophomore students.

All freshmen and sophomore students were required to take an English and an algebra I

or geometry class. A limitation to including the junior or senior classes was that a large

number of upperclassmen do not take specific core content classes. For the most part,

they take classes outside the core content area or in an advanced track in one or more

core content areas. In the fall of 2009 rather than in the spring, freshmen students were

given a portion of the MEAP and the sophomore students were given a PLAN test to

predetermine their performance levels on the ACT tests. Studying freshmen and

sophomore students provided the least amount of stress for the student and provided an

opportunity to be able to correlate the variables of teacher generation, teaching style, and

the constructs of student engagement. Table 1 shows the five high schools with some

identifiers.

Table 1

Identifying Components of Each High School

Identifiers	TC Central	TC West	GR Creston	Marquette	Muskegon
Total student population	1522	1811	870	1275	1256
Number of 9th grade students	346	437	309	280	498
Number of 10th grade students	394	462	232	256	324
Number of 9th grade ELA teachers	4	5	3	3	4
Number of 9th grade Math teachers	3	4	5	3	4
Number of 10th grade ELA teachers	5	6	5	4	3
Number of 10th grade Math teachers	4	6	8	4	3
Title I School	No	No	Yes	No	Yes
Geography	Rural	Rural	Urban	Rural	Urban

Instrumentation and Data Collection

        The tool used to determine each construct of student engagement was the

Coalition of Essential Schools' student survey (CES, 2007; see Appendix A). This

survey is given to all high school students each spring as a requirement for the Smaller

Learning Communities grant. Thus, it is familiar to them. The 50-question survey took

the students approximately 30 minutes to complete. The researcher obtained permission

from the five high schools to use and administer this survey for the purpose of this

research study (see Appendices G-K). Students who volunteered to take the survey

remained anonymous throughout the evaluation process.

        A representative of the Coalition of Essential Schools worked with the researcher

to identify the survey questions directly related to each construct of student engagement:

Personalization, Valuing Diversity, Efficacy Beliefs, Student Centered Culture, Rigorous

Academic Program, Instructional Practice, Support for Learning, Parent Involvement,

and Post-Secondary Options (CES, 2007).

        Teachers self-reported to which of three generational cohorts they belonged on

the teaching styles inventory. As cited in Montgomery & Groat (1998), Grasha's (1994)

Five Teaching Styles Inventory was used to determine how closely a teacher

implemented each of the five teaching styles: expert, formal authority, personal model,

facilitator, and delegator. The 40-question survey took teachers approximately 30

minutes to complete (see Appendix C).

        Surveys were administered to the students and teachers of all five high schools in

May 2010. Each respondent remained anonymous, and his or her participation was

strictly voluntary. In this correlational study, the students' surveys were correlated with

survey of the teacher who instructed them. The teacher's survey and the students' surveys were both identified with the same code.

Information from the student survey and the teaching style inventory were analyzed using the Pearson Product-Moment correlation coefficient statistical test to determine if there was a relationship between the generation a teacher was born into, his or her teaching style, and the constructs of student engagement for the Generation Y learner (Isaac & Michael, 1981). Due to the number of variables studied, three correlation matrices were developed instead of scatter plots to show the correlation coefficient of each variable studied and the relationship between them.

Validity and Reliability

Four areas ensure the quality of research designs: construct validity, internal validity, external validity, and reliability (Kidder, 1981). Validity is the ability to consider that the conclusions based on the data are true or valid (Eisenhart & Howe, 1992). Construct validity, or generalizability, is related to the ability to generalize the research analysis into other areas of study (http://www.socialresearchmethods.net, March 9, 2009). It may be more difficult to generalize the findings of this study because it is limited to only four districts in the State of Michigan, who are related by the Smaller Learning Communities grant. However, the analysis of the data will help those four districts to gain a better understanding of their students and teachers.

Internal validity relates to the direct causality of each construct of student engagement to each teaching style and each teaching generation. When thinking about

internal validity, the researcher kept in mind that other factors that may have caused the

effect or, in this case, each construct of student engagement (Eisenhart & Howe, 1992).

In regard to external validity, the ability to generalize the data analysis to other

settings, confounding variables, as shown in Table 1, indicated difficulty to generalize

this study's findings to other educational organizations (Eisenhart & Howe, 1992).

Reliability is the ability to replicate the study in other institutions or organizations

(Kidder, 1981). A clear methodological process has been given so that future researchers

will have the capability to replicate the study. Grasha's (1994) Five Teaching Styles

Inventory and the student engagement survey, which was developed by the Coalition of

Essential Schools, were both widely tested for their validity and reliability in other

research applications. It was the desire of this researcher to create a study that could

easily be replicated to gain a better understanding of student engagement in high schools

today.

Research Steps

The researcher used an eight-step process to conduct this study.

1. Obtained research approval from the researcher's doctoral committee and the
   Human Subjects Review Committee (see Appendix E).

2. Obtained written permission from the Traverse City Area Public School System,
   Grand Rapids Public School System, Muskegon Public School System, and
   Marquette Public School System to administer both teacher and student surveys
   (see Appendix C).

3. Visited each high school to describe the research study, answer questions, assure participant anonymity, and deliver both student and teacher surveys.

4. Obtained letters of consent from both freshmen and sophomore teachers and students in the research study (see Appendices F and G).

5. Surveyed the freshmen and sophomore students using the Coalition of Essential Schools survey.

6. Surveyed the freshmen and sophomore English, algebra I, and geometry teachers using the Grasha-Riechmann Teaching Style Inventory. A question was added to the survey to identify generational cohort.

7. Analyzed the results of the survey to determine if there was a relationship between the generation in which a teacher was born, each of the five teaching styles identified on the Grasha-Riechmann Teaching Style Inventory, and each construct of student engagement. The OMR Remark software program was employed to run the Pearson Product-Moment correlation statistical analysis test.

8. Compiled the results, determined implications, and finalized the research study.

Data Analysis

The Pearson Product-Moment correlation coefficient statistical test was used to determine the relationship between the variables. This test is used when both variables are measured on an interval level (Isaac & Michael, 1981). Data for all variables were given in a numerical point.

Data were analyzed using the OMR Remark software program, which interfaces with Microsoft Windows. This program was used because it is also extensively used to

analyze data for the Traverse City Area Public School system and was easy to prepare, analyze, and manage the research data. The OMR Remark allowed for examination of several independent factors within the constraints of both statistical tests. The coefficients *(r)* were able to determine the strength and direction of each studied relationship. The researcher used a significance level of 0.05 to set the criteria for rejecting or accepting each null hypothesis. The researcher also used the Safrit and Wood (1995) scale to determine the level of each relationship (Hinkle, Wiersma, & Jurs, 1988).

Researcher Bias

This study surveyed teachers and students in one of the four districts in which the researcher was employed as principal. Some of the responsibilities of the researcher included those related to the learning and management of ninth and tenth grade students and teachers. The researcher attempted to minimize bias by including a total of five high schools throughout the State of Michigan. Further, bias control included the study of value and belief systems as they related to teaching style and not teacher preparation programs.

To minimize human relationship difficulties and to ensure the compliance of ethical standards and legal constraints, Borg and Gall (1989) firmly suggested precautionary measures in the research study. The American Psychological Association established ten ethical principles to ensure the safety of the research participants and ethical responsibility of the researcher (1989).

To assure confidentiality of the teachers and students, codes were used rather than names as identifiers (Borg & Gall, 1989). The researcher also followed the Institutional Review Board's process and guidelines established by Eastern Michigan University and for the four public school systems. These guidelines helped to protect the rights of both teacher and student participants at both global and local levels.

