Integrating Choice in a Differentiated History Class

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Abstract

Educators in secondary heterogeneously grouped classrooms consistently experience the unique challenge of accommodating a wide-range of diverse learners influenced by a number of factors within the context of a state driven high stakes testing culture posed by the accountability movement in the United States. In light of this problem of practice, this study examines the efficacy of an instructional model combining two instructional strategies: student choice and differentiated instruction. As the literature review indicates, both strategies influence positive student outcomes. However, the degree to which choice can benefit student learning in a differentiated secondary history classroom has not specifically been investigated. This study employs a mixed-methods switched replication research design to determine whether choice can significantly impact both student engagement and learning in the classroom. Student assessments are compared in a choice and no-choice conditions to examine the relationships between choice, student engagement and student learning. Field notes and focus-group interviews with students are reviewed to identify both teacher and student perspectives on how choice impacts student engagement and learning. Quantitative results indicated students’ assessment and activity scores were higher in the no-choice context, no significant difference existed between assessment or activity scores in the choice and no-choice context according to an analysis of covariance (ANCOVA), students most often chose the graphic organizer activity, and students’ overall mean scores on all assessments and activities were above average regardless of the condition. Qualitative results showed the choice context increased students’ engagement and access to learning as well as more directed inquiry, academic rigor, engagement in learning, and focus on assigned task while students in the no-choice condition required disciplinary action and redirection from the instructor.

Keywords: Differentiated Instruction, choice, student engagement, student learning, and motivation.
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Chapter I: Introduction

Problem of Practice and Significance

Educators in secondary heterogeneously grouped classrooms experience difficulty accommodating a wide range of diverse learners influenced by a number of factors, including race, gender, language, economics, learning styles, learner preference, interest, motivation, learning abilities, and learning disabilities (McTighe & Tomlinson, 2006). Such diverse learners enter the classroom with not only specific individual needs, but also combinations of these influential factors that affect their achievement outcomes. Instructors within this context are left to identify all the solitary and combined individual accommodations for every student in their classroom and develop activities serving the dual purpose of meeting individual needs and providing a pedagogical avenue to learn the material successfully.

Adding complexity to this difficulty are state driven high stakes testing emerging from No Child Left Behind (NCLB) legislation, forcing districts across the nation to ensure all students demonstrate academic proficiency on these standardized assessments. In secondary social study classrooms the struggle is enhanced further because of the nature of the subject. Social studies is a discipline grounded in cultural, social, abstract, open-ended concepts, and the communication of ideas in any given historical or present-day context (Alexander-Shea, 2011). Furthermore, social studies teachers have the responsibility of educating students with the knowledge, skills, attitudes, and values essential for becoming a participating citizen in American democracy (Bailey, Hollifield, & Shaw, 2006). Currently in Massachusetts, no standardized test has been implemented to measure the performance of secondary students in social studies due to budget constrictions; however, social studies advocates have been pushing to stop this delay since 2009 and a high stakes test is on the horizon (Vaznis, 2009, Feb. 25).
The challenge of accommodating the wide-range of diverse learner needs within the context of a secondary social studies classroom with pressure from standardized testing is a unique and difficult problem of practice that is addressed through this research.

**Differentiated instruction and choice.** Over the past twenty years, differentiated instruction (DI) has been used by numerous educators as an instructional innovation to meet the demands associated with this problem of practice and accommodate the needs of a wide range of diverse learners. Though educators and scholars alike have expressed the effectiveness of DI, practitioner perceptions remain ambivalent with respect to understanding appropriate implementation (Brighton, Brimijoin, Callahan, Conover, Hertberg, Moon, Reynolds & Tomlinson, 2003). Furthermore, research suggests most scholars have neglected to study DI from a collective standpoint and examine it as an educational process (Roe, 2010).

The use of choice in the classroom has also demonstrated a number of positive impacts on student achievement. Research on choice in the classroom has examined autonomy support (Black & Deci, 2000), collaborative learning (Cianni, Summers, Easter, & Sheldon, 2008), autonomy and individual difference (Grolnick & Ryan, 1987), and classroom instruction (Cooper, Patall, & Wynn, 2010). These studies have occurred in primary and secondary educational settings as well as institutions of higher learning. All have revealed effective strategies for improving student outcomes and could enhance instruction among the wide range of diverse learners in secondary heterogeneously grouped social studies classrooms. However, the impact of choice as a specific instructional strategy in a differentiated social studies classroom on student learning and perceived impact on student engagement has not been formally investigated.
**Significance of the Problem.** This study is significant because student engagement is the foundation for learning. Before students can actually comprehend new information, they must first engage themselves in the material. Student engagement has demonstrated positive correlations with achievement-related outcomes in high school students (Fredricks, Blumenfeld, & Paris, 2004). Therefore, in order to engage students in the learning process, educators must select the appropriate strategies to more successfully promote achievement. In heterogeneously grouped classrooms, this challenge is especially difficult because students do not have the same level of academic ability in this context. Furthermore, the instructor has the responsibility of ensuring all students meet learning objectives, yet each individual does so at a different pace based on their individual needs.

DI has been used to accommodate this educational challenge; however, it still requires the instructor to direct students to complete assignments based on their perception of student readiness, interests, and learning profiles (Landrum & McDuffie, 2010). Yet students still must respond to the instructor’s external control without determining what they perceive as a successful path for learning. The use of choice can create a genuine sense of engagement among students because they have control over their learning process. The implementation of choice has shown positive relationships with engagement, motivation, and student achievement (Fredricks, Blumenfeld, & Paris, 2004). This is why testing the combination of these two insights is a significant investigation because it could build on the understanding of what inherently motivates student engagement and, therefore, induces learning.

**Practical and Intellectual Goals**

**Practical goals.** This doctoral research design investigates the efficacy of an innovative instructional model integrating choice among differentiated activities in a secondary
heterogeneously grouped social studies classroom. The practical goal of this investigation is to determine whether choice beneficially impacts student learning and student engagement in a differentiated social studies classroom. As a social studies instructor, differentiating activities is an important part of lesson planning and maintaining student engagement. Students need to learn content knowledge while developing research and analysis skills. With a wide range of diverse learners, social studies teachers need practical strategies for simultaneously meeting lesson objectives and individual needs for learning. Providing students with the opportunity to choose what they perceive as the most successful pedagogical strategies to reach learning objectives could serve the interests of educators and learners alike. This will give students the ability to control their learning experience and, perhaps, improve their engagement and achievement.

**Intellectual Goals.** The intellectual goal of this study is to determine the impact of choice on student learning within a set of differentiated activities as well as explore how the teacher and students themselves perceive the impact of choice on student engagement and learning. Specifically, the purpose of this research is to understand how student choice among differentiated activities may influence students’ perceived learning experience, engagement, and interest in social studies material and if using an instructional model combining choice and DI will improve achievement outcomes as compared to a classroom employing direct-instructional methods. In the end, the hope is to discover whether or not using such an instructional model will help students to more efficiently understand the material and become more engaged with the learning process.

The practical and intellectual goals associated with this research involve more informed preparation practices leading to improved student outcomes among a wide range of diverse
learners. Understanding these relationships can help practitioners create more flexible learning environments for diverse learners. Developing a flexible learning environment is significant because practitioners need to have the capacity to accommodate individual needs of all students in a practical and timely manner. By providing choices among activities, the responsibility for learning is reversed to the student by making them autonomous in their individual educational experience. The results from this research could guide student achievement to that end while addressing some scholarly concerns and gaps in the literature discussed later in this paper.

**Research Questions**

This study is informed by self-determination theory and student engagement theory. Both theories pertain to behavioral constructs where autonomy and choice can influence motivation and engagement. In the case of choice among differentiated instructional activities in a social studies classroom, students’ experiences are compared in an instructional context where they have the opportunity to choose and where they are directed to complete classroom assignments. The research questions for this study are aimed at learning whether providing choice among activities or directing students to complete activities has more of an impact on student learning and engagement. These questions also aim to learn how these conditions may impact teacher and student perceptions of learning and engagement. The following questions guide this investigation:

1. How does student choice in the context of a differentiated social studies classroom impact student learning in contrast to direct instruction, as measured through end of unit and end of week assessments?
2. How does student choice in the context of a differentiated social studies classroom impact student learning and students’ engagement in learning in contrast to direct instruction as perceived by (1) the teacher and (2) students?

Summary of Paper Contents and Organization

This Doctoral Thesis consists of five main chapters. Chapter I identifies and introduces the problem of practice, the significance of the problem, and outlines the research questions. In addition, Chapter I discusses the theoretical framework employed by the researcher to inform an instructional model integrating choice among differentiated activities in a secondary social studies classroom. Chapter II reviews the literature pertaining to current practices in social studies, the impact of DI on student learning and perception, and the impact of student choice on both student learning and perceptions. Chapter III discusses an overview of the study’s research design, including the site and participants, data and analysis methods, and considerations for ethics and protection of human participants. Chapter IV presents the major findings associated with unit test and weekly quiz scores, students’ and teacher perspectives about engagement and learning in both choice and no-choice contexts, coding, and other miscellaneous feelings about students’ learning experience. Chapter V discusses both quantitative and qualitative findings, their relationship to the theoretical framework and the literature review, limitations, conclusions, recommendations for future research, and a personal reflection.

Theoretical Framework

The two theories used to inform this study investigating the impact of choice in a secondary differentiated instructional context are student engagement theory and self-determination theory. DI is an instructional innovation designed to meet the needs of diverse learners by tailoring instruction by content, product, or process (Santangelo & Tomlinson, 2008)
to ultimately engage students in the learning process. Providing choice among activities is another instructional innovation creating a psychological construct where students perceive an autonomous learning environment, become more engaged in the material, and ultimately demonstrate higher achievement outcomes (Connell, 1990; Fredricks, Blumenfeld, & Paris, 2004). These two theories provide a lens through which the psychological functions of choice-making and engagement can be perceived. Self-determination discusses the psychological construct within a situation where an individual has the opportunity to choose among behavioral options. Student engagement theory emphasizes the behaviors associated with engaging students in the learning process. By combining both theories, the researcher can assess and evaluate the impact of choice on student engagement and learning. Self-determination and student-engagement theories also directly relate to the problem of practice by examining the impact of choice on student outcomes and achievement. A brief overview of these theories is discussed in detail to demonstrate their guidance in this investigation.

**Self-Determination theory**

Edward Deci (1980) developed self-determination theory as a macro-theory to human behavior. It emerges from his earlier work on intrinsic motivation, which makes up a crucial component of self-determination theory. Self-determination theory involves the psychological construct associated with making choices in any behavioral situation. Specifically, Deci defines self-determination theory as “a psychological construct referring to people’s flexibility and capacity both to choose from among behavioral options (regardless of the number of options) and to accommodate to the situations in which only one option is available” (p. 6).

The concepts of individual competence and autonomy support are major components of self-determination theory. Both competence and autonomy serve as underlying factors
influencing people’s intrinsic motivation in social contexts where their needs must be satisfied. “Therefore, intrinsic motivation is enhanced when an individual feels autonomous and when information is provided about the individual’s competence in navigating his or her environment” (Patall, Cooper, & Wynn, 2010, p. 2). On the other hand, intrinsic motivation and autonomy are diminished when aspects of an individual’s environment are controlled. Moreover, autonomy support is a key aspect of the classroom environment, influencing students’ perception “that the teacher understands, cares about, and trusts the students” (Ciani, Easter, Sheldon, & Summers, 2008, p. 628).

Intrinsic motivation is another main component of self-determination theory speaking to the natural motivational forces emerging when needs for autonomy and competence are met (Ciani, Easter, Sheldon, & Summers, 2008). “Intrinsic motivation is the propensity to engage in a behavior for its own sake” (Patall, Cooper, & Wynn, 2010, p. 2). In other words, a person may engage in a behavior because they enjoy, desire, or need to. In essence, intrinsic motivation is a prototype of autonomy support because the person is engaging in a behavior based on their own ability to control the situation. As Deci and Black (2000) assert:

Self-determination theory suggests that motivated behaviors vary in the degree to which they are autonomous vs. controlled. Behaviors that are autonomous have an internal perceived locus of causality, are experienced as volitional, and are performed out of interest or personal importance (p. 741).

Self-determination theory also has a component related to individual differences. This component is called general causality orientations, involving three main personality orientations including autonomy, controlled, and impersonal orientations. Autonomy orientation gravitates toward autonomy-supportive environments, which has been related to ego development, self-
esteem, self-actualization, and personality-integration. Controlled orientation involves an attraction toward controlled environments and has shown positive relationships toward public self-consciousness. Impersonal orientation demonstrates lack of motivation and attraction toward environments promoting incompetence and is linked to social anxiety, depression and self-derogation (Black & Deci, 2000; Deci, 1980).

The lens of self-determination theory then offers an opportunity to present the concept of choice as a motivational factor to influence students’ engagement in the learning process. Through choice, students have the ability to experience and execute their inherent need to engage in activities they find interesting, enjoyable, or are competent enough to complete. According to this theory, it also has the capacity to increase intrinsic motivation. Intrinsic motivation has been linked to academic achievement in many contexts ranging from elementary to college settings (Cooper, Patall, & Wynn, 2010). Since this investigation calls for examining the impact of choice on student engagement and learning, this theory provides an ideal framework to enhance understanding of this instructional innovation.

**Student engagement theory**

Student engagement is a meta-construct containing three main components: behavioral, emotional, and cognitive engagement (Fredricks, Blumenfeld, & Paris, 2004). Behavioral engagement involves students’ ability to demonstrate positive conduct, following rules, and obeying classroom norms while avoiding participation in disruptive behaviors. Emotional engagement pertains to students’ responses in classroom environments such as interest, boredom, confusion, sadness, anxiety, value, and enthusiasm. Cognitive engagement emphasizes psychological investment in learning with a preference for intellectual challenge. All three
constructs of student engagement have been studied and overlap throughout the literature (Blumenfeld, Fredricks, & Paris, 2004).

Each construct of engagement is relative to choice among differentiated activities through motivation and support of individual needs. Research shows similar constructs are found in the motivation literature, including motivation to learn, learning goals, and intrinsic motivation (Blumenfeld, Fredricks, & Paris, 2004). Cognitive engagement, for example, is a demonstration of self-regulation because it involves maintaining a commitment to intellectual challenge, indicating intrinsic motivation to learn. Self-regulation also emphasizes the fact students have an individual need to be challenged intellectually, which is why creating classroom contexts supportive of these needs is necessary to improve achievement.

The use of choice is identified in the literature as a strategy for influencing engagement. In their review of the literature, Blumenfeld, Fredricks, and Paris (2004) discuss some of the characteristics high schools implement to influence student engagement, including “voluntary choice, clear and consistent goals, small size, student participation in school policy and management, opportunities for staff and students to be involved in cooperative endeavors, and academic work that allows for the development of products” (p. 73). In light of these strategies, it’s clear that creating educational contexts where students have the opportunity to choose and be more involved in their educational experience has an impact on their engagement.

Autonomy support is another theme emerging in the literature surrounding student engagement. As discussed above, autonomy supportive classrooms influence intrinsic motivation and provide more opportunity for students to control their learning experience. Such classrooms are characterized by “choice, shared decision making, and absence of external controls” (Blumenfeld, Fredricks, & Paris, 2004, p. 78). For the purposes of this study, this
theoretical framework provides a lens through which to examine how ninth grade students’ assessment performance and perceptions are affected by choice among differentiated instructional activities.

Since student engagement is a main focus in this investigation, this theory is highly effective in providing a lens to study how choice impacts engagement. In addition, this theory is appropriate because it shares many overlapping components as presented in self-determination theory, including autonomy support and intrinsically motivated behavior. Approaches used to measure engagement are helpful to inform observational protocol in this investigation. Engagement can be measured by self-report surveys from teachers with indicators of conduct, work involvement, positive behaviors, and scales on students’ participator behaviors (Birch & Ladd, 1997; Finn, Folger, & Cox, 1995; Ladd, Birch, & Buhs, 1999; & Stipek, 2002). Overall, this theory provides an ideal lens to investigate how choice impacts student choice and ultimately students’ achievement outcomes.

Summary

Self-determination and student engagement theory informs this research project examining the efficacy of choice among differentiated instructional activities in secondary heterogeneously grouped classrooms. The implementation of choice and differentiated instruction both emphasize a support for individual needs. Both theories demonstrate a capacity for meeting individual needs by creating educational contexts promoting autonomy support, self-regulated behavior, and intrinsic motivation, giving students the ability to take control of their educational experience by selecting activities they perceive as the most effective way to learn. As the research implies, students will be more engaged with their learning experience when they are in educational contexts supporting their unique, individual needs. Though many clear
positive relationships exist among self-determined behavior, student engagement, and achievement, more research is needed to explore these concepts and gain a deeper understanding of their impact on academic performance. As Blumenfeld, Fredricks, and Paris (2004) assert “Before claims can be made about the benefits of autonomy-supportive environments for engagement, there is a need for more research into the consequences of choice, opportunities for decision making, and reward structures for behavioral, emotional, and cognitive engagement in actual classroom settings” (p. 78). It is the intention of this research to answer the call for further investigation in such settings and contribute to the growing body of literature examining instructional models promoting student achievement.

Chapter II: Literature Review

A review of the literature on social studies, DI, and student choice was necessary to more precisely identify the current practices used in the classroom. The focus of this review includes the current practices used for teaching social as they relate to student engagement; how choice has impacted student engagement and student learning; how DI is defined; and the impact of DI on student engagement and student learning. By exploring these specific relationships, the researcher can reveal the gaps in the literature, stated scholarly concerns, consistent patterns and themes, and the calls for future research. This information was used to more deeply inform this research study.

Social Studies Instruction

Guiding Question: *What is the current literature and research on the teaching of social studies for student engagement and student learning?*

Social studies is a dynamic subject compared to other disciplines because its very foundation is influenced by culture, society, history, and the communication of ideas. The
dynamic nature of the subject creates deeper complexities for providing accommodations in diverse learning environments through its “symbiotic relationship between social studies, world understanding and literacy” (Alexander-Shea, 2011, p. 95). When social studies is instructed effectively, it produces civic minded students educated in history, culture, and social issues of the day, rendering them capable of active involvement in “social issues that challenge their world views and compels the cycle of learning” (Alexander-Shea, 2011, p. 95).

The literature associated with social studies instruction shows several instructional approaches to meet the complex demands of this subject through issues-centered instruction, technology, and redefined vocabulary. In addition, scholarly concerns suggest this topic is being devalued as NCLB legislation has put English, math, and science as the primary academic concerns for the nation, leaving social studies as the subject taught when convenient. Teacher perception of social studies’ practices has also shed light upon both the concerns and instructional approaches encompassing this discipline. The following discusses some common themes, instructional approaches, and perceptions related to the teaching of social studies.

Common within the literature are “how-to” models for implementing effective social studies instruction. Caron (2004) examined how graduate-level teachers were prepared to implement issues-centered instruction units in a field-based setting. “Issues-centered instruction is an approach that draws upon difficult questions or problems as the primary source for the teaching and learning of social studies” (Caron, 2004, p. 5). Using a case study research paradigm, the researcher used six graduate students from a course taught by the researcher at a medium sized university in the Midwest. The researcher acquired data from four required reflection papers and an e-mail interview about the implementation and experiences with issues-centered instruction. Results showed teacher perceived issues-centered instruction as a positive
addition to their teaching practices; however, teachers also struggled with having in debt discussions while covering factual information required by the curriculum and motivating low-achieving students to participate in issues-based activities that promote higher order thinking skills.

Alexander-Shea (2011) explored a new learning strategy for teaching social studies using a redefined vocabulary approach based on theoretical insights related to activation of prior knowledge, consideration of the relationships between concepts, comparison and contrast of familiar concepts, and student generation of meaning. In justifying the need for a redefined vocabulary approach, the author emphasizes 85 to 95 percent of social studies curriculum is taught using the textbook. As Alexander-Shea (2011) argues:

If the overarching goal of social studies courses is to involve students in civic activities that encourage them to better understand the world and their place in it, then the goal of vocabulary development in social studies courses should be to further that mission by helping students grasp the complete scope of the social concepts they are encountering (p. 96).

The author discusses several types of graphically organized instructional activities used to redefine the placement of vocabulary in the social studies curriculum, including mind streaming, think-pair-share, knowledge rating, semantic mapping, role-audience-format-topic (RAFT) writing, spoken word, Venn diagrams, semantic feature analysis, word sorts, and list-group-label activities.

Research also shows scholars are concerned about the devaluation of social studies in response to NCLB legislation, which has made the subject the last priority in education. Bailey, Shaw, and Hollifield (2006) sampled 39 elementary pre-service teachers from a university in the
Southeast to examine the actual amount of time spent on social studies instruction, the variety of instructional activities used, and the frequency and types of technology implemented. The pre-service teachers were higher in the cooperating Title I district as paraprofessionals where they recorded a weekly log over a total of a 27 week period indicating allocating time for social studies, instructional strategies employed, and the use of technology in the classroom. After the development of themes and coding procedures, results showed teachers spent approximately 30 minutes of instruction a day; the number of weeks social studies was taught was inconsistent among teachers; and teachers did not demonstrate competency with technology in the classroom.

Litntner and Schweder (2008) investigated perceptions and practices in 36 elementary level special educators in a social studies self-contained setting in the Central Savannah River area. Participants completed surveys containing checklists, rank ordered responses, and Likert-type scales, which were divided into three categories: 1) perceptions and practices, 2) providing content/instructional strategies/accommodations, and 3) demographics. Following the survey, researchers conducted semi-structured interview to elicit more elaborated responses related to survey items. Results indicated social studies ranked fourth in terms of school-based and individual commitment among academic disciplines, revealing a lowly status; special education teacher teachers spent as much time on social studies instruction as general education teachers; and special education and general education teachers used similar strategies for social studies instruction, including DI, collaboration, social skill development, and hands-on learning.

Boon, Fore, III, and Spencer (2007) investigated both general education and special education teachers’ perceptions and attitudes toward technology-based instruction in social studies using Inspiration 6 software in a Southeast high school outside a larger metropolitan region. Researchers conducted a teacher satisfaction survey where participants completed 6 open
ended items eliciting information about strengths and weaknesses of the software, challenges for implementation, and benefits of the software. Results showed teachers perceived *Inspiration 6* software’s potential to enhancing student achievement, improving time on tasks, and increasing student motivation in those with or without learning disabilities.

In another study investigating the efficacy of *Inspiration 6* software, Boon, Burke, Fore, III, and Hagan-Burke (2006) compared traditional textbook methods in social studies to the software program using 47 participants, including 3 teachers (1 special education and 2 general education) and 44 tenth grade students (26 general education and 18 diagnosed with disabilities) at a high school in suburban area within a large metropolitan region in the Southeast. Researchers created two conditions: 1) cognitive organizer condition using the software and 2) traditional textbook condition. In both conditions, the same chapter was used and students completed a pre- and post-test assessing their knowledge of the chapter. Results showed the cognitive organizer condition with *Inspiration 6* software outperformed students in the traditional textbook condition. Furthermore, effect sizes for both general education and special education students showed the implementation of computer generated cognitive organizers was equally effective.

After reviewing the literature on social studies, several common themes have emerged related to both instructional approaches and perceptions. Social studies instructors are concerned about the devaluation of the discipline in the years following NCLB legislation. Social studies instructors, regardless of whether they are general education or special education teachers, use various types of differentiated activities, including graphic organizers, issues-centered instruction, and technology based instruction; however, their competency in using these methods...
are inconsistent, suggesting a need for instructional model that will meet the needs of diverse learners in secondary heterogeneously grouped classrooms.

**Differentiated Instruction**

**Guiding Question:** *What is the impact of DI on student engagement and student learning?*

Choice integration and differentiated instruction have been studied in a number of educational contexts, examining specific aspects of each instructional innovation. All the research show relationships between choice, differentiated instructional methods, and positive student outcomes. The research, however, examines both instructional innovations as a separate entity. The purpose of this research is to examine the impact of an instructional model combining both DI and choice integration. As the theoretical frameworks suggest, imbedded within each instructional innovation are insights related diverse learning abilities. DI acknowledges the need to accommodate multiple intelligences in the classroom while choice promotes autonomy support for the individual learner. Both have implications for reaching a wide-range of diverse learners in secondary heterogeneously grouped classrooms, illustrating the motives behind the research questions and hypotheses used for this investigation.

Before studying these two instructional innovations as a combined approach, reviewing the literature from an individual standpoint will be necessary. First, this review discusses the literature associated with choice from two standpoints: improving behavior and positive impacts on student achievement. Second, the literature pertaining to DI focuses on teacher perceptions and student performance. At the conclusion of this review, a brief summary of the common themes, concerns, and recommendations for future research on DI and choice will help emphasize the need for this proposed doctoral project.
Teacher and student perception of DI and its impact on student learning. Several studies examined DI in relation to teacher perception and student performance, which demonstrated positive outcomes. Callahan, Eiss, Imbeau, Landrum, Tomchin, and Tomlinson (1997) investigated six teacher education programs using 70 novice teachers and their cooperating teachers at large colleges and universities in 3 states in the South, Middle Atlantic, and Northeast United States. Researchers conducted a qualitative analysis using a survey of attitude and practices and semi-structured classroom observation and semi-structured protocol. Pre-service teachers participating in intervention groups were more conscious of the need for DI than non-intervention participants and participants in the intervention groups attempted to accomplish differentiation more often as well.

Carr, Edwards, and Siegel (2006) studied perceptions of understanding, usage, and attitudes toward DI using a questionnaire asking 17 teacher candidates, 34 elementary school teachers, and 25 education faculty members before and after a teacher education workshop at Southeastern Louisiana University. Results indicated teachers are prepared to use and are using specific DI strategies and teachers’ attitudes toward differentiation didn’t change between pre- and post-test scores according to the questionnaire. This information was used to improve DI curricula in the teacher preparation program.

Roe (2010) also investigated teacher perceptions of DI methods using 9 teachers and 30 students. Roe conducted 135 classroom observations, equating to five observations for each teacher in four middles schools in the northwest in three different geographic locations: one urban, two suburban, and one rural. The results showed the teachers exceed limits on teachers’ attention to differentiation as discussed in the literature. Furthermore, results indicated wider school contexts impact options to differentiate, selecting activities focused differentiation points,
teachers differentiate for product completion rather than literacy, and teachers rarely use assessment scores to inform instruction.

Van Hover, Hicks, and Washington (2011) investigated teacher perception in a high stakes testing context where district administration pushed teachers to employ DI. Researchers selected one secondary world history teacher who was identified as an instructor using differentiated instructional methods within among diverse learners who needed to pass an end-of-year high stakes test to pass high school. After triangulating between 54 classroom observations, four semi-structured interviews with the participant, unit planning documents, e-mail correspondence, and a reflective research journal, results indicated the participant had an understanding of DI consistent with the literature. The participant not only could provide a definition of DI, but also employed strategies recommended by differentiation experts as revealed through the observations.

Logan (2011) examined 141 novice teachers’ perceptions about the use of DI using a qualitative survey instrument called Examining Differentiated Instruction for Novices: Teachers Respond. The survey consisted of 16 items pertaining to 1) essential principles, 2) essential components, and 3) common myths associated with DI. The study was conducted across five middle schools within an urban public school district in southeast Georgia. After analyzing the data, results showed pre-service teachers seldom experienced DI training in their teacher preparation programs and typically completed one course on diverse learners. Implications revealed participants agreed upon the essential principles and components needs to employ DI methods.

**Impact of differentiated instruction on student learning.** Chamberlin (2011) investigated 108 prospective elementary teachers’ experience with DI in five sections of an
undergraduate mathematics content course at two mid-sized universities in the Rocky Mountains region of the US. Researchers differentiated materials in each section according to student readiness, student interest, and student profiles using interest and learning style inventories data. Quantitative data was elicited from a classroom survey while qualitative data was generated from a three-page written reflection at the end of the semester. Results showed the course met students’ instructional needs. Furthermore, results indicated students not only hoped to incorporate DI methods in future instruction, but also enhanced their perception and plans for implementing DI.

Santangelo and Tomlinson (2008) examined the impact of using DI using 25 students representing a wide-range of socioeconomic, racial, and ethnic groups at a state-supported university accredited by the National Council for Accreditation of Teacher Education. Researchers used student readiness, interest, and learning profile to inform differentiation of content, process, and product of materials in an Education and Psychology of Exceptional Learners graduate course. Data was used to assess each course objective, including a pre-assessment each student completed during the first class, primary course assignments, and student perspectives as elicited from a valid standardized evaluation instrument called Student Instructional Report (SIR) II. Results showed differentiation had a positive and meaningful impact on student learning and that it optimized students’ learning experience.

Servilio (2009) is one of the only researchers to have studied the combination of both choice integration and DI methods using 24 fifth-grade students, 6 of whom were diagnosed with learning disabilities, in an inclusive reading classroom. The researcher examined student choice among differentiated instructional practices using a seven step methodology: 1) identify students’ learning styles through a survey instrument, 2) assess current achievement, 3) obtain
research based differentiation strategies, 4) differentiate materials, 5) allow students to choose among activities, 6) administer an assessment, and 7) evaluate performance. Results showed that 83.4% of participants improved reading scores, 12.5% maintained the same scores, and 4.1% decreased using this procedure.

**Criticism of differentiated instruction.** Santamaria (2009) examined the differences between culturally responsive teaching (CRT) and DI through a case study methodology in two K-5 schools characterized as socioeconomically disadvantaged: one with 318 students and the other with 499. The author conducted observations and recorded conversations with teachers, administrators, students, and parents over a 5-year period. The author asserted increases in grade-level proficiency where DI and CRT methods were employed and DI and CRT are two totally different pedagogical practices: DI accommodates academic diversity and CRT addresses cultural and linguistic diversity.

**Student Choice and its Impact on Learning**

**Guiding Question:** What is the literature and research on student choice and its impact on student engagement and student learning?

**Impact of choice on improving behavior outcomes.** The use of choice in the classroom has been examined under a number of classroom conditions ranging from curricular to behavior modifications. With respect to behavior modifications, a few studies have examined the integration of choice in the classroom as a way to improve special needs students’ behavior as well as student achievement in the classroom. This includes students diagnosed with learning disabilities requiring accommodations in the classroom, including bipolar and attention deficit disorder. The following will illustrate some of the research examining the impact of choice on certain classroom behaviors.
Bambara, Fogt, and Kern (2002) investigated choice as a curricular modification using six students between the age of 13 and 14 with severe emotional disturbance and other diagnoses, including bipolar disorder, mood disorder, anxiety disorder, depressive disorder, and posttraumatic stress disorder, in a science classroom. Results indicated the use of high-interest activities and opportunity to choose had positive effects on student engagement and disruptive behavior.

Clarke, DePerczel, Dunlap, Gomez, White, Wilson, and Wright (1994) investigated the use of choice-making to promote adaptive behaviors among students with emotional and behavioral challenges using three elementary students possessing such diagnoses. Specifically, the researchers developed a quantitative analysis measuring levels of engagement, teacher interaction, and problem behaviors during 20-30 minute instructional periods in both choice and no-choice conditions. Participants showed high levels of disruption in no-choice conditions while they demonstrated higher levels of task engagement and decreased problem behaviors in choice conditions.

Morgan (2006) evaluated systematically evaluated several studies examining preference and choice making in K-12 classrooms using a total of 48 participants. The author examined the articles based on five criteria: 1) participants were enrolled in K-12 education, 2) participants were observed while engaging in academic activities, 3) focused directly on choice or preference, 4) dependent measures specified academic or behavioral performance, and 5) studies came from peer-reviewed journals between 1985 and 2004. Results indicated positive student outcomes when using choice and preference in the classroom. Two studies showed using preference decreased problem behavior and increased appropriate behavior and student productivity and four studies indicated choice-making improved student-teacher interaction.
**Impact of choice on student learning and perception of learning.** As suggested by self-determination theory, autonomy support involves providing a classroom context where students perceive the instructor as someone who cares, understands, and trusts students (Ciani et al, 2008). Providing choice is one way to create these conditions and lead students to control their own educational experience. “In the classroom, providing students with choices and options is a characteristic of an autonomy-supportive teacher” (Ciani et al, 2008, p. 628). The following research will demonstrate the impact of creating an atmosphere where students have autonomy supportive conditions. All these investigations suggest positive correlations exist between providing choice and student perceptions and outcomes.

Ciani, Easter, Sheldon, and Summers (2008) studied the effects of choice as related to collaborative learning using 6 professors and 544 students in introductory level undergraduate courses. Two conditions were used among the six professor’s courses: two professors allowed students to choose their group membership while four assigned group membership. After comparing the dependent variables in both conditions, including autonomy support, intrinsic motivation and classroom community, students demonstrated less intrinsic motivation and classroom community when professors chose their group membership.

Cooper, Patall, and Wynn (2010) examined the effects of providing choice among homework assignments on student motivation and academic performance using 207 students in grades 9-12 as a sample population over a period of four weeks. Researchers created and compared two conditions: homework-choice and homework-no-choice. Results demonstrated benefits from using choice by creating interest and enjoyment among school tasks. Student perception of receiving autonomy support derived from a background and school experiences questionnaire predicted high grade point average and self-regulation in academics.
Black and Deci (2000) conducted a quantitative experiment investigating instructor autonomy support through choice using 137 students at a small eastern university. Participants completed questionnaires during two lecture, one prior to the first exam and the other the week after the last regular exam but two weeks before the final exam for the course. Results showed when students experienced perceived autonomy support, their perceived competence, interest and enjoyment of the course increased while there was a significant decrease in anxiety. These findings also suggest perceived autonomy support lead to better course performance and that students became more autonomous with their learning as the course proceeded.

Brooks and Young (2011) examined choice-making opportunities as they relate to motivation and learner empowerment in the classroom using 419 participants from various ethnicities enrolled in courses spanning over a variety of disciplines at a large U.S. campus. Students completed surveys in eight different classrooms where four did not offer any choice-making opportunities. The remaining four classrooms provided several choice-making opportunities among a menu of course assignments and a choice as to whether to take a final exam or write a final paper. Participants in both conditions completed three surveys with Likert-type scale items: 1) Situational Motivation Scale, 2) Learner Empowerment Scale, and 3) State Motivation Scale. Results indicated learner empowerment is positively associated with intrinsic motivation through choice-making opportunities. Furthermore, results showed choice-making opportunities should be consistent among classroom policies or procedures to avoid confusion and frustration among students.

Cordova and Lepper (1996) examined the effects of choice and its relationship to intrinsic motivation and the process of learning at two private elementary schools in the San Francisco Bay area. Researchers sampled 72 participants in fourth and fifth grade classrooms.
Participants were placed in either a choice or no-choice condition to play a 30 minute mathematical computer game. Prior to the playing the game, participants were pre-tested on their knowledge of the order of operations and use of parentheses to solve mathematical problem. They also completed a “personalization questionnaire” eliciting personal information ranging from names of close friends to learning preferences. When playing the game, students in the choice condition had opportunity to choose an icon among four options they felt best represented themselves while the icon was randomly selected by the computer in no-choice conditions. Following the computer game, students were post-tested on the order of operations and parentheses. Results indicated students exposed to motivationally embellished activities through choice demonstrated higher levels of intrinsic motivation and growth of learning.

**Criticism of choice.** Furtak and Kunter (2012) studied the effects of cognitive and procedural autonomy-supportive on student learning and motivation at a seventh grade English language school in Germany. 48 participants were divided into eight groups based on pretest English proficiency rating, which was provided by school administrators. The researchers constructed template science lessons using four treatment conditions. The purpose of the lessons involved acquiring time and distance data from a ball rolling down a ramp. Procedural autonomy-supportive conditions were employed when students could collect their own data. Cognitive autonomy-supportive conditions were used when students had to find their own solutions based on the data collected. These conditions were compared to those where a teacher guided students through the process. Results showed students in conditions of high cognitive-autonomy support did not learn more than other students; however, students who perceived higher cognitive autonomy had higher learning gains, yet this perception occurred in conditions trying to control them.
Summary

After reviewing the literature associated with choice and DI, consistent results demonstrate positive relationships exist between these methods and student outcomes. With respect to choice, consistent evidence shows improved problem behavior, increased engagement, interest, and assessment scores. In addition, DI is perceived and used by teachers and administers to effectively reach a wide-range of diverse learners. However, future research needs to examine DI and choice from specific areas based on scholarly concerns. Patall, Cooper, and Wynn (2010) suggest an examination of choice within an experimental context using autonomy-supportive practices. Ciani et al (2008) call for an investigation of students’ personality characteristics in relation to motivation, self-efficacy, and teaching style to teachers’ willingness to provide choices. With respect to DI, Santamaria (2009) encourages future research on differences between DI and CRT. Finally, Roe (2010) argues DI must be studied as a collective process rather than a remedy to specific classroom situations because most researchers fail to study DI using this approach. In response to these concerns as well as the consistently positive effects of these practices, this researcher investigated the efficacy of an innovative instructional model integrating choice among differentiated instructional activities.

Chapter III: Research Design

This doctoral study examines the efficacy of an instructional strategy to integrate choice within a differentiated classroom and to investigate both students’ and the teacher’s perceptions of how choice impacts student engagement and learning. The efficacy of choice among differentiated instructional activities was determined by comparing weekly assessment scores in two differentiated instructional contexts: one with choice and one without choice in activities.
Analysis of students’ assessment scores in conditions with and without choice will determine the efficacy of the instructional model.

Adding to this quantitative analysis, observations of students’ engagement among differentiated activities with and without choice contributes to teacher’s perception of these practices using a pre-determined observation protocol. Furthermore, randomly selected students participated in focus groups eliciting information pertaining to student perception of both choice and no-choice conditions. Responses to pre-determined semi-structured interview questions were recorded, transcribed, and grouped into themes.

**Research Questions**

The following research questions are informed by the theoretical framework and literature review previously presented. The three research questions guiding this investigation are:

1. How does student choice in the context of a differentiated social studies classroom impact student learning in contrast to direct instruction, as measured through end of unit and end of week assessments?

2. How does student choice in the context of a differentiated social studies classroom impact student learning and students’ engagement in learning in contrast to direct instruction as perceived by (1) the teacher and (2) students?

Self-determination theory, student engagement theory, and recent research on social studies instruction, DI, and student choice inform the research questions for this investigation. Both theories emphasize psychological constructs related to self-regulation, autonomy support, engagement, intrinsic motivation, and the support of individual needs. The literature on choice has demonstrated many benefits and positive impacts associated with improved behavior,
achievement, and students’ perceptions of learning. The research on DI has also shown
relationships with improved student achievement and provided insight about teacher and student
perceptions in a number of educational contexts; however, no research has combined these two
constructs and studied its effect on students’ assessment performance and examined teacher and
student perceptions of its impact.