Summary

As indicated by the research questions, the purpose of this research study was to gain a better understanding of student engagement. Because there are bodies of research describing the generational cohorts, teaching styles, and student engagement, the education industry will benefit with more information to determine relationships between these variables. There is also research surrounding beliefs of teachers, as they relate to teaching style. In determining if there was a relationship, there is also a deeper understanding of the teaching and learning process of students and teachers in schools today. One purpose of quantitative research designs is to test theories and provide statistical analysis to determine relationships (Charles, 1995).

CHAPTER IV – ANALYSIS and PRESENTATION of DATA

Two phenomena are shaping public education. The first phenomenon is the differing belief and value systems of students in school today (Kambon, 2008). The second phenomenon is the variety of generations teaching in public school classrooms (Coates, 2007). Each generation is defined by the events that have shaped the belief and value systems of the cohort (Coates, 2007). This study examined the relationship between the generation a teacher was born into, his or her teaching style, and each construct of student engagement. The findings of the research are reported in this chapter.

Two surveys were distributed and analyzed in this study. One survey was given to the ninth and tenth grade English and math teachers in five large but geographically and demographically diverse high schools, and the other survey was given to the students in those classes. Teachers' generations were self-reported at the beginning of the Grasha-Reichmann Teaching Style Inventory. Table 2 shows the boundary years related to each generation.

Table 2

The Generation Boundary Lines

Generation Cohort	Boundary Years
Baby Boomers	1946 – 1963
Generation X	1964 – 1979
Generation Y	1980 - 2000

The 40-question inventory with a four tier-leveled Likert scale was designed to determine teachers' preponderance toward one of the following teaching styles (Grasha, 1994): Expert, Formal Authority, Personal Model, Facilitator, and Delegator. The complete survey is located in Appendix C. Table 3 indicates the questions corresponding to each teaching style.

Table 3

Relating Questions to Teaching Style

Teaching Style	Relating Questions
Expert	1, 6, 11, 16, 21, 26, 31, 36
Formal Authority	2, 7, 12, 17, 22, 27, 32, 37
Personal Model	3, 8, 13, 18, 23, 28, 33, 38
Facilitator	4, 9, 14, 19, 24, 29, 34, 39
Delegator	5, 10, 15, 20, 25, 30, 35, 40

The Coalition of Essential School survey to measure varying constructs relating to student engagement (2007) was given to the selected students. In many cases, this meant that the student took the survey twice, as they were directed to answer the survey based upon the teacher in front of them.

The students' 47-question survey measured the following constructs of student engagement on a four-leveled Likert scale.

1. Personalization

2. Valuing Diversity

3. Efficacy Beliefs

4. Student-Centered Culture

5. Rigorous Academic Program

6. Instructional Practice

7. Support for Student Learning

8. Parent Involvement

9. Post-secondary Options

The complete survey and the survey broken down by the student engagement constructs are located in Appendices A and B, respectively. Table 4 outlines the questions related to each construct of student engagement.

Table 4

Relating Questions to Each Construct of Student Engagement

Constructs	Relating Questions
Personalization	8, 29, 31, 34, 35
Valuing Diversity	11, 20, 21, 22, 23, 33
Efficacy Beliefs	10, 24, 25, 26, 41
Student-Centered Culture	30, 36, 37, 38, 46
Rigorous Academic Program	3, 4, 5, 14, 15, 17
Instructional Practice	7, 9, 12, 16, 18, 19
Support for Student Learning	28, 39, 40, 45
Parent Involvement	32, 43, 47
Post-secondary Options	1, 2, 6, 13, 27, 42, 44

Survey responses of both teachers and students were recorded on Scantron bubble sheets. Specific teachers' and their students' surveys were coded identically so that the results for each class could be correlated. Upon completion, the surveys were returned in a prepaid box to the researcher to be analyzed.

Of the 74 teachers invited to participate in this study, 53 returned completed surveys, a participation rate for teachers of 72%. Of the 53 participating teachers, 16 were from the baby boomer generation, 29 were from Generation X, and 8 were from Generation Y.

Because the results of this study were contingent upon a direct correlation of teacher and student responses, the only valid student surveys were from students of the participating teachers. If there had been 100% teacher participation, 3538 students could have been surveyed. However, since the teacher participation rate was 72%, the same percentage of students (2643) was offered the opportunity to be surveyed. Nearly all of the 2643 students chose to participate and took the student survey in their ninth and tenth grade English and math courses.

Results

Data received were scanned and analyzed using the OMR Remark software program available in the Traverse City Area Public School System, which uses this program for analyzing all of their statistical data. This software interfaces with Microsoft Windows, and the capabilities of Microsoft Excel software were used to assist in the analysis of the statistics gathered in this study.

Each teacher and the students in his or her class were coded with the same identifier to make it possible to run a statistical test of correlation. Teachers were also coded according to their generation cohort: baby boomer (1), Generation X (2), and Generation Y (3).

Using the OMR Remark software program, the means of each question within the Coalition of Essential Schools (CES) student survey and the means of each question on the Grasha-Reichmann Teaching Style Inventory were calculated. Then, for each generation, the frequency and the mean of the responses for each question on the same survey were calculated. Other descriptive statistics were produced by OMR Remark

including the mean, standard deviation, and variance of each response for the two surveys.

The Pearson Product-Moment correlations coefficient statistical test, which is used to determine the direction, shape, and strength of two variables, was used in this study to determine if there was a relationship between each of the variables. It is not used to determine if one variable causes a reaction of the other (Isaac & Michael, 1981). The Pearson Coefficient *r* calculated between two variables is identified in each matrix, and significant relationships are italicized. The Safrit and Wood scale was used to interpret each correlation coefficient to determine if there was a relationship and to determine the strength of each relationship that occurred. Table 5 displays the standards as outlined by Safrit and Wood (1995).

The Spearman Rank Order is another statistical analysis used to determine correlation (Hinkle, Wiersma, & Jurs, 1988). Two reasons determined the use of the Pearson Product Moment over the Spearman Rank Order. The first reason is that Spearman typically calculates the correlation of two ordinal data points (Isaac & Michael, 1981). The data points used in this study consisted of two interval data points and one ordinal, which was the generation. The second reason the Spearman coefficient wasn't calculated was that it analyzes the correlation of data that as ranked ordered (Isaac & Michael, 1981). A decision was made to not rank order data in this study.

Table 5

Strength of Relationship as Determined by Correlation Coefficient

Relationship Strength	Negative	Positive
None	-0.19 to 0.0	0.0 to 0.19
Low	-0.39 to –0.20	0.20 to 0.39
Moderate	-0.59 to –0.40	0.40 to 0.59
Moderately High	-0.79 to 0.60	0.60 to 0.79
High	-1.0 to –0.80	0.80 to 1.0

For the first analysis, teacher generation (baby boomers, Generation X, and Generation Y) was paired with each construct of student engagement. Table 6 shows the calculation of the Pearson Product-Moment coefficient.

Table 6

The Relationship Between Teacher Generation and Constructs of Student Engagement

Engagement Constructs	Teacher Generation
Personalization	0.07
Valuing Diversity	0.03
Efficacy	0.03
Student Centered	0.08
Academics	0.01
Instruction	0.04
Learning Support	0.04
Parent Involvement	0.02
Post-secondary	0.03

According to the Safrit and Wood (1995) scale in Table 5 that defined a 0.05 coefficient as a significant value, there was no correlation between a teacher's generation cohort and any of the constructs of student engagement.

The second analysis was to determine if there was a relationship between a teacher's generation and his or her teaching style. Results of the Pearson statistical test are shown in Table 7.

Table 7

Relationship Between Teacher Generation Cohort and Teaching Style

Teaching Style	Teacher Generation	Relative Strength
Expert	-0.19	None
Formal Authority	-0.04	None
Personal Model	0.13	None
Facilitator	0.05	None
Delegator	*-0.20*	Low

As Table 7 indicates, there is only one weak or inverse low relationship between generation and teaching style according to the Safrit and Wood (1995) scale of significance. The remainder of the variables indicated no relationship between Teacher Generation and Teaching Style.

The third analysis, as shown in Table 8, determined whether there was a relationship between the constructs of student engagement and styles of teaching.

Table 8

The Relationship Between Student Engagement and Teaching Style

Engagement Constructs	Expert	Formal Authority	Personal Model	Facilitator	Delegator
Personalization	-0.07	-0.06	0.05	0.18	0.15
Diversity	-0.14	-0.01	0.02	0.19	0.18
Efficacy	-0.07	-0.05	0.02	0.11	0.10
Student Centered	-0.08	-0.05	0.03	0.16	0.15
Academics	-0.05	-0.04	0.12	*0.24*	*0.20*
Instruction	-0.19	-0.09	0.01	*0.20*	*0.22*
Learning Support	-0.05	-0.06	0.05	0.16	0.13
Parent Involvement	-0.03	0.01	0.06	0.09	0.05
Post-secondary	-0.05	0.00	0.11	*0.22*	0.17

Results indicate that there is a weak or low relationship between the Facilitator teaching style and three student engagement constructs: Rigorous Academic Programming, Instructional Practice, and the awareness of Post-secondary Options. There is also a weak or low relationship between the Delegator teaching style and Rigorous Academic Programming and Instructional Practice.

Hypotheses

Based upon the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value statistical analyses, the researcher accepts the first null hypothesis.

1. There will be no relationship between the generation a teacher was born into and each construct of student engagement in ninth and tenth grade students.

However, based upon the same scale of significance, the researcher fails to accept the final two null hypotheses.

2. There is no relationship between the generation a teacher was born into and each teaching style.

3. There will be no relationship between each teaching style and each construct of student engagement in ninth and tenth grade students.

Summary

Findings and analysis of data gathered in this study are discussed in Chapter IV. Surveys were administered to participating teachers and students, and responses were analyzed using the OMR Remark software program and Microsoft Excel to determine relationships between three independent variables. Descriptive statistics and the Pearson Product-Moment Correlation Coefficient statistical tests were employed. The results indicated clearly that there is not a relationship between the generation a teacher was born into and any of the constructs of student engagement. However, there was a weak, inverse relationship between the Delegator teaching style and teacher generation, and there was also a weak relationship between The Facilitator teaching style and Rigorous Academic Programming, Instructional Practice and the awareness of Post-secondary

opportunities. In addition, there was a weak relationship between the Delegator teaching style and the Rigorous Academic Programming and Instructional Practice. A more detailed summary, implication of the findings, and recommendations for further research are presented in Chapter V.

CHAPTER V – SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Many changes are taking place in the external and internal environments of school systems (Jacobs, 2010). This study was centered on three phenomena. The first is the move from the Industrialization Age to the Information Age. Teachers across America are attempting to prepare students for careers that do not currently exist (Dede, 2005). Second, more generations of workers are found in all industries, including schools (Coates, 2007), and last, teachers of various generations are working with students who have different beliefs and value systems than their teachers (Kambon, 2008).

One of the attributes of the Information Age is that students are using technology tools on a more consistent basis and with more proficiency than any other generation (Oblinger, 2003). They are also exposed to an incredible amount of information that is not confined to the pages of a textbook or the words of a teacher (Dede, 2005). However, extensive research indicated that teachers still do impact student learning (Marzano, 2010).

Today's teachers were born in differing generations and have had a wide range of experiences. Many schools include up to four generations of teachers and students learning together (Marx, 2006). Each generation has had its own set of belief and value systems. A generational cohort is defined by the major events that helped to shape its defining characteristics. Research has suggested that each generation has learned and been engaged differently in learning experiences due to the events and life experiences of the times (Coates, 2007).

Many factors have been determined to affect student engagement – teacher-student relationship, academic rigor, teaching style, and so on (Renzulli & Reis, 2008). There has been little research, however, to determine if there is a relationship between the generation a teacher was born into and student engagement. There is also limited research about the relationship between the generation a teacher was born into and teaching style.

There are suggestions that an individual's beliefs and values do shape the foundation of his or her behavior (Yero, 2002). Additional research has characterized learning styles among each generation (Coates, 2007). It is also stated that what teachers believe about school and learning comes from their own experiences as students (Yero, 2002).

The purpose of this study was to determine a relationship between teacher generation and teaching style, teaching style and student engagement, and teacher generation and student engagement. Furthermore, the researcher wished to gain a better understanding of student engagement as it may or may not be related to teacher generation and teaching style. This study investigated the characteristics of three generations – teachers from the baby boomer generation and Generation X, and both students and teachers included in Generation Y. Teaching style and several constructs of student engagement were also investigated.

Review of Methodology

This study was a non-experimental, quantitative, correlational design to determine the relationship, if any, between the three variables of generational cohorts, teaching

style, and student engagement. Five large Michigan high schools participated in this study, including Traverse City West Senior High School, Traverse City Central High School, Grand Rapids Creston High School, Muskegon High School, and Marquette High School. Fifty-three math and English teachers of ninth and tenth grade students completed the Grasha Reichmann Teaching Style Inventory and self-reported to which generational cohort they belonged. Approximately 2600 ninth and tenth grade math and English students in classes of the participating teachers participated in the Coalition of Essential Schools survey to measure nine different constructs of student engagement.

Pearson coefficient *r* values were calculated and examined to determine if there was a relationship between the generation a teacher was born into and five different teaching styles, the generation a teacher was born into and each of the nine constructs of student engagement, and each teaching style and construct of student engagement. The Safrit and Wood Scale of Coefficients was used to determine the strength of each correlation (Safrit & Wood, 1995).

Research Questions, Conclusions, and Discussion of Results

The results of this study led to conclusions, which address the research questions and null hypotheses.

Q 1. Is there a relationship between the generation a teacher was born into and specific constructs of student engagement in ninth and tenth grade students? The constructs of student engagement include the following: Personalization, Valuing Diversity, Efficacy Beliefs, Student-Centered Culture, Rigorous Academic Program,

Instructional Practice, Support for Learning, Parent Involvement, and Post-Secondary Options (CES, 2007).

Each generation's personal characteristics and value system generation is thought to have been shaped by their shared experiences (Coates, 2007; Oblinger, 2003). Yero (2002) suggested that a person's behavior stems from the foundation of his or her value system. He also suggested that a teacher's belief and value system determines priorities set by a teacher in his or her classroom. Therefore, the researcher studied the relationship between generation and teaching style, given that each generation has defining characteristics (Coates, 2007; Oblinger, 2003).

Conclusion – No relationships were found between the generation a teacher was born into and the specified constructs of student engagement in ninth and tenth grade students in math and English classes as defined by the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value. The null hypothesis was thus accepted.

Discussion – Not finding a relationship adds to the knowledge that there is much more to effective teaching then the age of the teacher. Charlotte Danielson and others have outlined elements of good teaching, none of which indicate that when a teacher is born is a factor (Tomlinson, 2010). Effective teaching is having the knowledge and a desire to work with students and content. Many effective educators also have a passion for the learning and are lifelong learners themselves. All teachers regardless of age or experience need to learn and grow with the students and society (Tomlinson, 2010). The technology and tools students use today have evolved (Kambon, 2008). This requires an evolution of our teaching practice for all.

On the other hand, failure to show statistical significance does not mean there is no relationship (Hinkle et al., 1988; Isaac & Michael, 1981; McMillan, 1996). One reason for the lack of correlation could be the number of teachers corresponding to each generational cohort. Of the 53 teachers who participated in the survey, the fewest teachers (8) identified with the Generation Y cohort. The highest number of respondents in a generation cohort was 29 teachers in Generation X. The number of baby boomers who responded was 16. The statistical analysis might have produced a different outcome if there were even numbers of respondents in each generation cohort. Overall, the number of teacher respondents represented a relatively low sample of the total teaching population in the five participating high schools.