Methodology

The practiced-based research in this investigation employs both quantitative and
qualitative analyses, yielding a mixed-methods research approach. A mixed methods research
approach was chosen for the purpose of triangulating between three sources of data, including
observation notes, focus group interviews, and assessment scores to identify whether choice
among differentiated instructional activities has an impact on both student and teacher perception
of choice and on student learning.

This study compared two groups of participants in a secondary heterogeneously grouped
social studies classroom over four instructional weeks using a switched replication design. In the
switched replications design, on alternating instructional weeks, each group was either the
control group or treatment group. For example, while group A is the treatment group during
instructional week 2, group B was the control group. On the following instructional week, the
roles will reverse. This switched replication happened twice during the study.

Using the data gathered from this method, this study identified if choice had an impact on
both student learning and perception as well as teacher perception when students are provided a
choice among differentiated instructional activities in secondary heterogeneously grouped
classrooms. Comparing student performance and perception on the instructional weeks with
choice and non-choice conditions provided this insight. Student perception was examined from
the qualitative data received from focus group interviews while observation notes served as the basis for teacher perception. To acquire data about student learning, each instructional week ended with a quiz to provide assessment data. These assessment scores, observation notes, and interview responses were analyzed and triangulated to formulate conclusions following this study’s implementation.

**Hypotheses.** After investigating the problem of practice pertaining to the individual needs of diverse learners in heterogeneously grouped classrooms and reviewing the literature pertaining to student choice and DI, the researcher believed the following statements when combining these two instructional strategies. The three hypotheses, the first of which was determined through statistical analysis involving end of week and end of unit tests, are as follows:

*Hypothesis A:*

When students have the opportunity to choose among differentiated activities in a secondary heterogeneously grouped classroom, they demonstrate higher achievement on weekly assessments than students directed to complete activities.

*Hypothesis B:*

Students with the opportunity to choose among differentiated instructional activities in secondary heterogeneously grouped classrooms will demonstrate higher levels of engagement based on pre-determined observation protocol as compared to conditions where students are directed to complete activities.

*Hypothesis C:*

Students with the opportunity to choose among differentiated instructional activities in secondary heterogeneously grouped classrooms will express a positive learning
experience in conditions where they have the opportunity to choose among instructional activities as compared to conditions where students are directed to complete activities.

**Site and participants.** A regional vocational technical high school in a suburban region in the Northeast United States served as the site of this research study. The school population consists of 1360 students ranging from 14 to 18 years of age across grades 9-12. The site is a public institution serving five towns. Last year, the school showed a 97% attendance rate and scores high on state driven standardized tests in comparison to other districts.

Approximately 103 students in the ninth grade were part of this research study. These participants were chosen because they are enrolled in the classes in which the researcher is the instructor. Students are both male and female with approximately 33% being diagnosed with Individualized Education Plans (IEP’s). The students from five 9th grade social studies courses were divided to make up to two groups being compared in this investigation. Students in these classes are White, Hispanic, or Indian from lower-class to upper-middle-class economic levels.

The instructor for all five classes is also the researcher. The curricula for all five classes were aligned with the Massachusetts State Frameworks, are age appropriate, and followed the same lesson plan on a daily basis. My role is a social studies instructor. I possess a Bachelor’s and Master’s degree in History, a Certificate of Advanced Graduate Study in Educational Administration, and am currently pursuing a Doctorate in Education specializing in curriculum leadership. As both instructor and researcher, I ensured consistency across all five classes.

Course content is a combination of both world history and geography. The researcher planned the activities for all five classes. Instructional activities for the course included lectured notes, graphic organizers, guided reading, primary source analysis, open-response writing, cooperative learning, and inductive learning. For the purposes of this study, activities were differentiated
according to product. In other words, students in the choice condition chose the activity they desired to produce, whether it was writing a response, drawing a picture, or developing a graphic organizer.

**Treatment and data collection activities.** Two world history topics were chosen to examine the impact of choice among differentiated instructional activities in five 9th grade heterogeneously grouped classrooms. During each week, there are five days of instruction for each topic. On the first day of instruction for all classes, students participated in an interactive “cloze notes” lecture where they fill in blanks underlining key terms for the chapter as the instructor presented them on the board. Following the lecture, students were either directed to complete an activity or chose among three activities depending on whether their group is in the choice or no-choice condition. The activities in the choice condition are all aligned with the same learning objective as the no-choice condition; however, each activity was differentiated by product (Santangelo & Tomlinson, 2008). The differentiation by product was consistent in all instructional weeks during this research study, using writing, illustration, and graphic organizer products. Students in the choice condition were able to select among these three activities. All activities had the same level of difficulty to avoid students choosing the path of least resistance instead of the activity best supporting their diverse needs.

The topics being instructed during this research study include the following historical periods as listed in the Massachusetts Department of Elementary and Secondary Education (MADESE) Curriculum Frameworks for World History. These topic titles are chapters in the textbook used for the course, *World History: Connections to Today* (Prentice Hall, 1999). Each chapter consists of 4-5 sections, which focus the activities used in this research study:

1. *The Renaissance and Reformation (1300-1600)*
“WHI. 29 Describe the origins and the development of the Renaissance, including the influences and accomplishments of Machiavelli, Michelangelo, Leonardo Di Vinci, Raphael, Shakespeare, and Johannes Gutenburg.

WHI. 30 Describe the origins and effects of the Protestant Reformation.

WHI. 31 Explain the purposes and policies of the Catholic Counter-Reformation, including the influence and ideas of Ignatius Loyola.

WHI. 32 Explain the role of religion in the wars among European nations in the 15th and 16th centuries” (MADESE, 2003, p. 54-55).

2. *The First Global Age: Europe and Asia (1415-1796)*

   “WHI. 12 Explain why European nations sent explorers westward and how overseas expansion led to the growth of commerce and the development of the trans-Atlantic slave trade” (MADESE, 2003, p. 53)

*The Renaissance and Reformation (1300-1600)* is a time period discussing many scholars, artists, and writers emerging at first in Renaissance Italy and proceeding throughout the rest of Europe. Comparisons are made between the Middle Ages and the Renaissance and an explanation is given as to why the Renaissance was delayed in Northern Europe. Furthermore, discussion is focused on how northern humanists and the printing press transformed Europe. This period also examines the widespread criticism of Catholicism, including the ideas of Martin Luther and John Calvin, leading to the reform of the Catholic church.

*The First Global Age: Europe and Asia (1415-1796)* discusses the reasons European nations sent explorers to navigate new trade routes on the world’s oceans, including Portugal and Spain. This time period also examines the existing cultures of Southeast Asia, Korea, and Japan. An explanation as to how Portugal built a trading empire in Southeast Asia, how the Dutch
eventually become the leading commercial power, and how Europeans extended their influence in India after 1700 serve as major focal points for this topic. Finally, this topic describes foreign policy shifts between European and Asian nations due to international shifts of power.

Step 1. Students were assessed using four weekly quizzes and one unit test at the end of the quarter. Students’ daily assignments were also graded according to a rubric outlining the specific requirements and expectations of the assignment. A total of 103 9th grades students from 5 different classes made up the sample population for the study. Students in these courses are heterogeneously grouped according to their Stanford Diagnostic Reading Test (SDRT) scores. The SDRT is used to homogeneously group students in English and Math courses; however, regardless of their scores, social studies classes remain heterogeneously grouped, insinuating students in these World Cultures classes have mixed abilities ranging from significantly above to below grade level in terms of reading ability. Overall, these scores were simply used to inform the heterogeneity of the sample population and were not used to measure the impact of choice, engagement, or perception.

Step 2. The participants in the research study were divided into two groups: Group A and B. Students in Group A consisted of three of the five classes adding up to a total of approximately 58 students. Group B consisted of the remaining two classes adding up to a total of approximately 45 students. All students reported to the same classroom at different points throughout an eight-period school day. The study took place over four instructional weeks, allowing the researcher to acquire data from four sets of weekly quiz assessments and one set of unit test data for each group. A switched replication research design was used over the four-week period where both groups alternate as the control and experimental group. For example, during the first week of instruction, Group A and B received direct instruction. During the
second week of instruction, Group A was the experimental group while Group B was the control group. The following weeks the roles of control and experimental group are reversed. The final week of the study both groups received the choice treatment.

**Step 3.** During the first week of the research study, both groups received direct instructional practices from the instructor/researcher. On day one of week one, the researcher/instructor presented notes on the *Renaissance and Reformation (1300-1600)*. Following the presentation of notes, students in both groups were instructed to complete an inductive writing activity, which was started in class and finished for homework. Day 2, class began by asking students to volunteer reading their writing products to the class. Following this review, students were instructed to complete a drawing assignment focused on illustrating information from section 2 of the chapter and completed what they did not finish for homework. Day 3, the instructor began class by asking students to volunteer discussing their drawing products for approximately the first 5 minutes of class. Next, the researcher-instructor asked students to complete a graphic organizer activity related to section 3. Day 4, at the beginning of class, students discussed their work using the graphic organizer followed by a review session for all students led by the instructor. Finally, on day 5, students took a quiz assessing their content knowledge pertaining to the week of instruction.

**Step 4.** During second week of the research study, Group A received a choice among differentiated activities while Group B was instructed to complete an assignment selected by the teacher in the same fashion as the first week of the research study. On Day 1, the instructor presented notes on *Renaissance and Reformation (1300-1600)* (sections 4 and 5). Following the presentation, students in Group A chose among three differentiated activities pertaining to section 4, including an inductive writing assignment, a drawing activity, or a graphic organizer
while students in Group B were instructed to complete one of the three assignments. On Day 2, after the instructor reviews the information relative to the assignments, students in Group A chose among an inductive learning writing assignment, a drawing activity, or a graphic organizer activity focused on section 5 while students in Group B were instructed to complete one of the three assignments. On Day 3, after the instructor reviews the material from the day before, students in Group A had the opportunity to choose among an inductive writing activity, drawing activity, or a graphic organizer activity. Day 4, students in both groups reviewed the information from the week and completed a quiz on Day 5 to assess their content knowledge.

Step 5. On the third week of the research study, Group B received a choice among differentiated activities while Group A was instructed to complete an assignment selected by the teacher. The daily instructional sequence for the third week of research replicated the second with the exception Group B had opportunity to choose instead of Group A. During the fourth week of research, both groups had the opportunity to choose among differentiated activities and followed the instructional sequence of weeks two and three. During weeks four and five students learned about *The First Global Age: Europe and Asia (1415-1796)*. On Day 5 of weeks three and four, students in both groups completed a quiz to assess their content knowledge.

Students were observed during all four weeks of the research study. The researcher used an observation form with specific performance indicators to determine students’ level of engagement during each of the research study. An observation form “requires the observer not only to record certain behaviors but also to evaluate some as they occur” (Fraenkel, Hyun, & Wallen, 2012, p. 121). By observing and evaluating behaviors indicating student engagement, the researcher was able to distinguish the difference in engagement between students in the choice condition versus student in the no-choice condition.
Step 6. When four weeks of the research study concluded, students were randomly selected using a random number table (Fraenkel, Hyun, & Wallen, 2012). Six to eight students were selected for each focus group. Once students were randomly selected, they were asked questions eliciting information about their perception of choice among differentiated activities. These responses were triangulated between observation field notes, and quiz and unit test assessment scores.

Timeline. This mixed-methods study to began in March of 2013. The switched-replication research design investing the impact of choice among differentiated instructional activities was conducted with 103 participating ninth-grade world history students. The sample population was divided into two groups: Group A and Group B. On alternating weeks over four instructional weeks, participants served as the control group and the experimental group. At the end of each instructional week, students were assessed with weekly quizzes. At the end of four instructional weeks, students completed a unit test.

Data analysis. Quantitative and qualitative data was used to assess the impact of choice among differentiated instructional activities in secondary heterogeneously grouped classrooms. The use of a mixed-methods procedure was to gather data from assessment outcomes and elicit information about both student and teacher perception of choice. After gathering the data, the researcher triangulated between the quantitative and qualitative resources and developed conclusions consistently reinforced throughout the three sources.

Quantitative analysis. In the quantitative part of this research study, the difference in students’ historical content acquisition in a classroom condition providing choice versus a classroom using direct instruction was compared. An Analysis of Covariance (ANCOVA) was used to examine students’ weekly assessment scores and the unit test scores at the conclusion of
the research study to analyze covariance between and within the participants in groups being studied. The independent variable was the choice condition where students can choose among activities. The dependent variable in this analysis was the difference between the comprehensions of historical content between both groups as indicated by the assessment scores. When analyzing the covariation between and within the scores, the $F$ value is used to determine statistical significance. As Fraenkel, Hyun, and Wallen (2012) explain “when only two groups are being compared, the $F$ test is sufficient to tell the researcher whether significance has been achieved” (p. 236). Treatment and data collected across Group A and B are provided in Table 1.

Table 1

*Treatments and Quantitative Data collected across groups*

<table>
<thead>
<tr>
<th>Week</th>
<th>Days 1-3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Groups A and B are directed to complete a differentiated activity.</td>
<td>Groups A and B review material from the week.</td>
<td>Groups A and B are assessed using a multiple choice quiz.</td>
</tr>
<tr>
<td>Week 2</td>
<td>Group A has opportunity to choose among differentiated activities. Group B is directed to complete a differentiated activity.</td>
<td>Groups A and B review material from the week.</td>
<td>Groups A and B are assessed using a multiple choice quiz.</td>
</tr>
<tr>
<td>Week 3</td>
<td>Group B has opportunity to choose among differentiated activities. Group A is directed to complete a differentiated activity.</td>
<td>Groups A and B review material from the week.</td>
<td>Groups A and B are assessed using a multiple choice quiz.</td>
</tr>
<tr>
<td>Week 4</td>
<td>Groups A and B have the opportunity to choose among</td>
<td>Groups A and B review material from the week.</td>
<td>Groups A and B are assessed using a multiple choice quiz.</td>
</tr>
<tr>
<td>Week 5</td>
<td>Groups A and B take a unit test assessing their comprehension of material from the past 4 weeks.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Qualitative analysis: teacher observation.** In both the choice and no-choice conditions, the researcher recorded observations for each day of instruction using the observation protocol (see Appendix #). Observations were conducted using an observation form in order to determine students’ level of engagement. According to Fraenkel, Hyun, and Wallen (2012), an observation form allows the researcher to “not only to record certain behaviors but also to evaluate some as they occur” (p. 121). Part of constructing the observation protocol is to determine the performance indicators identifying students’ level of engagement, including focus on task, asking questions, and task completion (Finn, Folger, & Cox, 1991; Ladd, Birch, & Buhs, 1999).

Through observation, the researcher recorded and gained insight to students’ level of engagement and compared the responses of each participant in both conditions. By comparing the observation of students’ activity engagement and behaviors in each group in both choice and no-choice conditions, the researcher was able to identify the more engaged students because their behaviors and activity engagement were more frequent. Observation notes were grouped and categorized according to themes observed during each day of instruction.

**Qualitative analysis: student perception.** Following the unit test at the end of four instructional weeks during this research study, students were randomly selected to be part of a focus group interview. Six to eight students were sampled using a random numbers table. Using a random number table ensured “that each and every member of the population has an equal and independent chance of being selected” (Fraenkel, Hyun, & Wallen, 2012, p. 94). During this
focus group interview, students were asked to reflect upon their experiences during the lessons conducted over the past four weeks.

Specifically, the questions elicited responses about the students’ perception of choice in the classroom. The focus group meeting was a three-part discussion: 1) introducing the group members and explaining the purpose, context, and rules of the interview, 2) asking the questions and eliciting responses, and 3) thanking and debriefing participants and ask for any further input. The interview was recorded and transcribed for further analysis. The questions are as follows:

- Over the past four weeks, we’ve learned about 2 different topics. Did you like one topic better than the other? Which one? Why?
- The material was presented in two ways: with choice among activities and without choice. Which condition did you like better, the choice condition or no-choice condition? Why?
- In reflecting upon your learning experience over the last four weeks, did you feel like you learned more when you had a choice among activities or when you were directed to complete an activity by your teacher? Why?

Following the focus group interviews, a content analysis procedure followed. In all content analysis procedures, the researcher “must at some point convert (i.e. code) descriptive information into categories” (Fraenkel, Hyun, & Wallen, 2012, p. 480). Furthermore, the researcher can use pre-determined categories before the analysis or allow the categories to emerge as the analysis continues. For the purposes of this study, the researcher allowed the categories to emerge as the analysis continues. In gaining deeper understanding of students’ perception of choice among differentiated activities, importance lies in learning what types of responses emerged during focus group interviews.
Units of analysis in this research study focused on sentences and phrases formulated into themes about students’ responses to choice among differentiated activities. A two cycle coding procedure was used to analyze students’ responses. In the first cycle, Structural Coding will apply “a content-based or conceptual phrase representing a topic of inquiry to a segment of data that relates to a specific research question used to frame the interview (Saldaña, 2009, p. 66).” Using the Structural Coding procedure helped to formulate initial themes in the first stages of the analysis. In the second cycle, a Values Coding procedure was used to elicit deeper insight about students’ perceptions about choice among differentiated activities. A Values Coding procedure is used as “the application of codes onto qualitative data that reflect a participant’s values, attitudes, and beliefs, representing his or her perspectives or worldview” (p. 89). The combination of these two analyses provided a rich insight to students’ perception of choice and reflected the research questions in this study.

The reason for employing a mixed methods approach was to gain a deeper understanding of the impact of choice among differentiated activities by methodological triangulation. Methodological triangulation involves comparing sources of data in order to enhance the validity of the results. When using triangulation, Fraenkel, Hyun, and Wallen (2012) argue, “if the results are in agreement, they help validate the finding of each” (p. 559). For the purposes of this research study, the hope was to gather data from these three instruments, formulate conclusions based on their consistent agreement, and use this information to inform and improve future practice in secondary heterogeneously grouped classrooms.

Validity and Credibility

Limitations to this proposed study occurred because some students did not complete a significant amount of homework. When a student did not complete his or her work throughout
the instructional weeks of the research study, this limited analyses for activity and assessment outcomes. Homework completion was also used as a performance indicator for student engagement; therefore, though homework completion created a limitation, it still had the possibility to yield information regarding the impact of choice. For example, if a student did not complete his or her homework during an instructional week providing a choice condition, but did complete chosen classwork activities, this enhanced the validity of using choice in the classroom. However, if a student did not complete a significant amount of homework, they were removed from the experiment.

A second limitation involves the topic change from one instructional week to the next. In some cases, students were more familiar with one topic compared to another whether through their own research or from other teachers. If a student happen to be more familiar with the Renaissance and Reformation (1300-1600), for example, as opposed to The First Global Age: Europe and Asia (1415-1796), they achieved higher assessment outcomes. However, to meet this possible limitation, the researcher was also the instructor and presented the material exactly the same in both groups.

Another limitation involves the level of difficulty among differentiated activities. During the instructional weeks students had a choice among differentiated activities, it was important to ensure all activities, though differentiated by product, are at the same level of difficulty. This was to ensure students do not select an activity because it is easier than the others. In other words, providing a consistent level of difficulty was necessary to ensure students do not choose the path of least resistance.