What also might account for the lack of relationship was the span of years within each generation cohort. There was a span of 17 years in the baby boomer cohort, 15 years in the Generation X cohort, and 20 years in the Generation Y cohort. If data were separated within the cohort groups to a span of five years or less, the analysis might be different.

Q 2. Is there a relationship between the generation a teacher was born into and specific teaching styles? The teaching styles include the following: Expert, Formal Authority, Personal Model, Facilitator, and Delegator.

Conclusions – No relationship was found between the generation a teacher was born into and three of the identified teaching styles – Expert, Formal Authority, and Personal Model as defined by the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value; the null hypothesis was accepted regarding those teaching styles.

However, there was an inverse, low relationship between teacher generation and the Delegator teaching style (*r* = -0.20). Because the correlation was so low, the researcher was not able to determine which specific generation caused the inverse relationship. Thus the null hypothesis was rejected for the relationship between teacher generation and this specific teaching style.

Discussion – The review of research suggested that a teacher's value system helps to shape the manner in which he or she teaches (Yero, 2002). Coates (2007) hypothesized that teachers teach in a manner similar to the way in which they learned. She further identified the differences in learning styles of each generation. The baby boomer generation is characterized to learn in a traditional manner in which information is given to the learner in a structured classroom where skill-building and isolated concepts were taught (Coates, 2007). This sounds much like they were taught with a formal authoritative or expert teaching style. However, the traditional classroom didn't fit the Generation X learner; they thrived in a more personalized learning environment. Results in this study indicated a low, inverse relationship between teacher generation and the delegator teaching style. However, the analysis is inconclusive since it is not clear which teacher generation caused the inverse relationship.

What might account for the low relationship could be the insufficient variation in the scores identifying teaching style to allow for a relationship to reveal itself (Hinkle et al., 1988). The survey was based upon a 4-point Likert scale. The teachers self-reported and received a score for each teaching style. It is possible that teachers answered questions the way they thought they should. One teacher didn't have a strong preponderance to one style or another. Teachers received a score from 1.0 to 4.0 on each

of the five teaching styles. "If the range is restricted, the variability is reduced, and without adequate variability, the correlation will be low" (McMillan, 1996, p. 179).

Q 3. Is there a relationship between each teaching style and each construct of student engagement in ninth and tenth grade students?

Conclusions – No relationship was found between the Expert, Formal Authority and Personal Model teaching styles and any identified construct of student engagement, as defined by the Safrit and Wood (1995) scale of correlation coefficients with a 0.05 significance value.

However, there was a low relationship between the Facilitator teaching style and the student engagement constructs of Instructional Practice ($r = 0.20$), Rigorous Academic Program (r = 0.24) and being aware of Post-secondary Options ($r = 0.22$).

There were also low relationships discovered between the Delegator teaching style and the student engagement constructs of Instructional Practice ($r = 0.22$) and Rigorous Academic Program ($r = 0.20$). Thus, the null hypothesis was rejected due to the relationships found between the facilitator and delegator teaching styles and these student engagement constructs.

Discussion

The correlational analysis of results to determine if a relationship existed between student engagement and teaching styles produced a few interesting trends. The statistical analysis showed that, overall, the coefficient r values were higher for the teaching styles of facilitator and delegator in all engagement constructs. Although there was not a correlation, each r was a negative value in determining a relationship between the expert and formal authority teaching style and each of the engagement constructs.

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Correlations that did show a small relationship was between the facilitator and the engagement constructs of academic rigor, instructional practice, and awareness of post-secondary options. Further, a second correlation showed a low relationship between the delegator teaching style and academic rigor and instructional practice. Because this is an exploratory study, McMillan (1996) indicated that these low correlations might need further study.

Additional Considerations

Circumstances related to this study that might have had an impact on the data analysis included the fact that all five participating high schools were part of a consortium that was awarded a federally-funded Smaller Learning Communities grant. They were in year three of a five-year grant cycle. Three major correlates of this grant, with specific goal areas under each, included personalization, improving upon academic achievement, and helping to transition students into and out of high school.

All five high schools worked closely with the Coalition of Essential Schools on a monthly basis to help define each goal area and to move forward in reaching the goal. When surveys for the present study were conducted, each school had had training in distributive leadership, critical friend groups to improve instruction, advisory planning, and helping to create a smaller learning community structure for all high school students.

A factor surrounding this study was that the Coalition of Essential School survey was given to high school students in each of these five high schools at least twice previous to the survey conducted in this study. The goals of the grant were embedded into the survey, and progress was monitored through specific survey questions. This condition may have impacted the results of this study, as there was an increased

awareness in all five high schools of these embedded goals and strategies, which included instructional practice, academic rigor, and awareness of post-secondary opportunities.

Even with the limitations, including teacher sample size and small variability of the manner in which to answer teaching style questions, six small correlations were found. This is worth further study.

Implications for Practice

This study found a low relationship between the facilitator teaching style and the three student engagement constructs of instructional practice, rigorous academic program, and being aware of post-secondary options. It also discovered a low relationship between the delegator teaching style and two student engagement constructs of instructional practice and rigorous academic program. In addition, the overall *r* values were higher in the categories of facilitator and delegator teaching styles, whereas the only negative *r* values were in the categories of expert and formal authority teaching styles. The finding of these statistical analyses might suggest implications for teachers, students, and school leaders.

The lack of correlation between generation and teaching style suggests differing and varying teaching styles regardless of when a teacher was born. Thus, there might be other variables that influence teaching style, such as years of experience and type and frequency of professional development. As was stated earlier, each of the five high schools had been working together on a grant to create smaller learning communities in each of their high schools. Teachers were undergoing professional development, which valued the constructivist approach to teaching. How much influence this professional development had on the teachers in this study is worth further exploration.

There is research indicating that teachers have a tendency to teach the manner they believed was successful for them (Merriam, Caffarella, & Baumgartner, 2007). There is also research indicating that a teacher's belief and value systems influence teaching style (Pajak, 2003). If a teacher values student voice and student autonomy, he or she will try to nurture this in a facilitative or delegatory manner.

The lack of correlation between generation and student engagement implies that other variables might encourage the engagement of students. It also might imply that teacher generation isn't influential in the manner a student wishes to engage with the content or with the teacher. Student engagement is a dynamic concept worthy of continuous exploration. Students today are receiving much more information than their teachers ever did in a myriad of ways (Dede, 2005). If teachers were open to this influx of information and technological tools regardless of which generation they were born into, they would be able to relate to the students in their classrooms.

The facilitator and delegator teaching styles might imply a higher correlation to students engaging in their academic studies and their teachers' instructional pedagogy. By definition, the facilitator teaching style is about guiding and students and encouraging them to make informed choices. The facilitative teacher wishes to consult with students and provide support and encouragement rather than direct instruction (Grasha, 1994). The delegatory teacher acts in much the same way. They differ in the way that they view themselves more of a resource person and encourage students to work independently with high autonomy (Grasha, 1994).

It is difficult to serve as an expert teacher in any one topic with the amount of information available and the manner in which it is coming at learners today. The most

effective way to wield all of this information and to help students learn is to facilitate or delegate their own learning.

Recommendations for Further Research

The consortium of five high schools in this study was part of a grant-funded program that involved goals related to student engagement constructs. This involvement could have had an impact on the analysis of data in this study. A more comprehensive study might include these high schools and other high schools that are not involved in a similar grant-funded program. A different tool could also be used to measure each of the student engagement constructs.

Further study may be warranted to explore the negative r values between each of the student engagement constructs and the expert and formal authority teaching styles. Because the only positive correlations between teaching style and student engagement were shown with a facilitator and delegator teaching style, it may prove interesting to further explore characteristics of these specific teaching styles.