In order to prevent threats to internal validity, a series of precautions were taken for this research study. The researcher ensured both groups A and B receive exactly the same treatment.
Since this is a switched replication study, both groups were exposed to the choice treatment on alternating instructional weeks. Both experienced the opportunity to choose as well as direct instruction. As both instructor and researcher, all other intervening variables were controlled for with the exception of choice among differentiated activities. All groups reported to the same classroom on a daily basis. One hundred three participants was a large enough sample to consider the removal of some participants if necessary.

**Protection of Human Subjects**

**Ethical issues.** DI is a common practice among teachers in the district and is promoted by administrators in the building. Students were familiar with engaging in various differentiated activities, yet the formal use of choice among them was a new practice. The use of choice in no way harmed any of the subjects. Before recruiting the sample population and conducting the research study, written permission was acquired from both the principal and superintendent of the school to conduct this investigation on one-hundred three ninth grade students in the building during the months of November and December of 2012 (See Appendix #).

Since September of 2012, the researcher was the teacher of all students for each class used in the investigation and a positive rapport had been established. An informed consent form was distributed to all students selected as the sample population. In addition, an informed consent form was sent to the families of the students selected for the investigation, giving permission for their child to participate in research (See Appendix#). Both families and students were notified they could opt out of the study at any time. The informed consent form sent home to families outlined specific procedures used in the research study, ensured their child would remain anonymous and their rights would not be violated, and listed any anticipated questions
and answers. The contact information for the researcher was also provided on the informed consent form.

**Conclusion**

Educators in secondary heterogeneously grouped classrooms experience difficulty in accommodating a wide range of diverse learners. Diverse learners enter the classroom each day with any combination of factors influencing their learning experience, including race, gender, learning preference, economics, learning abilities, and learning disabilities. Within a social studies classroom, the complexity is more enhanced because of the symbiotic relationships between history, culture, world perceptions, and literacy. In addressing this problem of practice, DI has been used to help accommodate the individual needs of diverse learners. The use of choice in the classroom has also been shown to show a positive impact on student performance. No research has explored the impact of combining these two approaches as a collective instructional method.

The review for this thesis has shown several emerging themes in the literature for social studies instruction, DI, and the use of choice in the classroom. In social studies, scholars are concerned about the devaluation of social studies due to state mandates for standardized testing in math, English, and science. Much of the literature in social studies provides “how-to” models for delivery social studies content, instructional strategies for students to learn vocabulary, and explores the use of technology. The literature on differentiated instruction explores teacher perception and student learning, yet little empirical evidence exists on the topic and there is a call for studying this instructional innovation as a whole process. The literature on choice explores its impact on improving behavior outcomes, student perception, and student learning, yet no research has investigated choice among differentiated instructional activities.
A mixed-methods research design was used to conduct this investigation. Using five ninth-grade classes to make up a sample population of 103 students and dividing them into two groups, this research compared a choice and no-choice condition based on students’ level of engagement and assessment outcomes using a switched replications procedure. To obtain this data, quantitative and qualitative methods were employed. Assessment scores from weekly quizzes and a unit test served as the quantitative data while an observation form and focus group responses from randomly selected participants made up the qualitative data. An Analysis of Covariance (ANCOVA) was used to analyze the quantitative data and triangulated between the observed behaviors and categorized responses elicited from the focus group interviews. All necessary protection of human subjects and ethical procedures were conducted prior to the research study, including the distribution and acquisition of both students’ and their families’ informed consent as well as permission to conduct the study in the selected research site from the principal and superintendent.

In an effort to respond to the gaps in the literature and add insight to the field, this research study investigated the impact of choice among differentiated instructional activities on student engagement and learning while obtaining insight about both teacher and student perceptions in using this instructional innovation. Overall, the hope was to gain a deeper understanding of this combined instructional practice so educators can use this information to more effectively engage their students and improve their achievement outcomes. The results of this study contribute to the field and add to the literature aimed at meeting the individual needs of diverse learners.
Chapter IV: Research Findings

The purpose of this chapter is to report the findings of a mixed methods study focused on the impact of choice on student engagement and learning in a differentiated history class. Quantitative data collected during the study includes student scores on classroom activities, weekly quizzes, and a unit test at the conclusion of four instructional weeks. Qualitative data includes recorded and transcribed focus group interviews to elicit students’ perception of choice and its impact on their engagement in learning and on their learning. In addition, the instructor-researcher observed students during classroom instruction and noted behaviors evidencing the impact of choice or lack of choice on students’ engagement and learning. The analysis of these three sources of data will help explain how students’ engagement and learning is impacted by choice in a differentiated history class.

In this chapter, the first section will discuss the purpose of this study. After discussing the purpose, the second section will present the results and the analysis of the quantitative data using an analysis of covariance between the two groups participating in the switched replication research design as it relates to the first research question. The third section will focus on the qualitative data, which is divided into four sub-sections: teacher observations, student perceptions about activities used during the study, a thematic analysis as it relates to the second research question, and additional student commentary useful in the analysis of the findings.

Purpose of the Study

The main goal of this study was to investigate the impact of choice on students’ engagement and learning a ninth grade differentiated history class providing students with the choice of types of activities or lack of choice. Educators in secondary heterogeneous classrooms face a unique challenge in accommodating a wide range of diverse learners influenced by a
number of factors including race, gender, economics, learning styles, learner preference, interest, motivation, learning abilities, and learning disabilities (McTighe & Tomlinson, 2006). Students enter the classroom not only with one of these factors, but also with combinations of them. Teachers experience difficulty in this setting because they must accommodate these children while ensuring all demonstrates proficiency in learning. Research has shown many benefits exist with using either choice or differentiated instruction in the classroom (Brighton, Brimijoin, Callahan, Conover, Hertberg, Moon, Reynolds & Tomlinson, 2003; & Cooper, Patall, & Wynn, 2010); however, no research has attempted to combine both instructional innovations. Implementing choice among differentiated activities will reverse the role of accommodating learning styles to the student. By making their own choices, students can select activities they perceive to be their most successful avenue for learning, leading to the proficient acquisition of knowledge educators are trying to instill upon their students.

This study used choice within a differentiated context employing a switched replications research design. A switched replications design allows both groups being compared in the study to gain exposure to choice among activities and allows a statistical analysis of potential impact on students’ learning. With both groups receiving exposure to choice, the researcher can precisely identify whether choice may have impacted learning. The specific impact choice has upon student engagement and learning can inform teacher practice moving forward by enhancing lesson preparation practices and the facilitation of learning. Educators will be able to create instructional contexts where students have control of their own educational experience.

To obtain insight to this impact, the researcher collected quantitative data derived from classroom activities, quiz scores, and unit test grades. These scores measure student performance in a context with choice and without choice on activities across two groups. Four
focus groups were also conducted comprised of six to eight randomly selected students per focus group. The focus groups allowed the researcher to collect and analyze students’ perceptions of how choice impacted their engagement in learning and their learning. The specifics related to these results are discussed in the following sections.

**Quantitative Findings and Analysis: Comparing Students’ Activity Scores With and Without Choice**

For the quantitative portion of this mixed methods study, the researcher recorded both assessment and activity scores over four instructional weeks using a switched replications design. In using this research design, groups A and B were directed to complete activities during the first instructional week. In week two, group A had a choice among differentiated activities, including inductive writing, drawing, or graphic organizer, while group B remained in a classroom context where they were directed to complete activities. During week three, the roles reverse, providing group B with the opportunity to choose among activities while group A was directed. Finally, both groups had the opportunity to choose during week four.

Table 2

*Switched Replication Research Design over Four Instructional Weeks between Groups A and B*

<table>
<thead>
<tr>
<th>Instructional Week</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>No Choice</td>
<td>No Choice</td>
</tr>
<tr>
<td>Week 2</td>
<td>Choice</td>
<td>No Choice</td>
</tr>
<tr>
<td>Week 3</td>
<td>No Choice</td>
<td>Choice</td>
</tr>
<tr>
<td>Week 4</td>
<td>Choice</td>
<td>Choice</td>
</tr>
</tbody>
</table>
After collecting the data over four weeks of instruction to assess whether student choice of activities impacted student learning, the researcher performed several analyses. First, the researcher compared the mean and standard deviation of weekly quiz scores for groups A and B, with and without choice. Secondly, the researcher compared weekly quiz scores for groups A and B in weeks two and one, three and one, four and two, and four and three. Included in this comparison is an analysis of covariance. An analysis of covariance (ANCOVA) is “a statistical technique for equating groups on one or more variables when testing for statistical significance” (Fraenkel, Hyun, & Wallen, 2012, p. G-1). Third, the researcher calculated the percent of students choosing one or another activity (inductive writing, drawing, or graphic organizer) for each occasion when offered choice. Finally, the researcher compared activity scores when students had choice among activities versus when they did not have choice. The tables below present the results for each set of data followed by a discussion and analysis of these findings.

**Comparison of learning with vs. without choice as assessed through an analysis of the weekly quiz scores.** Table 3 compares the mean and standard deviation of weekly quiz scores for groups A and B over the four weeks of instruction. The mean quiz scores for group A in week 1 versus week 2 shows students had higher scores during the direct instructional week. Students had a mean score of 85.2 and a standard deviation of 16.1 during the direct instructional week and a mean score of 84.8 and standard deviation of 12.3 when students had the opportunity to choose. When analyzing weeks three and four, the data shows students scored higher in the week with direct instruction than with the opportunity to choose. When students did not have a choice in week 3, they earned a mean score of 83.4 with a standard deviation of 7.7 whereas they earned a mean score of 75.7 and a standard deviation of 12.6 in the week they had the opportunity to choose activities. After comparing week 2 and 3, the data shows students had
higher scores during the week they had choice with a mean of 84.8 and a standard deviation of 12.3 whereas students had a mean score of 83.4 and a standard deviation of 7.7 in the week students were directed to complete activities. An analysis of variance showed no significant difference in the scores for group A in weeks where they had the opportunity to choose versus weeks they were directed to complete activities.

Table 3

*Comparison of learning with vs. without choice as assessed through an analysis of weekly quiz scores*

<table>
<thead>
<tr>
<th></th>
<th>Week 1: No Choice</th>
<th>Week 2: Choice</th>
<th>Week 3: No Choice</th>
<th>Week 4: Choice</th>
<th>Week 5: No Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment</strong></td>
<td>Quiz</td>
<td>Quiz</td>
<td>Quiz</td>
<td>Quiz</td>
<td>Unit Test</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>85.2</td>
<td>84.8</td>
<td>83.4</td>
<td>75.7</td>
<td>85</td>
</tr>
<tr>
<td><strong>Standard Deviation</strong></td>
<td>16.1</td>
<td>12.3</td>
<td>7.7</td>
<td>12.6</td>
<td>9.5</td>
</tr>
<tr>
<td><strong>Group B</strong></td>
<td>Week 1: No Choice</td>
<td>Week 2: No Choice</td>
<td>Week 3: Choice</td>
<td>Week 4: Choice</td>
<td>Week 5: Not Treatment</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>Quiz</td>
<td>Quiz</td>
<td>Quiz</td>
<td>Quiz</td>
<td>Unit Test</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>82.1</td>
<td>86.5</td>
<td>82.7</td>
<td>73.3</td>
<td>83.5</td>
</tr>
<tr>
<td><strong>Standard Deviation</strong></td>
<td>17.4</td>
<td>11.6</td>
<td>5.9</td>
<td>11.4</td>
<td>10.7</td>
</tr>
</tbody>
</table>

Similar results are also shown in Table 2 for group B. The mean quiz scores in weeks 1 and 2 where students did not have a choice are higher than weeks three and four when students had choice. During weeks 1 and 2, group B students had mean scores of 82.1 and 86.5 and standard deviations of 17.4 and 11.6. In weeks 3 and 4, group B students had mean scores of 82.7 and 73.3 and standard deviations of 5.9 and 11.4. This shows a drop in scores between both choice weeks. Again, after conducting an analysis of variance, no significant difference existed between the scores.

**Assessing the impact of choice vs. no choice on students’ learning.** To statistically assess whether choice impacted students’ learning, an ANCOVA was employed. Table 4-6
comparisons quiz scores in weeks two and one, three and one, four and two, and four and three for groups A and B. Weeks two and three were compared to week one because it served as baseline data where both groups were in the direct instructional context. By comparing instructional weeks four and two and four and three, the researcher examined two choice weeks as well as choice versus direct instruction depending on the group. For example, weeks two and four were both choice weeks for group A whereas weeks one and three were direct instructional weeks.

The opposite is true for group B with direct instruction for weeks one and two while choice was provided in weeks three and four.

Table 4

Comparing Quiz Scores for Weeks 2-1, 3-1, 4-2, and 4-3 for Group A

<table>
<thead>
<tr>
<th>Instructional Week</th>
<th>Group A</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Week 1 No Choice</td>
<td>Week 2 Choice</td>
<td>Weeks 2-1</td>
<td>Week 1 No Choice</td>
</tr>
<tr>
<td>Mean</td>
<td>Quiz</td>
<td>Quiz</td>
<td>-0.3</td>
<td>Quiz</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>16.1</td>
<td>12.3</td>
<td>-3.8</td>
<td>16.1</td>
</tr>
</tbody>
</table>

Table 5

Comparing Quiz Scores for Weeks 2-1, 3-1, 4-2, and 4-3 for Group B

<table>
<thead>
<tr>
<th>Instructional Week</th>
<th>Group B</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Week 1 No Choice</td>
<td>Week 2 Choice</td>
<td>Weeks 2-1</td>
<td>Week 1 No Choice</td>
</tr>
<tr>
<td>Mean</td>
<td>Quiz</td>
<td>Quiz</td>
<td>4.4</td>
<td>Quiz</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>17.4</td>
<td>11.6</td>
<td>-5.7</td>
<td>17.4</td>
</tr>
</tbody>
</table>
### ANCOVA Summary of Quiz Scores comparing Weeks 2-1, 3-1, 4-2, and 4-3 for Group A and B

<table>
<thead>
<tr>
<th>Instructional Week</th>
<th>ANCOVA Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weeks 2-1</td>
<td>F (1, 26) = 0.1</td>
</tr>
<tr>
<td>Weeks 3-1</td>
<td>F (1, 26) = 0.4</td>
</tr>
<tr>
<td>Weeks 4-2</td>
<td>F (1, 26) = 0.7</td>
</tr>
<tr>
<td>Weeks 4-3</td>
<td>F (1, 26) = 0.8</td>
</tr>
</tbody>
</table>

When comparing weeks two and one for group A, the difference between the mean scores is -0.3 while the difference in standard deviation is -3.8, suggesting students scored higher during week 1 when the instructor used direct instruction. The same is true for students in weeks three and one with a -1.7 difference in mean score and -8.4 difference in standard deviation.

When comparing both choice weeks for group A, the data shows a -9.1 difference in mean and 0.3 difference in standard deviation. This difference in mean and standard deviation suggests students had lower scores during the second week group A had the opportunity to choose.

Again group B showed similar results. After comparing weeks two and one, the difference in mean scores was 4.4 while a standard deviation of -5.7. Since weeks one and two were direct instructional weeks for group B, this data suggests students’ scores increased during the second week of direct instruction. A wider deviation from the mean occurred with a -11.5 when comparing weeks three and one, yet there was a slight increase in the mean by 0.6. This
data suggests group B students performed higher when they had the opportunity to choose. Finally, when comparing weeks four and three, which were both choice weeks for group B, students mean scores decreased by -9.4, which is almost identical to group A’s comparison of both choice weeks. The standard deviation also increased when comparing weeks four to three by 5.6 points.

While there were differences in mean scores and standard deviations, an ANCOVA indicated that there was no statistical difference between the two groups dependent on choice or no choice in types of activities. When conducting ANCOVA between the weeks listed above in both groups, the researcher compared how each individual student performed on the quiz during weeks providing choice among activities versus weeks with direct instruction. In this case, the ANCOVA in the context of this switched replications study allowed the researcher to determine whether providing choice or no choice across groups impacted student learning. Across all comparisons of choice vs. no-choice, there were no significant differences identified in students’ learning as measured through the teachers scoring of the individual activities.

**Students’ Preferences for Kind of Activity**

Table 7 shows how frequently students chose a particular activity over the four instructional weeks when given choice. Overall, in both groups, students chose the graphic organizer most frequently. As shown below, students in group A chose the graphic organizer 66% of the time when they the opportunity to choose while students in group B chose it 69%. The writing activity was chosen the least chosen with 7% for both groups. The drawing activity was chosen almost just as frequently in both groups with 27% for group A and 24% for group B. In sum, both groups made similar choices among activities and tended to favor drawing and graphically organizing information instead of writing.
Table 7

*Overall Percentage of Activities Chosen*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Writing Activity</th>
<th>Drawing Activity</th>
<th>Graphic Organizer Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choice %</td>
<td>7%</td>
<td>27%</td>
<td>66%</td>
</tr>
<tr>
<td><strong>Group B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choice %</td>
<td>7%</td>
<td>24%</td>
<td>69%</td>
</tr>
</tbody>
</table>

**Comparing Students’ Learning Across the Writing, Drawing, and Graphic Organizer Activities when given Choice or No Choice.**

Table 8 shows a comparison of activity scores for weeks one and two and one and four for group A. The researcher compared these two weeks to see the difference in scores on activities during weeks students were provided a choice among activities versus weeks with direct instruction. Again, week one was used as baseline data where both groups received direct instruction. Group A was provided choice during weeks two and four. With respect to the writing activity, students in group A scored 5 points lower when they had a choice in week two. No difference occurred in standard deviation. In week four, students’ mean scores differed -2.5 points when provided choice and -3.5 points in standard deviation. The drawing activity showed similar results in week 2 with a -4.1 difference in means during the choice week, yet a 2.0 increase in standard deviation. In week four, the data shows students’ mean scores differed in points by -7.5 while the standard deviation differed by -5.8 when students chose the drawing activity. The graphic organizer showed the least difference in the comparison with no difference in mean scores and -1.1 difference in standard deviation in week 2. Week four also showed
slight differences in the mean with a -0.2 and a 2.9 increase in standard deviation when students had a choice.

Table 8

Comparison of Activity Scores for Weeks 1-2 and 1-4 for Group A

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weeks 1-2</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=3</td>
<td>N=11</td>
<td>N=13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Week</td>
<td>1 2 Diff</td>
<td>1 2 Diff</td>
<td>1 2 Diff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>91.7 86.7 -5.0</td>
<td>90.4 86.3 -4.1</td>
<td>91.2 91.2 0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>7.6 7.6 0.0</td>
<td>14.4 16.4 2.0</td>
<td>6.1 5.06 -1.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Weeks 1-4

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weeks 1-4</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=2</td>
<td>N=6</td>
<td>N=22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Week</td>
<td>1 4 Diff</td>
<td>1 4 Diff</td>
<td>1 4 Diff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>95 92.5 -2.5</td>
<td>90 82.5 -7.5</td>
<td>93 92.7 -0.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>7.0 3.5 -3.5</td>
<td>17.6 11.7 -5.8</td>
<td>6.4 9.4 2.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9 shows a comparison of activity scores for weeks one and three and one and four for group B. Like group A, the purpose of comparing these particular weeks was to analyze the differences in mean and standard deviation scores between weeks students had a choice versus direct instructional contexts. Week 1 was used as baseline data. Since no students chose the writing activity during week three, no comparison could be provided. In week three, the mean score differed from week one by -3.3 while the standard deviation increased by 1.7 when students chose the drawing activity, suggesting students had a more successful performance in the direct instructional context. When students chose the graphic organizer in week three, the mean increased by 1.6 and the standard deviation increased by 0.3, showing students performed more successfully in the choice context.

When students from group B chose the writing activity in week 4, the mean increased by 8.3 while the standard deviation differed by -5.8, suggesting more successful performance in the choice context. When students from group B chose the drawing activity in week 4, the mean
increased by 1.4 while standard deviation increased by 2.2. Again, this suggests students had a more successful performance when they could choose the drawing activity in week 4. Unlike week 3, when students from group B chose the graphic organizer in week 4, the mean differed by -1.4 and the standard deviation increased by 2.2, which is almost identical to student performance with respect to choosing the drawing activity.

Table 9

Comparison of Activity Scores for Weeks 1-3 and 1-4 for Group B

<table>
<thead>
<tr>
<th>Group B: Weeks 1-3</th>
<th>N=0</th>
<th>N=5</th>
<th>N=15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Writing</td>
<td>Drawing</td>
<td>Graphic Organizer</td>
</tr>
<tr>
<td>Instructional Week</td>
<td>1</td>
<td>3</td>
<td>Dif</td>
</tr>
<tr>
<td>Mean</td>
<td>95</td>
<td>91.6</td>
<td>-3.3</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>8.7</td>
<td>10.4</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>8.6</td>
<td>8.9</td>
<td>0.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weeks 1-4</th>
<th>N=3</th>
<th>N=7</th>
<th>N=25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Writing</td>
<td>Drawing</td>
<td>Graphic Organizer</td>
</tr>
<tr>
<td>Instructional Week</td>
<td>1</td>
<td>4</td>
<td>Dif</td>
</tr>
<tr>
<td>Mean</td>
<td>90</td>
<td>98</td>
<td>8.3</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>8.7</td>
<td>2.9</td>
<td>-5.8</td>
</tr>
</tbody>
</table>

Summary. In sum, the data showed mixed results with respect to how having the opportunity to choose impacted students’ assessment performance. After several analyses, students more frequently earned higher assessment scores in direct instructional contexts. In fact, in some cases, students’ scores increased in their second week of direct instruction and decreased between weeks in the choice context; however, the assessment data for weeks three and one in group B did show an increase within the choice context. Whether the direct instruction or choice context showed higher assessment scores, an ANCOVA analysis showed no statistical significance in the difference.

With respect to activity scores, the results were also mixed. The data shows students most frequently chose the graphic organizer with the drawing activity at a distant second. The
writing activity was the least chosen activity by far. When comparing scores for activities, students had higher mean scores during direct instructional weeks. However, group B showed higher mean scores during week 3 with the opportunity to choose the graphic organizer. In addition, group B showed higher mean scores with the opportunity to choose the writing and the drawing activity during week 4, yet lower scores when in the choice context for the graphic organizer.

Research Question #2: How does student choice in the context of a differentiated social studies classroom impact student learning and students’ engagement in learning in contrast to direct instruction as perceived by (1) the teacher and (2) students?

Research Question 2 will be answered through an analysis of students’ responses to questions in the focus group, as well as through analysis of the teachers observations

Student perspectives: focus groups.

For the qualitative portion of this mixed methods study, the researcher conducted four separate focus group interviews using a total of 27 participants to elicit students’ perspectives about the impact of choice on their engagement and learning. Two focus groups consisted of six participants with three males and three females. A third focus group had seven participants containing six males and one female. The final focus group consisted of eight participants, including six males and two females. The focus group participants were randomly selected using a random number table. The researcher generated a list of potential participants based on the random sample and asked for volunteers. Informed consent was already obtained from all participants and their parents prior to the random sample. Next, the researcher formed the groups based on the days volunteers could meet, planning to get six to eight participants for each group.
All participants were randomly selected from five 9th grade World Cultures classes. This population is heterogeneously grouped, ranging from students with individualized education and 504 plans to those reading above grade level. Participants in the focus group interviews were also part of the four weeks of instruction using the switched replications design and, therefore, experienced choice and direct instruction twice during the study. The participants were asked several questions to elicit feelings about engagement and learning with respect to choice in the classroom. Table 10 lists the 11 questions asked to all four focus groups during the interview. Each question was designed to elicit students’ perspectives about the impact choice had on their engagement and learning.

Table 10

*Focus Group Protocol*

1. Over the past four weeks, we’ve learned about two different topics. Did you like one topic better than the other? Which one? Why?

2. After studying these two topics over the past four weeks, did you find either one to be more challenging? Which one? Why?

3. What types of classroom activities help you learn best? Please be specific.

4. When you engage in your preferred classroom activities, how do you feel it impacts your test or quiz performance? What makes you feel this way?

5. The material was presented in two ways: with choice among activities and without choice. Which condition did you like better, the choice condition or no-choice condition? Why?

6. How did having a choice among differentiated activities make you feel about learning? Why?

7. What did you like and/or dislike about having the opportunity to choose among differentiated activities? Why?

8. Does having the opportunity to choose among differentiated activities increase or decrease your interest in the topic being studied? How?
9. In reflecting upon your learning experience over the last four weeks, did you feel like you learned more when you had a choice among activities or when you were directed to complete an activity by your teacher? Why?

10. Would you encourage other teachers to use choice among classroom activities? Why or Why not?

11. Do you have anything else you would like to add? If so, please explain.

Focus groups allow participants not only to share their responses to the questions, but also hear other’s responses. In such cases, participants in focus groups “offer additional comments beyond what they originally had to say once they hear the other responses” (Fraenkel, Hyun, & Wallen, p. 457). The responses offered by students during the interviews allowed the researcher to gain deeper insight into the feelings, reactions, and perspectives related to choice in the classroom. Focus groups ranged from 35-54 minutes, in length.

Coding

According to Creswell (2009), “Coding is the process of organizing the material into chunks or segments of text before bringing meaning to the information” (p. 186). Interviews were recorded, transcribed, coded, and analyzed for common themes for the purpose of identifying student perspectives about engagement and learning as they relate to choice in the classroom. Specifically, the researcher intended to identify feelings about engagement, learning, specific activities, choice versus direct instruction, and any other miscellaneous responses emerging in the process.

While analyzing the interview data, the researcher followed three basic steps: organizing and preparing the data, reading through the data, and to develop a coding process. As Creswell (2009) writes, analysis “is an ongoing process involving continual reflection about the data,
asking analytic questions, and writing memos throughout the study” (p. 184). After all the data was transcribed, the researcher read through all the transcriptions in order to “obtain a general sense of the information and to reflect on its overall meaning” (Cresswell, 2009, p. 185). While reading through the transcriptions, the researcher highlighted any significant quotes related to the research questions.

After obtaining a general sense of the data, the researcher went through several cycles of values coding. “Values coding is the application of codes onto qualitative data that reflect a participant’s values, attitudes, and beliefs, representing his or her perspectives or worldview” (Saldana, 2009, p. 89). In this case, the researcher wanted to learn about students’ perspectives on how choice impacted their learning and engagement. After developing codes, the data was categorized accordingly. Following this coding and categorization process, common patterns related to engagement and learning were identified. As Saldana (2009) writes, “coding is thus a method that enables you to organize and group similarly coded data into categories or ‘families’ because they share some characteristic—the beginning of a pattern” (p. 8).

Themes were identified in the transcribed focus groups interviews and the teacher observation notes. The themes derived from these documents, in conjunction with the quantitative data, were triangulated to address the research questions, provide evidence, and support an investigation about the impact of choice on student engagement and learning in a differentiated classroom. According to Fraenkel, Hyun, and Wallen (2012), “When a conclusion is supported by data collected from a number of different instruments, its validity is thereby enhanced” (p. 458). In this case, the instruments selected were focus group interviews, teacher observation notes, and students’ performance in the classroom providing a practical research design maximizing the enhancement of the researcher’s conclusions at the end of the study.
Responses related to Research Question #2 were predominately discussed by randomly selected students in the focus group interviews. Several themes emerged from the focus group data. The themes suggest having the opportunity to choose increased engagement in learning as well as access to learning. Some miscellaneous ideas surrounding engagement and learning also emerged in the focus group interviews. In addition, themes emerging from the teacher observation notes supported those derived from the focus group data. Table 11 presents the themes identified by the researcher in the analysis of focus group interview transcriptions.

Table 11

**Themes in relation to the question: How does student choice in the context of a differentiated social studies classroom impact student learning and students’ engagement in learning in contrast to direct instruction as perceived by the students?**

<table>
<thead>
<tr>
<th>Focus Group Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having the opportunity to choose the activity increased engagement in learning</td>
</tr>
<tr>
<td>• Participant could choose an activity where they perceive more successful performance</td>
</tr>
<tr>
<td>• Participant put more effort into the assignment when chosen</td>
</tr>
<tr>
<td>• Participant developed a sense of ownership in the activity</td>
</tr>
<tr>
<td>Having a choice in activity increased their access to learning</td>
</tr>
<tr>
<td>• Participant perceived choice as more enjoyable</td>
</tr>
<tr>
<td>• Participant perceived choice as a more effective learning experience</td>
</tr>
</tbody>
</table>

**Feelings about activities.** Before discussing the various themes emerging within focus group and teacher observation data, a general discussion regarding students’ perceptions about each activity is necessary. The activities implemented during the study had three basic designs: inductive writing, drawing, and using a graphic organizer. Inductive writing activities required students to write from within the historical context they are learning. For example, a student
may have to write a journal entry discussing their journey on one of Columbus’ ships and events that occurred when they encountered Native Americans for the first time. The drawing activity required students to draw illustrations based on the material being learned. The graphic organizer activity had a central idea connected to four subtopic boxes related to that idea. To stay with the Columbus example, students would draw pictures illustrating Columbus’ voyage and first encounters with Native Americans whereas the graphic organizer activity asked students to organize the information using shapes and arrows.

The focus group data indicated students chose one of the three activities for certain reasons. With respect to the writing activity, one student explained,

Well I did the writing activity, like the journal activities and stuff. And I thought…if you like it more, like what your homework is, that you’re obviously going to remember it better. I think if you’re enjoying what your homework is, then you’re going to remember it better.

Another student shared a similar comment about the drawing activity:

I don’t know. I liked the drawing because it was easier for me to understand. Like an image is easy for me to remember because I’m like, I know the face almost. Well, say like, Leonardo Da Vinci was a word, and like, if I…remember like a drawing…like a painting he did, that would like help me to like remember more about him…

In both cases, students tended to choose activities simply because they liked them and thought the assignment was easier to understand. Students chose the graphic organizer for various reasons. As one student said,

Uh, I felt like, I feel the graphic organizer, it made me actually want to learn it, and if you were, since we, if we were forced to do something, I would, like, procrastinate at home,
and, like, not, like, care about it, but if I'm actually doing something that I want to do, I
would actually just be focused on that thing, and that thing only, nothing else, you know,
around me.

Another reason involved the breakdown of the graphic organizer, asserting

  Cause it [graphic organizer] breaks down the sections, and the, like, smaller sections, so
  those are quick and easy, and you can just read through them to get all the information
down... You can get most of the information from the section. It's also easy to
understand... Like it's easily broken down.

Finally, another student explained how useful the graphic organizer was for studying. “Cause,
like, it's easy to look at each section that's broken down, so you can know, like, what parts you
should study for the test. It's an easier studying tool than the drawing, or, like, any other, uh,
activity.” In sum, students chose the graphic organizer activity because it broke down the
information, was useful for a study tool, and motivated them to learn.

With respect to students’ perceived impact on engagement in learning, students from all
focus groups made comments indicating the opportunity to choose increased their engagement in
learning. Specifically, students felt they could choose an activity where they perceived greater
likelihood in successful performance; students felt they put more effort into assignments when
they had the opportunity to choose; students developed a sense of ownership in the activity they
chose; students perceived the assignment as more enjoyable with the opportunity to choose; and
participants perceived choice as a more effective learning experience. All perceptions are
relative to participants becoming more motivated or engaged in the activity because they had the
opportunity to choose. In addition, perceptions demonstrate the students’ increased ability to
learn the material within the context of the choice treatment.
Theme 1: Student could choose the activity they believed they would be more successful in and learn. According to the focus group data, students’ choices are motivated by whether or not they will be successful on one of the three activities. For example, if a student is not comfortable with their writing ability, they may choose the drawing activity instead because they will perform more successfully than they would if he or she had to write. One student thoroughly explains this point:

Yeah, I like the choice also because…if you like do better at something and like, if you do better at drawing then you would do at like writing, then you can like pick that, which would help you do better and like kind of help you study more.

As the quote suggests, the student made a choice perceived as a more successful avenue for learning. Another student made a similar comment, reinforcing the idea of choosing for more successful performance on the activity:

I agree with everyone that the choice will keep someone’s interest. Because I mean, back to like everyone learns differently, like personally, I can’t draw, so I would not, so if I were to do the drawing activity, I would not be able to learn from that…It’s just like, so everyone has a different learning experience, so like, if you didn’t like that, if your not good at that that act, if your not good at something, at like one of the assignments you’re not going to want to learn from it. So with that choice, you’ll be like, the person would be like, okay, I know I don’t want to do that, let’s see what else there is, okay, so I like that. So…let’s say, the graphic organizer, they’ll do that and they’ll be like, you know, do the work. So like, um, it’ll like make them want to learn more because they aren’t doing something that they don’t want to do.
Without naming any specific activities, another student spoke in a general sense and compared making choices in the classroom to playing a desired position in baseball:

> Well to me, the idea of choice kind of relates to like a sport…because by choosing an assignment that you like, you can learn better. And like if you’re like playing baseball you, by like choosing your position to play, it makes you learn better than like being stuck with something that you don’t want to play, like being stuck in the outfield or something like that."

Finally, another student explained how choosing activities not only created a perception of more successful academic performance, but also alleviated anxiety about performing unsuccessfully:

> Um, like when you get a choice your not nervous about getting a bad grade on it because it’s something that your good at doing and that you like to do. So you know that you’re going to get a pretty good grade on it, rather than something that you don’t choose and maybe you’re not good at it. So you get kind of scared that you’re going to get a bad grade on it, like due to the fact that you don’t really understand it or your not good at it.

These comments suggest students choose activities they perceive as more successful, specifically, by selecting activities suitable to their learning preference, avoiding activities perceived as unsuccessful, not being forced to complete activities failing to meet their individualized needs, and because it alleviates the anxiety associated with performing a task unsuccessfully. In addition, these perceptions insinuate when students have a choice, they have increased engagement in the activity. The fact students are strategically making choices to have a more successful learning experience indicates their engagement has increased with their ability to choose.
Theme 2: Students put more effort into the assignment when given a choice of activity. A common response in all focus groups interviews emphasized students put more effort into assignments when they had the opportunity to choose. Each perspective revealed a unique insight as to the reason why choice enhanced students’ effort in the assignment. One student explained having a choice helped with gaining a confident understanding of the material and, therefore, enhancing students’ effort: “I think it helps to have a choice, because, like, with the choice, you feel like you'll pick the one that you like more, and, therefore, you'll put more effort into it, because you feel like you'll understand it more, and you'll do it better.”

Other students explained how choice provided opportunity to select assignments they perceived as more interesting, leading to enhanced effort in the assignment by making comments such as “Because like if people like actually get a choice in what they’re going to be doing, like pick what they want to be actually like interested in it and they’d put more effort into it.” One comment provided deeper insights by elaborating on details related to specific assignments when saying:

Because if someone like wants to write a story, like if they choose to write a story, they’re like, oh, now I’m going to go back there and get all this information so I can actually make a good story. So like they get more interested in it.

This point is significant because it not only demonstrates putting more effort into the assignment, but also specifically how the student enhanced effort by finding more information to make a more quality story.

Another student emphasized how having a choice not only enhanced effort, but also increased their motivation to complete the assignment:
When you have a choice, um, it basically gives you a reason to want to do the assignment, like, when I either get a graphic organizer, or the drawing activity, I would want to do my homework more often…and I learned more from it, but when I get an assignment that I dislike…I wouldn't do it at all, or I'd just put it off 'til the last second. Furthermore, this particular student asserted the absence of choice made her decide not to complete or procrastinate, in turn, putting less effort into the assignment.

More students compared the choice and no-choice contexts. All made negative comments regarding the context missing choice. As one student explained:

When you give us like the assignment I felt as though it’s like I didn’t like that. Because like it’s like people put less effort into it and they don’t learn from it I think. And then when we got to choose our assignments I felt as though…I wanted more than when I—than when you directed assignment to us. Because like you pick your own like assignment so it’s like easy—the graphic organize I prefer because it was like easier for me to study from than like the writing assignment.

Finally, another student asserted when an opportunity to choose exists, the activity was more interesting leading to enhanced efforts whereas no choice meant less effort or failing to complete the assignment, by saying “…it’s more interesting and I put more effort into what I want to do rather than, let’s say, I usually choose the graphic organizer and I put a-a lot of effort into it. And if I chose the writing activity, I feel like I wouldn’t put as much effort because I don’t want to really do that."

All comments discussed above suggest participants put more effort into the assignment when they have the opportunity to choose, providing more evidence that students demonstrate increased engagement when they can choose activities. Students found choice to promote deeper
understanding of the material to develop more quality assignments; students became more motivated to complete activities; and students were more likely to become disengaged when they did not have a choice among differentiated activities.

**Theme 3: Increased student ownership in the activity as a result of having choice.**

Student responses indicate a sense of ownership is related to the choice in activity. One student stated choice "Gives you a sense of ownership of it [the activity]. Like, I chose that." Another student more deeply explained why a sense of ownership is felt when choosing an activity versus being directed by comparing it to selecting a meal from a restaurant menu:

> It’s kind of like when you go to a restaurant. What if they only had one thing to choose? You’re like basically being told what to eat. You don’t want that…Yeah, like when you have like a whole menu, you’re like I want that, and you get to choose, and they give it to you.

This quote emphasizes the importance of choice and its relationship to ownership in the activity while rejecting the idea of being directed.

Several students expressed ownership in the activity by perceiving choice as a way of feeling more like an adult or independent. As one student explains, “when we have, um, the choice, it basically gives us a kind of adult look on the world, because we're not being told what to do. We have our own free right to choose what we have to do." Another student added, “Well since we’re basically young adults, you want to start being independent and making our own choices, whether it’s kind of the smallish things, like choosing what our homework assignment will be. I think it’s a start that makes us feel more adult-ish and independent."

Through this sense of independence and maturity, students also commented on a sense of responsibility accompanying their choice in activity. One student stated, “Because like, it
[choice] gives the kid a certain like sense of responsibility.” Another student added “I think since we’re young adults we’ll be able to choose and make our own decisions and have more responsibility. And I think that’s why we like choosing so much. And more opportunities to represent ourselves.”

The comments above show students have a pride and sense of ownership in the choices they make in the classroom. Specifically, comments state students like to make choices because it provides them with a sense of maturity, adulthood, and responsibility. On the other hand, these comments imply students do not like being directed, as expressed through the restaurant comparison, they don’t want to be force-fed information in the classroom the same way they don’t want to be forced to eat a meal at a restaurant. Overall, ownership in the activity demonstrates increased engagement in learning because students gain a deeper, more meaningful relationship with classroom activities by having the opportunity to choose.