In addition to the above, a more thorough study of all five teaching styles would help us better understand how to reach learners of today in this age of information. Emerging research suggests that the influx of information and technological tools insist that educational reform is inevitable (Martinez, 2010). The age of information will require teachers to respond to the learner as individuals (McCombs & Whisler, 1997). This, in turn, suggests that teachers operate with more of a facilitative teaching style encouraging them to guide, support, and coach students within their individual learning styles, needs, and interests that are relevant to the world in which they live (Joyce & Weil, 1972; McCombs & Whisler, 1997; Moore & Berry, 2010; Schlechty, 2007).

If we wish for all students to meet with success, then we need to teach differently (Moore & Berry, 2010). The importance of a teacher as a whole person must not be underestimated, as his or her experiences are critical to student learning (Joyce & Weil, 1972). Joyce and Weil (1972) also remind us that an effective teacher doesn't employ just one specific teaching style. Rather, effective teachers recognize the importance of the individual learner in totality and change their approach to meet the learners' needs (Joyce & Weil, 1972; McCombs & Whisler, 1997).

Another research idea might include taking a closer look at the learning styles of present-day students. This researcher chose not to study learning styles because most of the learning style inventories found were created over thirty years ago. There is burgeoning research indicating that students today are *wired* differently; they learn differently (Oblinger, 2003). If we wish for all students to meet with success, then we need to potentially teach differently. It should all begin, however, with knowing how effective the teaching techniques we use today are.

The research suggested could include the validity of the most recent research learning style inventory and an investigation of an assessment tool that indicates the learning style of a student to determine its effectiveness.

Other potential research might include the study of professional development for the differing generations and the manner in which it is delivered. Coates (2007) clearly outlined the learning styles and preferences of each of the generations. Research involving this knowledge might be helpful when planning for adult learners.

Looking further into the structural organization of the learning environment could be another future research area. With the amount of information on the World Wide

Web, educational resources such as textbooks have a different role in the classroom (Oblinger, 2003). With the neomillennial student's desire to work within groups that include virtual collaboration, classroom and library space could be utilized in a different manner.

Finally, an additional research proposal might explore the real reason that Generation Y teachers leave the profession. There have been multiple theories on why this happens, but very little research, making it difficult to outline a staff retention plan. Some very recent articles suggested that the phenomenon involving loss of Generation Y employees is a commonality in expectations and traits amongst all Generation Y employees across industries and professions. Research has determined that they are bright, eager, tech savvy, and need frequent validation and immediate rewards (Carey, 2008). They don't like dealing with conflicts because their parents protected them. They also have a tendency to want to work on their own time and on their own terms (Tessler, 2008.) They seek out jobs that fit their lifestyles and desires rather than choosing a career and then a lifestyle such as older generations have done. Understanding the younger generation better could give schools more insight into how to recruit and retain them in the educational field.

Summary

This chapter included a review of the purpose, methodology, and statistical analysis of the data gathered in this study, with a discussion about the conclusions, implications for practice, and recommendations for further research. Future researchers may investigate further the relationship of teacher generation and teaching style,

particularly the facilitator and delegator teaching styles. Choosing a more homogenous

teacher generation sample with a tool that has more variance in score might provide

different results. Identifying the specific factors that lead to student engagement will help

to build upon the teaching practice for the learners in our schools today.

This study offers additional avenues for exploration into the learning styles of

present-day students and ways of enhancing learning by gaining knowledge about

professional development aimed at various generations of teachers. Teaching styles,

learning styles, and their relation to the expanding learning environment is an endless

research area.

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APPENDICES

Coalition of Essential Schools Student Survey with Constructs

Coalition of Essential Schools	
(Student)	
PERSONALIZATION (Valuing Students)	
There is at least one teacher I can go to when I have a question or concern	
I feel heard by teachers and staff	
I feel safe in this school	
I feel comfortable and supported in sharing different points of view	
I feel engaged by my school work	
VALUING DIVERSITY	
My school work has helped me to think about the world through other points of view	
In academic classes, all learning styles are respected and included	
My school has students of different ability levels together in the same classroom – it doesn't "track"	
In my classes, we study and discuss issues relating to a wide range of racial and ethnic groups	
The teaching staff reflects the diversity of the student body (ethnically, socioeconomically, linguistically)	
I have courses where teachers team-teach or that have an interdisciplinary curriculum	
EFFICACY BELIEFS	
I feel I direct my own learning	
This school is fair – if I work hard I can get a good grade	
My classes have less than 25 students	
The teachers and staff believe that I can do well	

The teachers and staff believe that all students can do well	
STUDENT-CENTERED CULTURE	
Teachers, staff, and students treat each other with respect at this school	
School rules are enforced consistently and fairly	
I think that all types of students feel welcome in this school	
There is a real sense of community in this school	
Students have a real say in decisions that matter to them at this school	
RIGOROUS ACADEMIC PROGRAM	
This class has helped me learn how to write well.	
This class has helped me understand mathematics more deeply.	
My teacher wants me to understand my school work, not just memorize it.	
This class has helped me to learn how to collect, organize, and analyze information	
This class has helped me learn how to evaluate and defend my ideas and views	
My teacher's evaluations (grades, rubrics, narratives, report cards) help me to understand what I know and need to know	
INSTRUCTIONAL PRACTICE	
My teacher asks me to learn through projects or other "hands-on" activities	
We study a few topics deeply instead of covering a lot of topics	
My teacher rarely lectures in this class	
We are assessed through presentations or exhibitions rather than multiple choice tests	
My grades are based on tests that ask me to recall knowledge (such as multiple choice and fill-in-the-blank questions)	
This class uses portfolios and competency presentations to assess my learning	
SECOND CHANCE LEARNING (Support for Learning)	
My teacher helps me with my work if I need it	
My teacher knows my academic strengths and weaknesses	

The school uses its resources to support my academic success (such as in student support, library, technology)	
There are teachers/staff available to speak with my parents in their native language	
PARENT INVOLVEMENT	
My parents/guardians are very involved in the school	
My parents/guardians and teachers communicate frequently	
My parent/guardians attend parent-teacher conferences	
POST-SECONDARY OPTIONS	
This class is preparing me well for my future career choice	
This class is preparing me well for college	
I understand how what I am learning relates to the "real world" (for example, my life, my interests, my future career)	
My teacher actively encourages me to go to college	
I know what I need to do to graduate from high school and be eligible for college	
Through my school work, I work on projects that contribute to the community outside of school.	
My teacher helps me to reflect on my work and set future learning goals	

Coalition of Essential Schools Ongoing Student Survey

(As it will be given to the students)

You are invited to be in a research study on effective classroom practices. We ask that you fill out a survey of about 50 items. You will read each item, determine how you feel about the item and then respond to the item using the provided scale. These items will measure your attitudes towards school and perceptions of the classroom environment. In this survey, **we ask you to answer for your current classroom experience**. It is expected that the total time required will be about 30 minutes. This is a very important survey that will help us to understand more about how to create learning environments that meet the needs of youth.

All survey responses will be anonymous and the records will be kept private. In any report, there will be no data included that would make it possible to identify a participant. Research records will be stored securely and only the researcher will have access to the data. Your participation is voluntary and you may choose to not complete the survey at any time without penalty or negative consequence. Your informed consent to participate in the student under the conditions described is assumed by your completing the survey and submitting it to me, the researcher. **Do not complete the survey or hand it in if you do not understand or agree to these conditions.**

Use the following scale to respond to these questions (A=Almost Never True   B=Occasionally True C=Frequently True   D=Almost Always True). PLEASE USE A #2 PENCIL WHEN COMPLETING THIS SURVEY. Please circle any question that you have difficulty understanding and, if possible, note why.

Think about the CLASS you are presently attending:

1. This class is preparing me well for my future career choice.

2. This class is preparing me well for college.

3. This class has helped me learn how to write well.

4. This class has helped me understand mathematics more deeply.

5. My teacher wants me to understand my schoolwork, not just memorize it.

6. I understand how what I am learning relates to the "real world" (for example, my life, my interests, my future career).

7. My teacher uses portfolios and competency presentations to assess my learning.

8. I feel engaged by my schoolwork.

9. My teacher asks me to learn through projects or other "hands-on" activities.

10. I feel I direct my own learning.

11. This course is where teachers team-teach or that have an interdisciplinary curriculum (a combination of two or more subjects, such as science and English, or a Humanities class).

12. We study a few topics deeply instead of covering a lot of topics.

13. My teacher helps me to reflect on my work and set future learning goals.

14. This class has helped me to learn how to collect, organize, and analyze information.

15. This class has helped me learn how to evaluate and defend my ideas and views

16. My teacher rarely lectures in this class.

17. My teacher's evaluations (grades, rubrics, narratives, report cards) help me to understand what I know and need to know.

18. We are assessed through presentations or exhibitions rather than multiple-choice tests.

19 My grades are based on tests that ask me to recall knowledge (such as multiple choice and fill-in-the-blank questions).

20. My schoolwork has helped me to think about the world through other points of view (perspectives).

21. In this class, all learning styles are respected and included.

22. My school has students of different ability levels together in the same classroom--the school does not

'track' or group students into classes based on students' achievement levels.

23. In my class, we study and discuss issues relating to a wide range of racial and ethnic groups.

24. This class is fair - if I work hard I can get a good grade.

Think about the TEACHER in this classroom:

25. My teacher believes that I can do well.

26. My teacher believes that all students can do well

27. My teacher actively encourages me to go to college.

28. My teacher helps me with my work if I need it.

29. I can go to this teacher when I have a question or concern.

30. This teacher and students treat each other with respect in this class.

31. I feel heard by my teacher.

32. My parents/guardians and teacher communicate frequently.

33. The teaching staff reflects the diversity of the student body (ethnically, socio-economically,

linguistically).

Think about the other STUDENTS or OTHER ASPECTS of your classroom:

34. I feel safe in this classroom.

35. I feel comfortable and supported in sharing different points of view.

36. Classroom rules are enforced consistently and fairly.

37. I think that all types of students feel welcome in this classroom.

38. There is a real sense of community.

39. My teacher knows my academic strengths and weaknesses.

40. The school uses its resources to support my academic success (such as in student support, library, technology).

41. This class has less than 25 students.

42. I know what I need to do to graduate from high school and be eligible for college.

43. My parents/guardians are very involved in the school.

44. Through my schoolwork, I work on projects that contribute to the community outside of school.

45. There are teachers/staff available to speak with my parents in their native language.

46. Students have a real say in decisions that matter to them in this classroom.

47. My parents/guardians attend parent-teacher conferences.

A=Almost Never True   B=Occasionally True   C=Frequently True   D=Almost Always True

Think about the CLASS you are presently attending:

1.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

2   Ⓐ   Ⓑ   Ⓒ   Ⓓ

3.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

4.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

5.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

6.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

7.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

8.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

9.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

10.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

11.   Ⓐ   Ⓑ   Ⓒ   Ⓓ

12. Ⓐ Ⓑ Ⓒ Ⓓ

13. Ⓐ Ⓑ Ⓒ Ⓓ

14. Ⓐ Ⓑ Ⓒ Ⓓ

15. Ⓐ Ⓑ Ⓒ Ⓓ

16. Ⓐ Ⓑ Ⓒ Ⓓ

17. Ⓐ Ⓑ Ⓒ Ⓓ

18. Ⓐ Ⓑ Ⓒ Ⓓ

19. Ⓐ Ⓑ Ⓒ Ⓓ

20. Ⓐ Ⓑ Ⓒ Ⓓ

21. Ⓐ Ⓑ Ⓒ Ⓓ

22. Ⓐ Ⓑ Ⓒ Ⓓ

23. Ⓐ Ⓑ Ⓒ Ⓓ

24. Ⓐ Ⓑ Ⓒ Ⓓ

Think about the TEACHER in this classroom:

25. Ⓐ Ⓑ Ⓒ Ⓓ

26. Ⓐ Ⓑ Ⓒ Ⓓ

27. Ⓐ Ⓑ Ⓒ Ⓓ

28. Ⓐ Ⓑ Ⓒ Ⓓ

29. Ⓐ Ⓑ Ⓒ Ⓓ

30. Ⓐ Ⓑ Ⓒ Ⓓ

31. Ⓐ Ⓑ Ⓒ Ⓓ

32. Ⓐ Ⓑ Ⓒ Ⓓ

33. Ⓐ Ⓑ Ⓒ Ⓓ

Think about the other STUDENTS or OTHER ASPECTS of your classroom:

34. (A) (B) (C) (D)

35. (A) (B) (C) (D)

36. (A) (B) (C) (D)

37. (A) (B) (C) (D)

38. (A) (B) (C) (D)

39. (A) (B) (C) (D)

40. (A) (B) (C) (D)

41. (A) (B) (C) (D)

42. (A) (B) (C) (D)

43. (A) (B) (C) (D)

44. (A) (B) (C) (D)

45. (A) (B) (C) (D)

46. (A) (B) (C) (D)

47. (A) (B) (C) (D)

48. (A) (B) (C) (D)

49. (A) (B) (C) (D)

50. (A) (B) (C) (D)

1. **Grade**:

   9   10   11   12   Ungraded

   O   O   O   O   O

2. **Gender**:

   M   F

   O   O

Grasha-Riechmann Style Survey

Teaching Style Survey
(Grasha-Riechmann)

The following is a Grasha-Riechmann teaching style survey. Respond to each of the items below in

terms of how you teach.

If you teach some courses differently than others, respond in terms only of one specific course. Fill out
another survey for the course(s) that you teach in a different style.

Try to answer as honestly and as objectively as you can.

Resist the temptation to respond as you believe you should or ought to think or behave, or in terms of
what you believe is the expected or proper thing to do.

Respond to questions below by using the following rating scale:

1 = strongly disagree | 2 = moderately disagree | 3 = undecided |

4 = moderately agree | 5 = strongly agree

1. Facts, concepts, and principles are the most important things that students should acquire.	**Response:** ☐	**1 = strongly disagree** 2 = moderately disagree
2. I set high standards for students in this class..	**Response:** ☐	3 = undecided
3. What I say and do models appropriate ways for students to think about issues in the content.	**Response:** ☐	4 = moderately agree 5 = strongly agree

4.	My teaching goals and methods address a variety of student learning styles.	**Response:** ☐
5.	Students typically work on course projects alone with little supervision from me.	**Response:** ☐
6.	Sharing my knowledge and expertise with students is very important to me.	**Response:** ☐
7.	I give students negative feedback when their performance is unsatisfactory.	**Response:** ☐
8.	Activities in this class encourage students to develop their own ideas about content issues.	**Response:** ☐
9.	I spend time consulting with students on how to improve their work on individual and/or group projects.	**Response:** ☐
10.	Activities in this class encourage students to develop their own ideas about content issues.	**Response:** ☐
11.	What I have to say about a topic is important for students to acquire a broader perspective on the issues in that area.	**Response:** ☐
12.	Students would describe my standards and expectations as somewhat strict and rigid.	**Response:** ☐
13.	I typically show students how and what to do in order to master course content.	**Response:** ☐

1 = strongly disagree

2 = moderately disagree

3 = undecided

4 = moderately agree

5 = strongly agree

1 = strongly disagree

2 = moderately disagree

3 = undecided

4 = moderately agree

5 = strongly agree

14.	Small group discussions are employed to help students develop their ability to think critically.	Response: ☐
15.	Students design one of more self-directed learning experiences.	Response: ☐
16.	I want students to leave this course well prepared for further work in this area.	Response: ☐
17.	It is my responsibility to define what students must learn and how they should learn it.	Response: ☐
18.	Examples from my personal experiences often are used to illustate points about the material.	Response: ☐
19.	I guide students' work on course projects by asking questions, exploring options, and suggesting alternative ways to do things.	Response: ☐
20.	Developing the ability of students to think and work independently is an important goal.	Response: ☐