Theme 4: Students perceived choice as increasing their learning because they were able to choose the activity they felt was more enjoyable. Students’ perceptions indicate learning was more enjoyable when they had the opportunity to choose activities. One student stated, "I thought it [choice] made learning, you know, a bit more enjoyable." Another student added, "It [choice] made me feel better about learning.” Other students had more elaborate responses, suggesting learning seems “better” when they can choose. “Like I feel like being in school as long as we have, and we’re just used to having no choice in what we do, and once we have a choice, it’s a lot nicer.” In reflecting upon prior classroom experience, one student explains opportunity to choose improved academic performance, which made the experience more enjoyable. “It's, either way, it needs to be done, but definitely having a choice really
improves the way I would actually work. Like, it...I feel like I actually did something that I actually, like, wanted to do."

Students also compared classroom contexts with choice versus those where the instructor directed them to complete assignments. All responses favored the opportunity to choose because it was a more enjoyable. As one student states:

“"I think I learned a lot more when I could choose what I wanted to do for homework. Because some of the homework I didn't like, I didn't do. And, like, the graphic organizer, I liked that, so I didn't mind doing it, and, then, stuff like the drawing, or the dialogue, I didn't want to do that 'cause I just didn't enjoy it.”

Another student added, "Having the choice made me want, like not care that I have to learn this stuff, because I enjoyed learning it more because I actually got to do like what I want to. Instead of what I’m forced to do.” While comparing choice versus no-choice contexts, one student explained how having a choice was not only more enjoyable, but also reduced procrastination:

"Um, I liked being able to choose the activity because it made it more enjoyable for me to do my homework and like actually complete it. Because I get bored and then I kind of just push it aside and I’m just like, oh, I’ll do it later. But then I just don’t.”

Having a choice also created a perception of learning as more fun and enjoyable while the no-choice context inhibited freedom of expression:

"Yeah, like I think it makes it more enjoyable. Because like the, like the choice one is a lot like funner to do, but like the… Funner’s not a word, sorry. More fun. And then like, say like the shop homework, you gave us, I found that extremely boring, because like you get like a set of question like, you can’t really have your own freedom on it. You have to
like do this, you can’t be like expressive really like, you can only like go in the, within the boundaries of those questions.”

Student perceptions discussed above all show choice among activities made their learning more enjoyable. Associated with the enjoyment of the choice condition were contributing factors, including perceived improvement in academic performance, increased likelihood for completing the activity, and reduced procrastination. These perceptions also showed students did not like no-choice contexts and direct instruction inhibited their freedom of expression. Altogether, these perceptions demonstrate choice among activities increased students access or ability to learn.

**Theme 5: Students perceived choice as increasing their learning because they were able to choose the activity they felt they could learn best in doing.** Students perceived classroom contexts with choice as a more effective learning experience than those with direct instruction, increasing access or ability to learn. Responses suggested students perceived the material as easier to understand when they had the opportunity to choose. One student said, "I wouldn't say it [choice] made it fun, but I would make say it, like, made it easier to understand, and made the information, like, easier to handle." Another response emphasized choice as being the reason for better comprehension, grades, and overall understanding. "And, uh, when they [teachers], like, give you choices…[students] have a better understand of it, they get, like, a better education off of it, and, uh, they learn a lot more, and it'll just, like, uh, increase their education, and grades." A student added, “just having the freedom just makes it much better and much more like easier to learn.”
Several students also indicated having the opportunity to choose increased their understanding of the material. One student reinforced this idea and perceived the activity to take less time:

If you actually like enjoy doing it [the activity], it’ll seem that it’s easier to you and make it like easy to remember all your facts. And it goes faster. Like when you’re enjoying something, it doesn’t drag on as long, especially with like homework and things because like no one wants to be sitting down for like hours.

Another student added to this point by stating:

Like if you choose yours then it’s like a better understanding of what you’re writing and a better understanding of like the section. Like for me it was better understanding for like the whole thing. Other than you choosing the assignment for us it wasn’t—it was less understanding for me. So I couldn’t really like get it. So I feel as though choosing your assignments would be like—it like increases like your understanding of like the sections.

More participants reinforced these notions making statements such as “Yeah, when I got to choose my assignments it was a better understanding of like the concept of, like, everything. So I got like a better understanding of it [the topic].”

Other students began comparing classroom contexts providing choice and those with direct instruction. Again, participants favored choice over direct instruction. Responses such as “Yeah, like if we got to like choose our assignments more often I feel as though more people are going to get good grades and they’re going to like—like, you know, get good grades and people that get like directed assignments they’re not going to do as well” helped illuminate students perceptions about choice its relation to learning. Another student said:
"No, like—like when I said like if we get to choose our assignments I feel as though more kids are gonna like succeed in this class than people getting a direct assignment. Well, it’s like depends on the type of person, like maybe somebody likes directed assignment to them, but I’m guessing like a lot more people want to choose."

A final comment favoring the choice context is “I would say that choice is a lot better than not having choice because it would boost the grades of students and also make them more interested in the work that they’re doing and may learn more." As discussed above, students perceive classroom contexts providing choice as a more effective learning experience. These perceptions are associated with feelings that choice makes the material easier to understand, increases understanding as well as interest, and students prefer choice contexts instead of direct instruction. All of these perceptions suggest the choice context increased students’ access or ability to learn the material.

**Theme 6: Additional student perceptions about learning through choice.** In addition to the major themes as described above, students commented on several perceptions about learning through choice throughout the focus groups. These perceptions included a dislike for being directed to complete activities, the ability to avoid activities students’ disliked, and the selection of activities they believed would serve them best as a study guide. These comments also suggest choice enhances student engagement and learning, as perceived by students in this study.

*Dislike for being directed to complete an activity without choice.* Perceptions regarding the dislike for being directed to complete activities were straightforward. One student explained, “I feel like when you can't choose what to do, you feel like you're forced to do it, and it just makes you want to put off more, because you feel like you have to." Other students found the
material boring or procrastinated more often when they were directed to complete activities. "When it gets more boring, when we're directed to do it we just look for a—we just try to blow it off." A student added to this point by expressing a “taste of freedom” in the choice condition while planning not to do the assignment when directed:

It was way more boring when you told us what to do and the taste of freedom definitely opened up our…minds and let us like focus more and we’re like, yeah, we’re gonna do it. I wasn’t going to do it when you told me what to do.

A student had even found the activity more difficult to complete when the teacher directed the participant to complete the assignment by asserting “it [direct instruction] makes it [the activity] harder to complete.”

Students appreciated the opportunity to avoid activities they disliked in the choice condition. Students felt as though having the opportunity to choose allowed them to avoid activities they disliked, which made learning easier. "There wasn’t really anything that I disliked. I mean, I chose the one that I liked, and I didn’t choose the one that I disliked. So it made it easier for me." Another example of this perception is explained in more detail about the drawing activity:

I strongly hated the drawing activity. I'm just not really a good, not really a good drawer, and, I don't know, I just, I can't really put, like, words into pictures. Like, they can't, like, make, like, a whole summary of the chapter into, like, one picture.

Speaking in general about avoiding disliked activities, a student explained, "Yeah. It just like falls right out of your head, and you forget what you’re doing. And then when you get home, it’s like, I was doing this? And you don’t even remember."
**Students appreciated the opportunity to choose the activity they felt they could learn best from and use as a study guide.** In some cases, students preferred the opportunity to choose because they could select an activity that would serve the dual purpose for learning and studying. One student shared this perception about the graphic organizer activity. "I like the graphic organizers. It helps me prepare for the quiz." Another student had similar feelings about the drawing activity. "Um, I enjoy the drawing activities, because it's easy for me to take words and long, like, sections, and put them into a small picture to remember everything."

**Teacher observation notes.** In addition to conducting focus group interviews and recording activity, quiz, and test scores, the researcher wrote observation notes everyday throughout the four instructional weeks. Specifically, the researcher recorded students’ observable behaviors demonstrating engagement and learning in the classroom. A coding and categorization process similar to the focus group interview data analysis was conducted for the teacher observation notes.

The researcher had prepared an observation protocol prior to the study listing specific behaviors representing evidence of engagement and learning, including student directed inquiry and academic rigor, students engaged in learning, and students simply on task. Observation notes were recorded and placed in the appropriate category every day during the four-week study. The researcher recorded behaviors when students were disengaged as well. Since the purpose of this study involves comparing choice and no-choice conditions, importance lies in not only understanding emerging behaviors when students are engaged, but also students’ disengagement. Analyzing both sets of behaviors will provide a more complete understanding of the impact of choice on student engagement and learning.
The teacher observation notes supported the themes above by indicating specific behaviors observed during the four weeks of classroom instruction. The researcher performed a similar analysis as the focus group interview data by compiling the observation notes, placing them into the aforementioned categories, and quantifying the frequency each observable behavior occurred. In addition, the researcher compared the frequency of the observed behaviors in the choice and no-choice contexts with the hopes of reinforcing students’ perceptions in the focus group interviews. Table 12 illustrates the themes and calculations identified by the researcher in the teacher observation notes as they relate to research question number two.

Table 12

Themes in relation to the question: How does student choice in the context of a differentiated social studies classroom impact student learning and students’ engagement in learning in contrast to direct instruction as perceived by the teacher?

<table>
<thead>
<tr>
<th>Teacher Observation Themes</th>
<th>No Choice:</th>
<th>Choice:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme 1: More student directed inquiry or academic rigor when provided choice among activities</td>
<td>4 (14%)</td>
<td>24 (86%)</td>
</tr>
<tr>
<td>Theme 2: More students engaged in learning when provided a choice among activities</td>
<td>4 (33%)</td>
<td>8 (67%)</td>
</tr>
<tr>
<td>Theme 3: More students on task when provided a choice among activities</td>
<td>1 (4%)</td>
<td>23 (96%)</td>
</tr>
<tr>
<td>Theme 4: More disciplinary action or redirection when students were not provided a choice</td>
<td>15 (71%)</td>
<td>6 (29%)</td>
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</table>
When coding the observation notes, the researcher used an observation protocol with four specific categories. The four main categories included student directed inquiry and academic rigor, students engaged in learning, students on task, and students disengaged. In order for an observable behavior to be selected for one of the particular categories, the researcher referenced a list of performance indicators reflecting the one of the four main categories. For example, if the researcher observed a student going beyond expectations listed in the instructions, this would involve applying higher levels of thinking and understanding and, therefore, was recorded in the category entitled “Student Directed Inquiry/Academic Rigor” (cite). Listing such categories and performance indicators provided the researcher with a practical way of observing classroom while also instructing the class.

The instrument used to record observation notes in this study allowed the researcher to not only record notes, but also indicate whether that particular observation occurred during a class providing choice versus a class directing students’ instruction. With respect to calculating the frequency of behaviors, the researcher compiled all observable behaviors, placed them in their appropriate categories, and checked whether they occurred in a choice or no-choice context. After following this procedure, the researcher could calculate the frequency of specific behaviors and the context in which they occurred. The observations and calculations are discussed below in further detail under the appropriate theme.

**Theme 1: More student directed inquiry or academic rigor when provided choice among activities.** The percentage of students observed to exhibit more student directed inquiry or academic rigor when provided choice amongst activities can be seen in Table 13.
Table 13

| Theme 1: More student directed inquiry or academic rigor when provided choice among activities | No Choice: 4 (14%) | Choice: 24 (86%) |

“Student directed inquiry and academic rigor” involves students problem solving, making authentic connections independently, and applying higher levels of thinking and understanding (cite). The most frequent piece of evidence representing this behavior involved students completing the drawing activity in the choice condition. “Those who chose the drawing activity used different approaches for completing the assignment. For example, some drew four quadrants with an additional box in the middle, totaling five squares in which to draw their pictures while others drew horizontal pictures using space on both sides of the worksheet.” Students were not required to make these adjustments in order to complete the assignment. They creatively organized the information to support the image they intended to draw. In addition, when calculating the frequency of student directed inquiry and academic rigor, 86% of the time these behaviors occurred during instructional weeks students were provided the opportunity to choose.

The focus group themes support these observations. The choice condition impacted how seriously one student approached an assignment, leading to enhanced academic rigor: “Yeah, I learned more, because I definitely… I read… I would actually care about what the answers were. I didn’t just write down what sounded like it was right.” Another student further explained this statement by asserting the amount of research involved when completing the writing activity was impacted during the choice condition, “Yeah, because you like, you kind of like, if they really like to write, they’re going to get excited and they’re going to want actually like go back and like
learn all the information to make it actually a good story.” A student added to this statement by saying “…if you get to like actually choose like what you’re going to be working on you’ll seem to put like more effort into it because like what you chose like…” Finally, a student argued the choice condition helped students learn more while the no-choice condition impeded efforts in the assignment: “if you choose something that you like, your actually going to like focus on it and end up learning more about it. Like, but if you do something you don’t like then your not really going to try hard on it, and your going to end up not learning much.” All statements suggest students place more effort into assigned tasks when they have a choice, implying higher levels of thinking and understanding and, therefore, academic rigor.

**Theme 2: More students engaged in learning when provided a choice among activities.**

The percentage of students observed to be engaged in learning when provided choice vs. no choice is presented in Table 14.

Table 14

<table>
<thead>
<tr>
<th>Teacher Observation Themes</th>
<th>No Choice: 4 (33%)</th>
<th>Choice: 8 (67%)</th>
</tr>
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<tbody>
<tr>
<td>Theme 2: More students engaged in learning when provided a choice among activities</td>
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“Students engaged in learning” involved students checking for understanding of assignment expectations, working actively on the assigned task, following directions, and performing manipulation of appropriate materials consistent with the assignment (cite). The majority of observations associated with these behaviors involved students simply engaged in the activity assigned to them or chosen. Observations read:

"Students chose an assignment after the instructor explained the expectations and emphasized that all assignments had the same level of difficulty and require the same
content. Students began reading the section and taking notes as directed by the instructor. Two students chose the writing activity, six chose the drawing activity, and twelve chose the graphic organizer activity."

Again, of all the observations where students were engaged in learning, 67% occurred when students had the opportunity to choose.

Students’ responses support these observed behaviors in the classroom. One student emphasized more engagement in learning with the opportunity to choose as opposed to direct instruction when stating,

I definitely agree. My homework average proved it, too. Like, when I had the choice to do it, I would put… Like actually do the work, and get through it, and like take the time, but when it was something I didn’t like, I kind of just like brushed it off.

Another student added to this point by explaining being directed to complete the assignment caused lower scores. Furthermore, the student eluded to the idea of apathetically completing the assignment when directed:

Yeah. Like I was getting 70s on one thing… Oh my god, it was horrible. I never got a 70 on homework in my life. And then I get a 70, I was like oh my god. Yeah, because I was being forced to do it, and like I wasn’t… I wasn’t doing it, just like writing random stuff down, but I don’t think I was trying as hard as I could have. Yeah. I was getting like 95s and 100s.

Finally, a student asserting having a choose in activity created more enthusiasm whereas being directed meant being less likely to complete it:

Um, I like the fact that you could choose because it gives you the freedom and it gives you that little, oh I’m happy now...Um, and it like makes you kind of more enthusiastic to
do it, but then I don’t like the graphic organizer because it makes you try harder. Like it makes you so that you have to try harder…

The comments above suggest students are not only more engaged in their learning when they have a choice, but also more enthusiastic about the activity while less engaged when directed.

**Theme 3: More students on task when provided a choice among activities.** The percentage of students observed to be on task when given choice vs. no choice of activities is presented in Table 15.

Table 15

<table>
<thead>
<tr>
<th>Teacher Observation Themes</th>
<th>No Choice: 1 (4%)</th>
<th>Choice: 23 (96%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme 3: More students on task when provided a choice among activities</td>
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</table>

“Students on task” is similar to students engaged in learning and involves a student performing a task or routine already modeled or highly familiar, writes notes as teacher directs, or reads text as teacher directs. Observations associated with this behavior involved students following the instructor’s directions and completing the assignment. “Students participated during the review of yesterday’s work. After the assignment was distributed and the directions were read, students began reading and writing notes. Most students left class with the assignment half complete.” When comparing the choice and no-choice conditions, 96% of the behaviors representing students on task occurred in the choice context.

Students may have remained on task more often within the choice context is because they developed a sense of independence with the opportunity to choose. As one student explains, having a choice provides “…a mature, uh, outlook at life, ’cause when you have choice, [it] definitely makes you feel, like, more independent in what you do.” Another comment suggests
the choice rendered feelings of independence, free will, and an alleviation of resenting the activity assigned:

I like, ah, being able to choose because like it makes you feel more independent like your kind of choices kind of, so like if you like, ah, if you really kind of, if you really don’t feel like dragged down by like what you assigned you can kind of have a free will kind of.

Finally, another student emphasized a sense of trust with the instructor because of the opportunity to choose.

You trusted us that we would actually do it, and not just pick it because it was easy.

Like, we, you trusted us that we would actually enjoy, to trying, you know, a different activity, or, or the activity that we liked.

Overall, the observations suggest students more frequently remained on task in the choice condition. These observations are supported by students’ feelings of trusting the instructor and a sense of independence in the choice condition, creating a scenario with more students on task.

**Theme 4: More disciplinary action or redirection when students were not provided a choice.** The percentage of students observed to require more disciplinary action or redirection when given choice or no choice of activities is presented in Table 16.

Table 16

<table>
<thead>
<tr>
<th>Teacher Observation Themes</th>
<th>No Choice: 15 (71%)</th>
<th>Choice: 6 (29%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme 4: More disciplinary action or redirection when students were not provided a choice</td>
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</table>

A student is “non-compliant or disengaged” when they were not doing the work assigned by the instructor, not following teacher directives, or if the instructor in any way had to redirect
the student. Each time the instructor had to speak to or redirect a student, the behavior was recorded. Such observations included students talking at inappropriate times. “Two students were spoken to for talking during the lecture. One student had to be moved to a different seat to avoid further disruption.” Another involved completing assignments hastily or not at all. “One student went through and completed the assignment as fast as possible and put away his materials. The instructor spoke with him and he continued adding details to his work.” Another student went to the restroom, came back to class, and then simply put away his materials. In any case, 71% of the observable behaviors where students were disengaged occurred during instructional weeks where they were not provided a choice among activities.

Student responses supported the fact more disciplinary action or redirection occurred when students were not provided a choice among activities. A student asserted there was a chance of not completing the assignment at all when directed:

…when you do things you don’t want to do, half the time you’re not even gonna bother doing it, and then you fail. It may seem like it’s your fault. In reality it’s not their fault, because they don’t want to do it because the teacher’s making them do it.

Another student simply stated, “when it’s boring you get less engaged in it. It’s like...you don’t pay as much attention.” Adding to this point, a student argued when the activity is perceived as boring, the result is procrastination or failure to complete the assignment:

…you put less effort into it…Then you like doze off and don’t think about the subject at all. You push it off as much as you can. I know I did. I pushed off your homework as much as I could because I didn’t have a choice. I really did. A lot of times I would push it off to the point where it’s like 9:00 at night and I’m like oh I’m tired. Good night.
In sum, occurrences where students needed to be redirected or the instructor had to take
disciplinary action happened in the context where a student was directed to complete an activity.
Student responses from the focus groups support these observations through descriptions of
boredom, inattentiveness, decrease in effort, disengagement, and procrastination.

**Summary of Findings**

The findings from this mixed-methods study came from three sources of data, including
students’ scores on classroom activities, quizzes, and a unit test, transcribed focus group
responses, and teacher observation notes. Students’ scores were collected over four instructional
weeks while the focus groups were conducted after this period. The teacher observation notes
were also written during the four instructional weeks. All data was gathered, coded, categorized,
and triangulated.