1 = strongly disagree | 2 = moderately disagree | 3 = undecided |
4 = moderately agree | 5 = strongly agree

21.	Lecturing is a significant part of how I teach each of the class sessions.	Response: ☐	1 = strongly disagree
22.	I provide very clear guidelines for how I want tasks	Response:	2 = moderately

	completed in this course.	☐	
23.	I often show students how they can use various principles and concepts.	**Response:** ☐	
24.	Course activities encourage students to take initiative and responsibility for their learning.	**Response:** ☐	
25.	Students take responsibility for teaching part of the class sessions.	**Response:** ☐	
26.	My expertise is typically used to resolve disagreements about content issues.	**Response:** ☐	
27.	This course has very specific goals and objectives that I want to accomplish.	**Response:** ☐	1 = strongly disagree 2 = moderately disagree 3 = undecided 4 = moderately agree 5 = strongly agree
28.	Students receive frequent verbal and/or written comments on their performance.	**Response:** ☐	
29.	I solicit student advice about how and what to teach in this course.	**Response:** ☐	
30.	Students set their own pace for completing independent and/or group projects.	**Response:** ☐	
31.	Students might describe me as a "storehouse of knowledge" who dispenses the fact, principles, and concepts they need.	**Response:** ☐	
32.	My expectations for what I want students to do in this class are clearly defined in the syllabus.	**Response:** ☐	1 = strongly disagree

	are clearly defined in the syllabus.	☐
33.	Eventually, many students begin to think like me about course content.	**Response:** ☐
34.	Students can make choices among activities in order to complete course requirements.	**Response:** ☐
35.	My approach to teaching is similar to a manager of a work group who delegates tasks and responsibilities to subordinates.	**Response:** ☐
36.	There is more material in this course than I have time available to cover it.	**Response:** ☐
37.	My standards and expectations help students develop the discipline the need to learn.	**Response:** ☐
38.	Students might describe me as a "coach" who works closely with someone to correct problems in how they think and behave.	**Response:** ☐
39.	I give students a lot of personal support and encouragement to do well in this course.	**Response:** ☐
40.	I assume the role of a resource person who is available to students whenever they need help.	**Response:** ☐

2 = moderately disagree

3 = undecided

4 = moderately agree

5 = strongly agree

Click "Score Survey " and your results will appear below.

The results of your teaching style survey are as follows:

Bottom of Form

expert	formalauthority	personalmodel	facilitator	delegator

coupon@longleaf.r | ../httpdocs/data/tea | Teaching Style Sur

Please provide the following information.

Discipline:

Level of Course:

Academic Rank:

Race:

Gender:

If you are filling out this survey more than once, because you teach some courses differently than others, provide the following identifying information:

Please invent a 6-digit number and enter that same number on each of your multiple surveys. Don't use the date. empty

OR

Put your name here: empty

That will make it possible for me to discuss with you whether the results seem meaningful.

Appendix D

Informed Letter of Consent for Students

Date_____.

 Dear Student,

My name is Ms. Cathy Meyer, and I am a doctoral student in the Department of Educational Leadership at Eastern Michigan University. As part of my research I am undertaking a quantitative study during the spring of 2010. My advisor, Dr. Ronald Williamson from Eastern Michigan University will be co-researcher. This letter is to invite you to participate in this study.

This study will determine if there is a relationship between the generation a teacher was born into, his/her teaching style, and student engagement. There are many reasons for which you are interested in your classes at school. I wish to better understand what keeps you interested. To determine your level of interest or engagement, the Coalition of Essential Schools' survey will be given, which you have seen and taken before for different purposes.

If you agree to participate in this study, you will be asked to complete this 50-question survey. It should take no more than thirty minutes to complete. I will be asking the same of 9th and 10th grade students in six large high schools across the state of Michigan. All results will be kept confidential and each survey will be kept anonymous. You do not need to write your name anywhere on the survey. The surveys will be electronically scanned for data analysis without names or any other way to identify you.

There will not be any foreseeable risks to you by participating in this study, nor is there any direct benefit. However, your participation will be helpful in determining if there is a relationship between the variables. If there is, then the information could be helpful in teacher learning as well as improving upon your student engagement.

I wish you to understand the following:

- Your participation in this study is strictly voluntary.
- There will be no penalty if you choose to not participate.
- If you do choose to participate and wish to withdraw at any time, you may do so without negative consequence.
- All participants will remain anonymous, and there will not be any identifiable information available to the reader.
- Your agreement to participate is assumed by your completing the survey and submitting it to me.
- **Do not complete the survey or hand it in if you do not understand or agree to these conditions.**

The goal is to have the study completed by the end of the 2009-2010 school year. If you have any questions, concerns, or would like more information, you may reach me at meyerca@tcaps.net or (231) 933-7591. You may also contact my dissertation advisor, Dr. Ronald Williamson at rwilliams1@emich.edu.

This research proposal and informed consent document has been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use between …. And …. If you have any questions about the approval process, please contact Dr. Deb de Laski-Smith, Interim Dean of the Graduate School and Administrative Co-chair of UHSRC at (734) 487-0002 or at human.subjects@emich.edu.

I would like to thank you for your consideration of my request.

Respectfully,

Catherine L. Meyer-Looze

<center>**Appendix E**</center>

<center>**Informed Letter of Consent for Teachers**</center>

Date_____.

Dear_____,

I am a doctoral candidate in the Department of Educational Leadership at Eastern Michigan University. As part of my research I am undertaking a quantitative study during the spring of 2010. My advisor, Dr. Ronald Williamson from Eastern Michigan University will be co-researcher. This letter is to invite you to participate in this study.

For many reasons, many industries including education have seen multiple generations of people working and learning together. This has sparked more research into the differing generations. A generational cohort of people is not only defined by the years they were born. They are also defined by the experiences between those years such as the Depression, World War II or the attack on the World Trade Center on 9/11. It is believed that our experiences help to shape our belief and value systems, which also differ in each generational cohort. There is additional research stating that generational indicators are cyclical. Similarities are proving to be found between the Neo-Millennial generation or those students born after 2000 and the Veteran Generation born 1920 – 1932 because they were born at the turn of the century and are facing some similar experiences such as the move from the Agricultural Industry to the Industrial Age and the Industrial Age to the Informational Age.

This study will determine if there is a relationship between the generation a teacher was born into, his/her teaching style, and student engagement. Teaching style may or may not be shaped by a teacher's beliefs and value systems, which is why this study will be looking at that piece of data. To determine teaching style, the Grasha-Riechmann survey will be given. It is a 40-question survey. The answers result into determining between five teaching styles to include the following: expert, formal authority, personal model, facilitator, and delegator.

If you agree to participate in this study, you will be asked to complete this survey once. It should take no more than thirty minutes to complete. I will be asking the same of 9th and 10th grade teachers in six comprehensive high schools across the state of Michigan. All results will be kept confidential and each piece of data will be kept anonymous. The information collected will be made available to anyone outside of this study. The surveys will be electronically scanned for data analysis.

There will not be any foreseeable risks to you by participating in this study, nor is there any direct benefit for your participation. However, your participation will be helpful in determining if there is a relationship between the variables. If there is, then the information could be helpful in outlining professional development practices as well as improving upon student engagement.

Your participation in this study is strictly voluntary, and there will be no penalty if you choose to not participate. If you do choose to participate and wish to withdraw at any time, you may do so without negative consequence. The results of this study will be presented in aggregate form only. All participants will remain anonymous, and there will not be any identifiable information available to the reader. Regardless of your decision to participate, a summary of my findings may be available to you upon request. I can be contacted at meyerca@tcaps.net or (231) 933-7591. The goal is to have the study completed by the end of the 2009-2010 school year. If you have any questions or concerns, you may reach me at the contact information above. You may also contact my dissertation advisor, Dr. Ronald Williamson at rwilliams1@emich.edu.

This research proposal and informed consent document has been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use between …. And …. If you have any questions about the approval process, please contact Dr. Deb de Laski-Smith, Interim Dean of the Graduate School and Administrative Co-chair of UHSRC at (734) 487-0002 or at human.subjects@emich.edu.

I would like to thank you for your consideration of my request. Your informed consent to participate in the study under the conditions described is assumed by your completing the survey and submitting it to me, the researcher. Do not complete the survey or hand it in if you do not understand or agree to these conditions.

Respectfully,

Catherine L. Meyer-Looze

Appendix F

Human Subjects Approval

Eastern Michigan University
University Human Subjects Review Committee (UHSRC)
REQUEST FOR HUMAN SUBJECTS APPROVAL

Use this form for initial approvals and major protocol modifications.
For minor changes, please use the *Minor Modification* form.
To renew an approval after one year, please use the *Continuation Form*.

CHECK ONE
☐ **FACULTY/STAFF**   ☒ **DOCTORAL**   ☐**MASTER'S**   ☐UG Student

PROJECT TYPE – STUDENTS

☒ Dissertation   ☐ Master's Thesis   ☐GR Project   ☐ Honor's Thesis   ☐ UG Project

FACULTY/STAFF/DOCTORAL researchers should submit this completed form and the proposal with all required elements as email attachments to human.subjects@emich.edu. Also, send one hard copy of signed original approval form with proposal and all required elements to: Human Subjects Review Committee, 200 Boone Hall, Eastern Michigan University, Ypsilanti, MI 48197 (734.487.0042).

MASTER'S AND UNDERGRADUATE STUDENT researchers conducting minimal risk undergraduate or graduate theses/projects should submit them to the appropriate college-level committee for the CHHS, 206 Marshall; COB, 473 Owen; COE, 310 Porter; COT, 150 Sill or see the colleges' websites for submission details. **College of Arts and Science** projects should be sent by email attachment to human.subjects@emich.edu with paper copy going to CAS, 411 Pray Harrold. **Master's level research that is above minimal risk should be submitted to the college committee and then it will be directed to the UHSRC for review.**

Date Submitted: ___January 3, 2010___

Title of Project ___An examination of the relationship between the generation a teacher is born into, teaching and high school student engagement___

Principal Investigator ___Catherine L. Meyer-Looze___

Department ___Graduate Department of Education - Leadership and Counseling___

Phone __(231) 933-7591__ Fax __(231) 933-7506___ Email ___meyerca@tcaps.net___

Co-PI/Project Director _____

If a **student project**, list faculty ___Dr. Ronald Williamson, Dr. Jaclynn Tracy, Dr. Barbara Bleyaert, and Dr. Murali Nair___

Signature of faculty sponsor_____

Student number __E00456318__

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Appendix G – Approval for Participation

Marquette High School

1674 Bannister Road
Traverse City, Michigan 49684

February 14, 2010

Marquette High School
1203 West Fair Avenue
Marquette, Michigan 49855

Dear Mr. Anthony:

I would like to thank you in getting your numbers and information to me as well as agreeing to participate in my research study. However, I failed to get one thing from you.

If you are still willing to participate in this study, which will require me to survey your 9th and 10th grade students and teachers, I need you to reply that you are, indeed, willing.

I am including a brief summary of my research study. If you would like to read the full proposal, please let me know, and I will send it to you. For now, please just reply with a "yes, we are willing to be a part of your study" along with your signature at the bottom of this letter.

I thank you very much!

Respectfully,

Catherine L. Meyer-Looze
Assistant Principal
Traverse City West Senior High School

_____

____ Yes, Marquette High School is willing to be a part of the above study.

2/19/10

Signature

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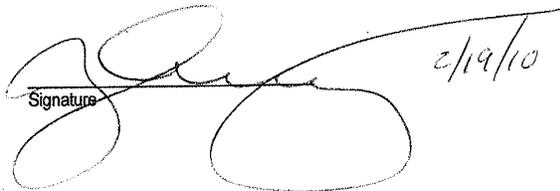
Appendix H – Approval for Participation

Muskegon High School

1674 Bannister Road
Traverse City, Michigan 49684

February 14, 2010

Muskegon High School
80 West Southern Avenue
Muskegon, Michigan 49441

Dear Mr. Lewis:

I would like to thank you in getting your numbers and information to me as well as agreeing to participate in my research study. However, I failed to get one thing from you.

If you are still willing to participate in this study, which will require me to survey your 9th and 10th grade students and teachers, I need you to reply that you are, indeed, willing.

I am including a brief summary of my research study. If you would like to read the full proposal, please let me know, and I will send it to you. For now, please just reply with a "yes, we are willing to be a part of your study" along with your signature at the bottom of this letter.

I thank you very much!

Respectfully,

Catherine L. Meyer-Looze
Assistant Principal
Traverse City West Senior High School

_____

____✓____ Yes, Muskegon High School is willing to be a part of the above study.
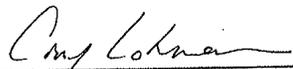
Signature

Appendix I – Approval for Participation

Grand Rapids Union High School

1674 Bannister Road
Traverse City, Michigan 49684

February 14, 2010

Grand Rapids Union High School
1800 Tremont Boulevard, NW
Grand Rapids, Michigan 49504

Dear Mr. Shalhoup:

I would like to thank you in getting your numbers and information to me as well as agreeing to participate in my research study. However, I failed to get one thing from you.

If you are still willing to participate in this study, which will require me to survey your 9th and 10th grade students and teachers, I need you to reply that you are, indeed, willing.

I am including a brief summary of my research study. If you would like to read the full proposal, please let me know, and I will send it to you. For now, please just reply with a "yes, we are willing to be a part of your study" along with your signature at the bottom of this letter.

I thank you very much!

Respectfully,

Catherine L. Meyer-Looze
Assistant Principal
Traverse City West Senior High School

_____

_X_ Yes, Grand Rapids Union High School is willing to be a part of the above study.

Signature

Appendix J – Approval for Participation

Traverse City West Senior High School

1674 Bannister Road
Traverse City, Michigan 49684

February 14, 2010

Traverse West Senior High School
Traverse City, Michigan 49684

Dear Mr. Tibaldi:

I would like to thank you in getting your numbers and information to me as well as agreeing to participate in my research study. However, I failed to get one thing from you.

If you are still willing to participate in this study, which will require me to survey your 9th and 10th grade students and teachers, I need you to reply that you are, indeed, willing.

I am including a brief summary of my research study. If you would like to read the full proposal, please let me know, and I will send it to you. For now, please just reply with a "yes, we are willing to be a part of your study" along with your signature at the bottom of this letter.

I thank you very much!

Respectfully,

Catherine L. Meyer-Looze
Assistant Principal
Traverse City West Senior High School

_____

_X_ Yes, Traverse City West Senior High School is willing to be a part of the above study.

_____
Signature

Appendix K – Approval for Participation

Traverse City Central High School

1674 Bannister Road
Traverse City, Michigan 49684

February 14, 2010

Traverse City Central High School
Traverse City, Michigan

Dear Mr. Vandermolen:

I would like to thank you in getting your numbers and information to me as well as agreeing to participate in my research study. However, I failed to get one thing from you.

If you are still willing to participate in this study, which will require me to survey your 9th and 10th grade students and teachers, I need you to reply that you are, indeed, willing.

I am including a brief summary of my research study. If you would like to read the full proposal, please let me know, and I will send it to you. For now, please just reply with a "yes, we are willing to be a part of your study" along with your signature at the bottom of this letter.

I thank you very much!

Respectfully,

Catherine L. Meyer-Looze
Assistant Principal
Traverse City West Senior High School

_____

X___ Yes, Traverse City Central High School is willing to be a part of the above study.

Signature