The findings from the focus group interviews show when students have the opportunity
to choose there are many benefits, as perceived by them and as recorded in the teacher-
researchers’ observations. Students stated that the opportunity to choose activities increased
engagement in learning as well as access to learning. With respect to increases in the
engagement in learning, participants would choose an activity where they perceive more
successful performance, put more effort into the assignment, and had a sense of ownership in the
activity chosen. Factors associated with increases in the access to learning showed participants
perceived choice as more enjoyable and a more effective learning experience. Miscellaneous
perceptions of choice included dislike for directed contexts, avoiding activities disliked in the
choice condition, and using the activity chosen as a study guide, in this case, most often choosing
to do the graphic organizer.
Teacher observation notes indicated students are more engaged when they have the opportunity to choose among activities. This was observed through such behaviors as students employing creative approaches to the assignments, remaining on task, and following instructions. Student responses supported these observations through a desire to obtain more information, gain deeper understanding, and put more effort into the activity chosen. In addition, the majority of disruptive behaviors or disengaged students occurred in contexts when students did not have a choice among activities. Again, these observations were supported by students’ responses, which indicated boredom, inattentiveness, decrease in effort, disengagement, and procrastination are all associated with direct instruction. Overall, these results contribute to gaining a deeper understanding about how choice impacts students’ engagement and learning in a differentiated classroom.

Chapter V: Discussion and Research Findings

Revisiting the Problem of Practice

Secondary educators in heterogeneous classrooms encounter a wide range of diverse learners requiring accommodations for a number of factors influencing their learning, including race, gender, language, economics, learning styles, learner preference, interest, motivation, learning abilities, and learning disabilities (Mctighe & Tomlinson, 2006). This educational context poses a unique challenge for secondary educators as they must accommodate according to multiple combinations of these influential factors affecting student learning. Secondary educators are required to identify both solitary and combined individual accommodations for every classroom student while designing activities and preparing instruction that produces the largest percentage of successful learning in the classroom. Teachers in heterogeneous contexts
must endure the difficulty of keeping a gifted student engaged and academically challenged while supporting a student struggling with the material.

With growing intervention from state and national governments, high stakes standardized testing has made this challenge even more complicated through time constraints, curricular limitation, and the need for students across the nation to demonstrate academic proficiency on standardized assessment. In particular, a secondary history class has an added level of difficulty because of the nature of the topic. Social studies is a discipline requiring an understanding of social and cultural perceptions, the investigation of abstract, open-ended concepts, and clear communication of ideas surrounding any historical or present-day context (Alexander-Shea, 2011). In addition, social studies teachers also have civic responsibilities associated with socializing students with specific knowledge, skills, attitudes, and values essential to becoming an active citizen in American democracy (Bailey, Hollifield, & Shaw, 2006).

Budget restrictions in Massachusetts has postponed the implementation of state-wide standardized test in social studies; however, social studies advocates have been pressuring legislators since 2009 (Vaznis, 2009, Feb. 25). Furthermore, a new evaluation system following the “Race to the Top” legislation will require social studies teachers—as well as other disciplines—to develop multiple forms of assessment data (MA DESE, Model System for Educator Evaluation, 2013). Accommodating a wide-range of diverse learners in a context promoting multiple, overarching, socializing objectives, including civic responsibilities, analysis of abstract concepts, research and writing skills, and sensitivity to social and cultural values in a practical manner on a daily basis is a unique and daunting problem of practice that must be addressed.
Numerous educators have used an instructional innovation known as differentiated instruction (DI) for the past twenty years to meet the demands associated with accommodating the wide range of educational needs among diverse learners. The effectiveness of DI is still a matter of debate among scholars; in fact, some practitioners are ambivalent about appropriate implementation (Brighton, Brimijoin, Callahan, Conover, Hertberg, Moon, Reynolds & Tomlinson, 2003). Roe (2010) has also emphasized the need for DI to be studied from a collective standpoint and examine it as a holistic educational process.

The use of choice in the classroom is another instructional innovation demonstrating a number of positive impacts on student achievement. The research surrounding the use of choice as an instructional innovation focuses on several areas, including autonomy support (Black & Deci, 2000), collaborative learning (Cianni, Summers, Easter, & Sheldon, 2008), autonomy and individual difference (Grolnick & Ryan, 1987), and classroom instruction (Cooper, Patall, & Wynn, 2010). Choice has been studied in various contexts, ranging from primary to higher educational settings. Though studies on choice have revealed a number of positive impacts on student learning across these educational settings, none have investigated the impact of choice within a differentiated secondary history classroom on students’ engagement in learning as well as their perceived impact on their engagement in learning.

Studying the impact of choice and DI in this context is significant because engagement is the foundation for learning. Students must first be engaged in the material before comprehending, applying, or synthesizing new information. To more deeply engage students in the learning process, more efficient strategies based on research must be carefully selected by educators to reach a wider range of diverse learners. In heterogeneously grouped classrooms, this challenge is enhanced significantly due to various levels of academic abilities in the
classroom. Within this context, instructors maintain the responsibility of ensuring all students meet learning objectives, despite the combinations of educational needs each individual requires to be successful academically.

Though educators employ DI to accommodate this educational challenge, this instructional innovation still requires the teacher directing students to complete assignments based on a perception of student readiness, interests, and learning profiles (Landrum & McDuffie, 2010). Yet students still must adapt to the instructor’s external control without determining a more individualized direction for learning, which could enhance their success in meeting educational objectives. The use of choice can create a genuine sense of engagement among students because they have control over their learning process. Implementing choice in the classroom has shown positive relationships with engagement, motivation, and student achievement (Fredricks, Blumenfeld, & Paris, 2004). Studying the combination of these two insights is a significant investigation because it could build on the understanding students’ inherent motivations with respect to engagement and learning.

This chapter is divided into the following sections: discussion of major findings, discussion of findings in relation to the theoretical framework, discussion of findings in relation to the literature review, limitations, conclusion, significance of the study, and future studies.

**Discussion of Major Findings**

Through the collection of quiz, activity, and unit test scores over four instructional weeks of a switched replication research design, four recorded and transcribed focus group sessions, and teacher observation notes, the researcher obtained a thorough investigation of how choice in a differentiated context impacts students engagement and learning as well as how both teachers and students perceive the impact. This section first presents the quantitative findings followed
by the qualitative. The quantitative discussion presents four major findings related to assessment and activity scores while the qualitative discusses five major themes that emerged during the focus group sessions, including three related to increased engagement in learning and two related to increased access to learning. Table 16 presents the major themes that emerged in the focus groups.

**Comparison of learning with vs. without choice as assessed through an analysis of weekly quiz scores.** When comparing quiz scores for group A in weeks students had choice versus when they did not, students earned higher scores when they did not have choice; however, an ANCOVA showed no significant difference existed between the scores. Group B showed similar results with higher scores in weeks they did not have a choice with no significant difference between the mean scores according to ANCOVA. Nevertheless, students scored above average on the unit test in both groups. Group A students earned an average mean score of 82.2 while group B students earned an 81.1, a difference of 1.1 points. This suggests regardless of the context, students scored above average on weekly assessments when activity products were differentiated.

**Assessing the impact of choice vs. no choice on student learning.** Another analysis compared quiz scores during specific weeks students had choice and when they did not, including weeks two and one, three and one, four and two, and four and three for groups A and B. Weeks two and three were compared to week one because the first week served as baseline data where both groups were in the no-choice instructional context. This allowed the researcher to not only compare choice versus no choice weeks, but also choice versus choice and no choice versus no choice. Again, students had higher scores during weeks they did not have choice in both groups. Furthermore, no mean scores, across all four weeks of instruction, had a quiz score below average. Overall, the lowest mean score between both groups was a 73.3. The ANCOVA showed no significant difference among scores.
Students' preferences for Kind of Activity. When students had the opportunity to choose activities, they most often chose the graphic organizer activity followed by the drawing activity. After calculating all the chosen activities, students chose the graphic organizer 66% of the time in Group A and 69% in Group B. Students chose the drawing activity 27% of the time in group A and 24% in group B. In both groups, students chose the writing activity 7% of the time. These results suggest when students have the opportunity to choose, they will select an activity more visually structured in presentation as opposed to text driven.

Comparing students learning across the Writing, Drawing, and Graphic Organizer Activities when given choice or no-choice. Activity scores were compared in weeks students had a choice versus when students did not have choice. For example, the score a student earned when directed to complete a graphic organizer activity versus when a student selected the graphic organizer in the choice context were compared. This allowed the researcher to see the difference in activity scores between these two contexts. In group A, students scored higher in the no-choice context among all activities. In group B, the results were slightly different. Students' scores showed mixed results with higher scores in the choice context for all activities with the exception of the drawing activity between weeks one and three (-3.3) and the graphic organizer between weeks one and four (-1.4). In both groups, regardless of the choice or no-choice condition, the average mean score across all activities was a 92, indicating a collection of positive student outcomes.

Conclusion of quantitative findings. To summarize the major findings of the quantitative analysis, the data shows mixed results but with positive student outcomes. No significant difference existed between students assessment scores in choice or no-choice conditions. These results were reinforced when comparing weeks two and one, three and one,
four and two, and four and three for groups A and B. Students clearly chose activities visual in representation such as the drawing and graphic organizer activities more often than writing assignments. In addition, students in group A scored higher on activities in no-choice conditions while group B had mostly higher scores in contexts with choice with the exception of two sets of activities. Finally, all students had above average scores on activities as well as assessment scores, suggesting positive student outcomes overall.

Table 17

Themes in relation to the question: How does student choice in the context of a differentiated social studies classroom impact student learning and students’ engagement in learning in contrast to direct instruction as perceived by the students?

<table>
<thead>
<tr>
<th>Focus Group Themes</th>
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<tbody>
<tr>
<td>Having the opportunity to choose the activity increased engagement in learning</td>
</tr>
<tr>
<td>• Student could choose an activity where they perceive more successful performance</td>
</tr>
<tr>
<td>• Student put more effort into the assignment when chosen</td>
</tr>
<tr>
<td>• Student developed a sense of ownership in the activity</td>
</tr>
<tr>
<td>Having a choice in activity increased their access to learning</td>
</tr>
<tr>
<td>• Student perceived choice as more enjoyable</td>
</tr>
<tr>
<td>• Student perceived choice as a more effective learning experience</td>
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</table>

Participant could choose an activity where they perceive more successful performance. A frequent theme among participants’ responses suggested students chose activities they perceived as a more successful avenue for learning. Students demonstrated this perception when explaining how choices were motivated by the ability to select activities they were more familiar or comfortable with completing. For instance, some students selected the
graphic organizer activity over the drawing activity because they were not confident with their ability to draw. Other students simply felt more comfortable with the idea of avoiding tasks they did not enjoy or lacked the ability to do efficiently. Adding to this sentiment, students also felt less motivated to learn and simply wanted to get through the activity when they did not have the opportunity to choose. On the other hand, students felt more motivated to complete activities more efficiently when they could choose. Finally, students explained the opportunity to choose alleviated anxiety associated with performing unsuccessfully on an assignment. These perceptions demonstrate a deeper level of engagement among students in classroom contexts providing choice among activities. The act of strategically selecting activities indicates their engagement has increased with their ability to choose.

**Students put more effort into the assignment when chosen.** Students’ responses emphasize an increase in the amount of effort placed in an assignment within a classroom context providing choice. Students perceived the activity they chose as more enjoyable; consequently, students tried harder and felt like the material was more easily understood. According to students’ perceptions, choice contexts also created deeper interest in the material, which enhanced effort in the activity. One response stated having the opportunity to choose the writing activity encouraged research for more information than usual in order to develop a quality writing product. Another student explained the choice context not only increased motivation to complete the activity, but also reduced procrastination. When comparing choice and no-choice contexts, all had negative perceptions about the absence of choice, including a greater likelihood to avoid the assignment altogether.

**Increased student ownership in the activity as a result of having choice.** Within the choice context, students’ responses indicate a sense of ownership in the activity. Students
emphasized contexts without choice are like being told what and how to learn. As discussed above, one student clarified this point by comparing it to dining out “It’s kind of like when you go to a restaurant. What if they only had one thing to choose? You’re like basically being told what to eat.” In addition, the choice condition made students feel more like adults making independent decisions. This independence and maturity fostered a sense of responsibility related to the choice in activity. Perceptions of maturity and responsibility associated with the autonomous nature of choosing created a sense of ownership in activities among students, which demonstrates a deeper engagement in learning.

**Students perceived choice as increasing their learning because they were able to choose the activity they felt was more enjoyable.** Students’ responses indicated the opportunity to choose allowed them to select a more enjoyable activity, which led to a more effective learning experience. Some students explained having a choice made the actual act of learning a more enjoyable experience. Other students explained that having a choice made them feel better about learning. When students reflected upon their learning experience, some had felt choosing activities helped their academic performance, adding to their enjoyment. Again, all students favored the choice over the no-choice context. With the opportunity to choose, one student explained, “I enjoyed learning it more because I actually got to do like what I want to. Instead of what I’m forced to do.” According to student responses, the sense of enjoyment made them want to learn the material and that it reduced negative behaviors such as procrastination. One student went as far to say the no-choice condition inhibited freedom of expression.

**Students perceived choice as increasing their learning because they were able to choose the activity they felt they could learn best in doing.** Students’ perceptions showed the choice condition increased their learning because they could choose activities resulting in
successful performance. This point suggests students were consciously aware of their strengths and weaknesses and used this knowledge to their advantage by selecting an activity favoring their needs most. Responses showed the material seemed “easier to understand” with the opportunity to choose, leading to deeper comprehension, grades, and overall understanding. In addition, as discussed a few times above, students favored the choice over the no-choice condition. All of these perceptions suggest the choice condition increased students’ access or ability to learn the material.

**Discussion of Findings in Relation to the Theoretical Framework**

This study was informed through two theoretical perspectives, including student engagement theory and self-determination theory. Each of these theories served as a lens to investigate the impact of choice in a differentiated history class.

**Self-Determination Theory.** The concept of self-determination theory involves the psychological construct associated with making choices in a behavioral situation. Deci (1980) defines self-determination theory as “a psychological construct referring to people’s flexibility and capacity both to choose from among behavioral options (regardless of the number of options) and to accommodate to the situations in which only one option is available” (p. 6). Intrinsic motivation, individual competence, and autonomy are fundamental components of the theory. When analyzing students’ responses, quiz, activity, and test scores, it became apparent how each component of self-determination theory was related to the findings.

When students could choose the activity they perceived would lead to more successful performance, they were demonstrating both intrinsic motivation and autonomy support. As explained in Chapter 2, intrinsic motivation involves the natural motivational forces when needs for autonomy and competence are met. After selecting an activity they perceived would result in
more successful outcomes, they were exercising their intrinsic motivation to learn. With the ability to choose an activity, their need for autonomy was met, allowing them to feel more competent in the assignment chosen; therefore, the classroom context providing the opportunity to choose was, in fact, an autonomy supportive environment.

With respect to students putting more effort into activities during choice conditions, the concepts of individual competence and autonomy support emerge. Individual competence and autonomy support are underlying influences to intrinsic motivation in social contexts where a person’s needs must be satisfied. Students tended to put more effort into activities with the opportunity to choose because they were intrinsically motivated to select an activity more suitable for their learning preference. The opportunity to choose activities had met their needs for individual competence because they could select particular activities where they would try harder to produce a more quality product. By simply having the ability to control their choices, their need for autonomy was supported.

The same is true for students that developed a sense of ownership in activities they chose. Students need for autonomy was met with the ability to choose, which made their choice in activity something for which they were responsible. This speaks to, perhaps, the main purpose of the study, which involves investigating an innovative instructional model where the responsibility for learning is reversed from the teacher to the student through the implementation of choice among differentiated activities. Once the need for autonomy is met, individual competence is stimulated thereby producing intrinsic motivation.

Students perceiving choice as a more enjoyable educational experience is related to self-determination theory through intrinsic motivation. As Patall, Cooper, and Wynn (2010) write, “Intrinsic motivation is the propensity to engage in a behavior for its own sake” (p.2). From this
statement, the authors are asserting people are motivated to engage in certain behaviors because they either enjoy, desire, or need to participate. According to students’ responses they perceived choice as more enjoyable and, therefore, were more intrinsically motivated to select activities because their needs of individual competence and autonomy were already supported.

Self-determination theory also discusses components related to three main causality orientations, including autonomy, controlled, and impersonal orientations, which speak to individual differences in the classroom. Findings show students perceived choice as a more effective learning experience. This perception related to autonomy orientation, which is a psychological component of self-determination that gravitates toward autonomy-supportive environments. Autonomy-supportive environments have been related to ego development, self-esteem, self-actualization, and personality-integration (Bambara, Fogt, & Kern, 2002; Black & Deci, 2000; Clarke, DePerczel, Dunlap, Gomez, White, Wilson, & Wright, 1994). The ability to choose was in fact an autonomy supportive environment, which could have influenced students’ self-esteem and personality-integration, which made the learning experience more enjoyable.

**Student Engagement Theory.** Student engagement theory is a meta-construct involving three main types of engagement, including behavioral, emotional, and cognitive engagement (Fredricks, Blumenfeld, & Paris, 2004). Once again, after analyzing the data, including focus group responses, activity, quiz, and test scores, and teacher observation notes, several forms of student engagement emerged. The following will discuss the various ways in which students demonstrated the behavioral, emotional, and cognitive engagement.

Behavioral engagement was demonstrated by students when they chose activities they perceived would lead them to more successful performance. Behavioral engagement is characterized by students’ ability to demonstrate positive conduct, follow rules, and obey
classroom norms while avoiding disruptive behaviors. Students demonstrated an adherence to classroom norms, positive conduct, and an avoidance of disruptive behavior when they strategically selected activities to be more successful. The very act of selecting an activity in order to be more successful is a demonstration of positive conduct. Likewise, this strategic selection is an adherence to positive conduct because the student is attempting to succeed academically by selecting an activity with the greatest likelihood for success. Furthermore, several students compared the choice and no-choice contexts and stated they were more apt to procrastinate or completely neglect the assignment when they were not provided a choice, which is in direct contrast to behavioral engagement.

Cognitive engagement was demonstrated by students who put more effort into the assignment when they had the opportunity to choose. Psychological engagement with a preference for intellectual challenge is cognitive engagement. Students made choices that intrinsically motivated them to put more effort into the activity, indicating a preference to challenge themselves intellectually. Those students who knowingly committed their activity selection to the assignment where the most effort would be placed inherently preferred an intellectual challenge. If those students had desired the path of least resistance, they would have chosen an assignment perceived as easier to complete.

Emotional engagement was evident in students developing a sense of ownership in the activity, perceiving the opportunity to choose as more enjoyable, and perceiving the opportunity to choose as more effective learning experience. The ways in which students respond to certain classroom environments through interest, boredom, confusion, sadness, anxiety, value, and enthusiasm characterizes emotional engagement. A student taking ownership in the activity they chose suggests a certain level of interest, value, or enthusiasm for that particular assignment.
The student is enthusiastic enough to take an interest or value in their work when demonstrate a sense of ownership. Students perceiving the opportunity to choose as more enjoyable also demonstrate an emotionally engaging response. Their perception of the choice context as more enjoyable suggests they do not see having a choice as boring or confusing. The experience is enjoyable and, therefore, engaging. The same can be said about perceiving choice as more effective learning experience. When students are effectively learning, they tend to be interested, enthusiastic, and value the lesson being presented, which is indicative of their perceptions.

**Discussion of Findings in Relation to the Literature Review**

The findings of this study have a strong connection to the literature presented in Chapter II The literature review focused on three main themes to inform this study:

1. Social Studies Instruction

2. Differentiated Instruction

3. Student Choice and its Impact on Learning

The connections between the findings of this study to each of these three areas are reviewed below.

**Social studies instruction.** What is the current literature and research on the teaching of social studies for student engagement and student learning? The literature associated with social studies instruction discusses the dynamic nature of the discipline, including its commitment to vocabulary, history, culture, modern day issues, and civic mindedness. As Alexander-Shea (2011) writes, accommodating a wide-range of diverse learners is more challenging in social studies because of its “symbiotic relationship between social studies, world understanding and literacy” (p. 95) where students must discuss “social issues that challenge their world views and
compels the cycle of learning” (p. 95). To meet this challenge, visual and graphically organized activities are recommended to illustrate key concepts and abstract ideas (Alexander-Shea, 2011).

Two of the activities used as instruments in this study were the drawing and graphic organizer activities. The researcher analyzed how often students chose a particular activity during the weeks providing opportunity to choose and found the most frequently chosen activities were in fact the drawing and graphic organizer activities. In group A, when students had the opportunity to choose, they selected the drawings 27% and the graphic organizer 69% of the time. Similar results occurred in group B when students selected the drawings 24% and the graphic organizer 69% of the time. In both groups, students selected the writing activity on 7% of the time; therefore, students tend to choose activities characterized by visual or graphic organization as discussed in the literature as an effective way to illustrate complex and abstract concepts that emerge in social studies curriculum.

The preference for visual or graphically organized activities is reinforced by the focus group data as well. Students chose the drawing activity because visualizing the concepts made it easier to comprehend. As one student stated, “I liked the drawing because it was easier for me to understand.” Students also chose the graphic organizer activity for various reasons, including its ability to break down the information and its usefulness as a study guide. One student explained the graphic organizer “breaks down the sections, and the, like, smaller sections, so those are quick and easy, and you can just read through them to get all the information down.” Another said “it's easy to look at each section that's broken down, so you can know, like, what parts you should study for the test. It's an easier studying tool than the drawing, or, like, any other, uh, activity.”
**Differentiated instruction.** What is the impact of DI on student engagement and student learning? A few connections exist between the DI literature and the results. For one, the results of Roe’s (2010) examination of teacher perceptions of DI in 135 classrooms across four middle schools indicated wider school contexts impact options to differentiate and selecting activities focused differentiation points. In addition, Roe (2010) called the study of DI from holistic process rather than the differentiation of a single activity. By integrating choice among differentiated activities, this study attempted to respond to some of the concerns discussed in the literature. Integrating choice among differentiated activities could allow teachers more flexibility with their options to differentiate and in selecting activities focused on differentiation points.

Santangelo and Tomlinson (2008) found differentiating content, process, and product of materials in a graduate Psychology course had positive and meaningful impact on student learning and it optimized students’ learning experience. When differentiating by product—writing, drawing, or graphically organizing—in this study, the activity scores students earned were above average. Students’ activity scores that were analyzed across all four weeks in group A did not have a mean score lower than 82.5. Group B, likewise, did not have a lower mean score lower than a 90. Though assessment scores had mixed results, across both groups, the mean score on weekly quizzes was not lower than 73.3; however, this could be because this study only differentiated by product, instead of differentiating by content, process, and product.

Santamaria (2009) explored the differences between culturally responsive teacher (CRT) and DI in two k-5 elementary schools over a five-year period and found increases in grade-level proficiencies where DI and CRT were employed. In addition, she asserted DI and CRT are two different instructional innovations where DI accommodates academic diversity while CRT
addresses linguistic and cultural phenomena. Again, the results of this study are connected to Santamaria’s work through the sense of ownership found in the results when students could choose the activity. Students’ ownership in their activity selection is fostered by a sense of independence and maturity. Providing a choice reverses the responsibility of learning to the student despite linguistic, cognitive, or cultural barriers, which could increase grade level proficiencies and narrow the gap between DI and CRT.

**Student choice and its impact on learning.** Several results from this study have connections to the literature with respect to the impact of student choice and its impact on learning, engagement, and reduced disruptive behavior. Bambara, Fogt, and Kern (2002) investigated the use of choice as a curricular modification among 13 and 14 year-old students with severe emotional disorders among other diagnoses and found the opportunity to choose had positive effects on student engagement and disruptive behavior. Clarke, DePerczel, Dunlap, Gomez, White, Wilson, and Wright (1994) found similar results among special needs students. Results indicated participants showed high levels of disruptive behaviors in no-choice conditions while demonstrating high levels of task engagement and decreases in problem behavior in choice conditions. Morgan (2006) also found links between increases in positive student outcomes, task engagement, and decreases in problem behavior when choice and activity preference were employed.

An analysis of the teacher observation notes implemented in this study showed an increase in disruptive behaviors in no-choice conditions versus instructional weeks where students were provided a choice. Over the course of four instructional weeks, 71% of disruptive behaviors, involving any scenario where the instructor needed to redirect students back to the assigned task, occurred during instructional weeks where students did not have a choice while
29% occurred during choice conditions. Likewise, 86% of student directed inquiry and demonstrations of academic rigor occurred in choice conditions. Furthermore, 67% of observable behaviors demonstrating students engaged in learning and 96% of observable behaviors where students remained on task occurred during choice conditions.

Ciani, Easter, Sheldon, and Summers (2008) when studying the effects of choice among collaborative learning activities found less intrinsic motivation when professors made choices in group membership. This finding is connected to students’ focus group responses regarding increased likelihood to procrastinate or lose interest in the material when they did not have a choice. As one student explains “I feel like when you can't choose what to do, you feel like you're forced to do it, and it just makes you want to put off more, because you feel like you have to.” Another student shared a similar perspective by stating “when we’re directed to do it we just look for a—we just try to blow it off.” This increase in apathy and procrastination is connected to the reduced intrinsic motivation found in Ciani, Easter, Sheldon, and Summers’ work when students could not choose group membership.

Cooper, Patall, and Wynn (2010) found choice created interest and enjoyment for homework assignments among high school students. Black and Deci (2000) also found when students had perceived autonomy support their perceived competence, interest, and enjoyment increased accompanied by a decrease in anxiety through the opportunity to choose. Focus group results are directly linked to these findings as students explained how the opportunity to choose made learning more enjoyable. Responses such as "I thought it [choice] made learning, you know, a bit more enjoyable" or "It [choice] made me feel better about learning” illustrate the connection between this study and the findings in the literature.
Brooks and Young (2011) found learner empowerment is positively associated with intrinsic motivation through choice-making opportunities. Their results also showed choice-making opportunities should be consistent among classroom policies or procedures to avoid confusion and frustration among students. These findings are connected to the results of this study through students’ frustration with the no-choice conditions after having the opportunity to choose. One student emphasized this point by stating there was a “taste of freedom” with the opportunity to choose activities; however when coming back to no-choice condition as a result of the switched replication design, the student was more likely to neglect the assignment.

Cordova and Lepper (1996) found students exposed to motivationally embellished activities through choice demonstrated higher levels of intrinsic motivation and growth of learning. Again, this finding is connected to the results of this study through students’ perceptions in the focus groups, indicating choice conditions created more effective learning experiences through increasing access or ability to learn.

Furtak and Kunter’s (2012) findings showed students in conditions of high cognitive-autonomy support did not learn more than other students; however, students who perceived higher cognitive autonomy had higher learning gains, yet this perception occurred in conditions trying to control them. This speaks to the mixed results found in the comparison of quiz scores in choice and no-choice conditions at the end of each instructional week. As illustrated above in table 4, students scored higher during no-choice rather than choice conditions throughout most of the analysis. For example, the mean score for group A in week one was 85.2 in the no-choice condition and 84.8 in week two with the opportunity choose. These results were similar in weeks three and four for group A with a drop from 83.4 in the no-choice condition to a 75.7 in the choice condition. Group B also seemed to score higher in the no-choice condition. When
comparing week two and four for group B, students dropped 13.2 points on mean quiz scores with the opportunity to choose.

**Conclusion.**

The two research questions directing this study focus on: how student choice in the context of a differentiated social studies classroom impacted student learning in contrast to direct instruction as measured through end of unit and end of week assessments and how student choice in the same context impacted student learning and student engagement in learning in contrast to direct instruction as perceived by 1) the teacher and 2) the students. The collection and analysis of assessment data, activity scores, focus group sessions, and teacher observation notes all contributed to answering how students’ learning experience was impacted by choice in a differentiated history class.

To summarize the findings in this study, it’s clear the students and the teacher perceived the integration of choice as a positive learning experience. The analysis of focus group responses showed students perceived having the opportunity to choose the activity increased engagement in learning through the ability to choose an activity perceived as a more successful route for academic performance, a tendency to put more effort into assignments with the ability to choose, and in developing a sense of ownership in the activity when chosen. Furthermore, students emphasized being able to choose an activity increased their access to learning because the activity seemed more enjoyable and that choice created a more effective learning experience. These insights were consistent with the literature where choice and differentiated materials enhanced students’ effort, interest, and positive feelings related to their learning experience (Roe, 2010; Santangelo & Tomlinson, 2008; & Santamaria, 2009).
Teacher observation notes helped confirm these insights by illustrating the teacher’s perspective. The observation notes showed the majority of disruptive behaviors occurred during contexts students were in a no-choice condition. This was consistent with the literature, which indicated students tended to display disruptive behavior without the opportunity to choose. Likewise, according to teacher observation notes, students demonstrated higher levels of engagement through student directed inquiry and academic rigor in choice conditions. Again, this is consistent with the literature indicating students had deeper levels of engagement with the opportunity to choose (Bambara, Fogt, & Kern, 2002; Black & Deci, 2000; Ciani, Easter, Sheldon, and Summers, 2008; Clarke, DePerczel, Dunlap, Gomez, White, Wilson, & Wright, 1994; Cooper, Patall, and Wynn, 2010; & Morgan, 2006).

After analyzing the frequency of activities chosen, results showed students most frequently selected either the drawing (24-27%) or graphic organizer activity (66-69%). When students have the opportunity to choose, the majority will select activities visual in presentation. This is consistent with social studies literature where researchers suggest activities including the graphic organizer, semantic mapping, semantic feature analysis, and list-group-label are most effective for enhancing vocabulary and illustrating abstract concepts existing in social studies curriculum (Alexander-Shea, 2010).

Differentiating by product, including inductive writing, drawing, and graphic organizer activities, did help to promote above average student outcomes across activities and assessment scores. According to tables seven and eight in Chapter 4, the mean scores of students’ activities were not lower than 82.5 across all instructional weeks regardless of the choice or no-choice condition. This is consistent with the literature on differentiated instruction, emphasizing differentiation has a positive and meaningful impact on student learning (Santangelo &
Tomlinson, 2008). Furthermore, when averaging the means across all four weeks of instruction for group A, students earned an 82.3 while group B earned 81.2. Again, according to these averages of the assessment means presented in table 2, students scored above average in a differentiated context.

After investigating this problem of practice involving the complexities surrounding individual needs of diverse learners in heterogeneously grouped history class and reviewing the literature associated with student choice and DI, the researcher developed three hypotheses. When students have the opportunity to choose among differentiated activities in a secondary heterogeneously grouped classroom: 1) they would demonstrate higher achievement on weekly assessments than students directed to complete activities; 2) they would demonstrate higher levels of engagement based on pre-determined observation protocol as compared to conditions where students are directed to complete activities; and 3) they would express a positive learning experience in conditions where they have the opportunity to choose among instructional activities as compared to conditions where students are directed to complete activities.

Based on the results of this study, the researcher was correct about two out of three hypotheses. Students in the choice condition did not have higher achievement on weekly assessments than students in the no-choice condition. The difference in mean scores for weekly assessments in group A between weeks one and two showed only -0.40 and a -7.7 between weeks three and four both in favor of the no-choice condition. The same calculation for group B showed -4.4 between weeks one and two and -9.4 between weeks three and four both in favor of the no-choice condition; nevertheless, an ANCOVA showed no significant difference in the results. However, the researcher was correct in hypothesizing students demonstrated higher levels of engagement in the choice condition as shown through the teacher observation notes. In
addition, the researcher was correct in hypothesizing students would express a positive learning experience in conditions with the opportunity to choose through the various themes found within the focus group data.

Limitations

The greatest limitation in this study involved the number of participants used to conduct the quantitative analyses for the weekly assessments and the activity scores. Over the course of four weeks of instruction, many students were absent during the days quizzes were administered; therefore, their scores had to be removed from the analysis, reducing the total number of students, which made it difficult to show statistical significance in the scores. A similar problem occurred among students’ activity scores. During the four weeks of instruction using a switched replication design, students had choices among or were directed to complete activities, which generated various scores throughout the study; however, if a student was absent or did not complete an activity during a week with or without choice, that student had to be excluded from the analysis. Only students that completed all activities and quizzes across all four weeks of instruction could be included in the analysis.

Another limitation involved the differentiation of activities. The researcher only differentiated for product, which were the inductive writing, drawing, and graphic organizer activities. If the researcher had developed an instructional model were the content, process, and product was differentiated throughout all four weeks of instruction, perhaps, the analysis of assessment scores may have shown more significant differences in favor of the choice condition. Specifically, the researcher could have used student readiness, interest, and learning profile to inform differentiation of content, process, and product as shown in the study conducted by
Santangelo and Tomlinson (2008). Given the time and resources available to the researcher, this research design was impractical, but it may be useful moving forward.

**Significance and Implications of the Study**

This study was conducted using self-determination and student engagement theories to inform a study investigating the impact of choice in a differentiated history class. Through these lenses, several beneficial themes emerged pertaining to positive learning experiences and engagement within the focus groups and the teacher observation notes. In addition, these lenses guided the analysis of quiz, test, and activity scores, which also showed several positive student achievement outcomes when choice was integrated into a differentiated context.

The challenges associated with accommodating a wide range of diverse learners influenced by a number of factors, including race, gender, language, economics, learning styles, learner preference, interest, motivation, learning abilities, and learning disabilities (Mctighe & Tomlinson, 2006) in secondary heterogeneously grouped classrooms educators face many odds in creating a classroom environment with consistently engaging and meaningful learning experiences on a daily basis. In a highly industrialized society like the United States, teachers need a practical and efficient model for instruction enhancing the learning abilities and achievement of all students despite the challenges associated with social, cultural, and economic differences. Through this model educators can produce a long lasting educational experience socializing students to be civic-minded citizens with the capacity to analyze and debate the abstract concepts emerging in our democratic society.

By investigating the impact of choice among differentiated activities, the researcher hoped to contribute to this end by building upon the existing body of research focused on DI and student choice. Integrating choice among differentiated activities could create another dimension
of differentiation to help accommodate a wider range of diverse learners. The integration of choice within a differentiated context can help reverse the role of accommodation to be more student-driven so they develop a habit for taking responsibility for their own learning.

Future Studies

The following list represents recommendations for future investigations examining the integration of choice among differentiated activities in heterogeneously grouped classrooms.

Future studies could include:

- The investigation of choice integration among differentiated activities in multiple classroom contexts, including academic disciplines in vocational technical high schools.

The investigation of choice among differentiated activities should be investigated in other classroom contexts, including English, Math, Science, and Special Education contexts to provide more perspectives regarding the impact of choice on student engagement and learning. In addition, more studies investigating the impact of choice among activities should take place in academic classrooms within vocational schools. These are unique settings because academic teachers in vocational institutions only meet with students half the time as those in traditional comprehensive high schools; therefore, the most efficient instructional models must be developed to accommodate this difference in time. Taking this approach to the research could significantly help practitioners in this setting.

- A replication of this study using all levels of differentiation, including content, process, and product, simultaneously.

This study only differentiated by product, including inductive writing, drawing, and the graphic organizer activities. The procedure of this study could be replicated but with added levels of choice-making opportunities among differentiated content, process, and product, simultaneously.
When provided a choice, students would have the opportunity to not only select a product, but also the amount of content and process by which they acquire the information. For example, suppose a student chooses to complete a writing activity. The teacher could then allow students to choose the content for the writing activity and select the research avenue, either by textbook, the Internet, software programs, or any other credible source of information. Again, using this research design with a more opportunities to choose among three levels of differentiation could show more significant results in the quantitative analysis.

- Studying the integration of choice among differentiated graphic organizer activities in various contexts and disciplines.

Since the majority of participants in this study chose the graphic organizer activity, it may contribute to the understanding of this topic by allowing students to choose among differentiated graphic organizer activities and compare their assessment scores to students directed to use a particular graphic organizer activity. These graphic organizers could be relative to any discipline and for the purposes of mind-mapping, pre-writing exercises, or semantic feature analysis related to any topic. Again, comparing these two contexts may show more significant results after conducting quantitative analyses.

- An investigation of choice among differentiated activities using more technology based learning and 21st century skills.

Though technology was used during this study, the skills associated with students’ performance were mainly traditional and not 21st century. This was due in part because of the resources available at the school where the study was conducted. The setting for this study does have computer labs and other technological resources; however, time must be scheduled to use these facilities as they are shared with other staff. Consequently, the researcher was more comfortable
conducting this research with resources more readily available over the course of a four week investigation. Nevertheless, if an institution has more advanced technology-based instructional tools, such as tablet devices, available to all students on a more consistent basis, developing a research design examining choice among differentiated activities using Internet driven assignments with provide deeper insight to this instructional innovation.

**Personal Reflection**

I grew up in a town near the district in which this study was conducted. I take special interest in providing an effective and meaningful education for the students I have the pleasure of working with at this institution. My passion as an educator began to emerge somewhere in the early years of my own education. Since my K-12 academic experience was average at best, I take a special interest in and a responsibility for ensuring students develop appreciation for the importance of education long before I had come to that recognition. In my high school experience, I was a mediocre student who was lucky to be accepted to a college upon graduation. This was partially because of the efficacy of instruction at the time as no systems of accountability existed back then, but it was mostly because of my lack of maturity as a student.

In my undergraduate experience, I had to re-learn the skills I already should have acquired before attending college, including research and writing skills. Basically, I took classes that came easy to me, which is why I selected history as my major. Once decided on that major, I asked myself, “What am I going to do with this degree?” This question is what led me into the educational field where I plan to reside for the rest of my career. I became fascinated by the philosophical, theoretical, and scientific nature of the field. Because I did not have a meaningful
experience prior to college, I just never had any interest in pursuing and learning the profession; however, in my undergraduate experience, I had the opportunity to know and learn from truly dedicated professional educators and I saw myself as someone who could perhaps contribute to the field. From that day, I made a goal for myself to reach the highest levels of education and dedicate my life to providing students with a more meaningful educational experience than I had as a child.

As I am approaching the completion of my doctoral degree, I fully intend to continue my contributions to the field with the newly acquired skills I’ve obtained. My experience in Northeastern University’s doctoral program has been one of the most challenging yet rewarding experiences of my life, which has made me a more effective and dedicated practitioner. With a new set of skills and perspective, I plan to devote my energies to providing students with a more individualized educational experience, guiding them in achieving their own goals and contributing to our democratic society.
References


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