

Elementary Social Studies Teaching and Learning in a Standards-Based Multi-  
Age Classroom

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A Dissertation

Presented to

The Faculty of the Curry School of Education and Human Development

University of Virginia

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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by

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May 2020

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## ABSTRACT

This dissertation study explored the interaction between elementary teachers' instructional practices and how students experience and learn social studies in one multi-age classroom within a standards-based setting in a tested state. The participants in this qualitative multiple case study (Yin, 2017) included three multi-age co-teachers and six focal students of various ages (eight-, nine-, and ten-year olds), who are representative of one elementary school within one large, county school division in Virginia. Data collection occurred during a social studies standards-based unit on Jamestown and included classroom observations, document analysis, teacher interviews, and student interviews.

Analysis indicated that despite an emphasis on teamwork and collaboration, the three co-teachers employed a "divide and conquer" approach to planning for the unit's instruction and assessments, which led to unclear aims and content objectives for the unit as well as uncertainty surrounding who would be responsible for teaching what content. A number of the three co-teachers' instructional practices (format, teacher actions, materials) reflected elements of best practice in social studies (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; NCSS, 2009, 2017) to varying extents, but only some of their teacher actions and none of their materials reflected best practice in history education (Levstik & Barton, 2005). Second, the focal students experienced the same instruction (even when in grade-leveled rotations), yet answered in different ways when asked to talk aloud about why they chose specific answers on the unit test

(Fitzpatrick, van Hover, Cornett, & Hicks, 2019) and they each incorporated differing Virginia substandards into their Minecraft performance assessments. The focal students demonstrated content knowledge on the two assessments, but they primarily focused on facts rather than conceptual understandings or historical thinking skills. Lastly, there was little overlap between the three co-teachers' instructional practices and how students experienced and learned social studies during the unit. Only a few formats, teacher actions, and materials were effective in regards to both teaching and learning social studies. These findings have potential implications for research (elementary social studies education and multi-age education), theory development (Cultural-Historical Activity Theory; Engeström, 2001), and practice (elementary teachers and teacher educators).

Curriculum, Instruction, and Special Education

Curry School of Education

University of Virginia

Charlottesville, Virginia

APPROVAL OF THE DISSERTATION

This dissertation proposal, “Elementary Social Studies Teaching and Learning in a Standards-Based Multi-Age Classroom,” has been approved by the Graduate Faculty of the Curry School of Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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March 31, 2020

## **DEDICATION**

This work is dedicated to all the teachers in my life. To my granny, Ruth Wheeler, who taught home economics at Appalachia High School. To my nana, Sue Cornett, who substitute taught in Wise County, Virginia. To my mom, Debbie Cornett Wright, who teaches nursing at Mountain Empire Community College. To my teachers, who facilitated my K-12 learning experiences at Powell Valley Primary School, Powell Valley Middle School, and Powell Valley High School. To my teacher colleagues, who valued my insights as a pre-service teacher and fostered my development as a novice in-service teacher. To my professors at the University of Virginia, who encouraged my growth while I pursued my Bachelor of Arts in History, Master of Teaching in Elementary Education, and Doctor of Philosophy in Curriculum and Instruction: Social Studies Education.

## **ACKNOWLEDGEMENTS**

Throughout this PhD journey, innumerable individuals have supported me – professionally and personally. First, I want to express my gratitude to the elementary students, multi-age teachers, classroom architect, and school-level as well as district-level administrators in this study. I was welcomed into their spaces with open arms. Speaking with them and observing their experiences provided contextual knowledge as well as insight on my topic. Next, I want to thank my dissertation committee for their guidance throughout this process. Each of you contributed to my doctoral program experience in numerous ways. Dr. Paulick, Dr. Grimes, and Dr. Trent provided valuable feedback to guide my use of theory, analysis of data, and presentation of findings. Finally, Dr. van Hover, who has believed in me since I was in her course as a B.A.M.T. student, has provided countless opportunities for research and teaching skill development. I have been incredibly fortunate to have her as an advisor. This experience has been truly rewarding and I have learned a great deal while studying, presenting, teaching, and researching with each of you. Lastly, I must thank my friends, family, and fiancé. ‘Team Social Studies’ and my doctoral student cohort pushed my thinking as a teacher educator and researcher. Dr. Ricky Dale Mullins Jr. served as a link to home (Wise County, Virginia) and research partner in our field. My best friends - Gloria, Mariel, Isabel, and Robert - provided balance to my life. I cherish my parents’ (Debbie and CF Wright) and grandparents’ (Jim and Sue Cornett) continued support to pursue my educational goals. Nathaniel (my fiancé), your encouragement brightens my life and I will always appreciate it.

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## **CHAPTER I**

### **INTRODUCTION**

Research clearly documents that social studies education is disappearing in standards-based grade-leveled United States (U.S.) elementary classrooms, with dramatic reductions in instructional time or, in some cases, the partial or complete removal of social studies from curricula and high-stakes tests (e.g., Bailey, Shaw, & Hollifield, 2006; Fitchett & Hefner, 2010; Hubbard, 2013; Leming, Ellington, & Schug, 2006; Rock et al., 2006; VanFossen & McGrew, 2008; Zhao & Hoge, 2005). These issues have raised alarms nationally, as researchers (e.g., Hubbard, 2013) and professional organizations (National Council for Social Studies, 2016) highlight the vital role high-quality elementary social studies instruction plays in teaching young students the knowledge, skills, and dispositions for informed participation in a culturally diverse and democratic society. Evidence shows that students can and must learn social studies at a young age in order to develop foundational competencies (e.g., Casey, DiCarlo, & Sheldon, 2019; Levstik & Barton, 2015; Westheimer & Kahne, 2004) that they will use throughout their lives including, but not limited to critically investigating issues, posing relevant questions, evaluating authentic sources, and contributing to communities. Given the importance of social studies, why has it been disappearing from standards-based grade-leveled elementary classrooms in the U.S.?

A robust body of research outlines the slow but sure disappearance of elementary social studies education within an accountability context that has privileged, prioritized,

and tested language arts and mathematics (e.g., Heafner, 2018b; Heafner & Fitchett, 2012; Pace, 2007, 2011; VanFossen, 2005; Wills, 2007). For example, findings from a 2006-2007 nationally representative survey conducted by the Center on Education Policy (CEP; McMurrer, 2008) indicated that 349 participating school districts decreased social studies instructional time from 239 minutes per week to 164 minutes per week (a decrease of 75 minutes per week) while increasing instructional time in language arts and mathematics. This decrease was in direct response to required annual high-stakes testing in language arts and mathematics, outlined in *No Child Left Behind* (NCLB; United States Department of Education, 2002) and its more recent reauthorization, *Every Student Succeeds Act* (ESSA; United States Department of Education, 2018). Both NCLB and ESSA require each state to have a challenging and distinctive set of language arts and mathematics standards that align with associated annual testing in grades 3-8. These federal policies did not include equivalent mandates for social studies, leaving the decision to test social studies to the individual states.

Some states, like the Commonwealth of Virginia, have continued to test social studies in elementary schools (van Hover, Hicks, Stoddard, & Lisanti, 2010). Research on teaching social studies in these states (where social studies is taught and tested) indicates that teachers often prioritize the didactic presentation of information to be memorized and regurgitated (e.g., Barton & Levstik, 2004; Evans, 2001; Heafner, 2018a; Savage, 2003; Vogler & Virtue, 2007). This is in direct opposition to best practice elementary social studies instruction, which professional organizations and researchers suggest should be meaningful, integrative, value-based, challenging, and active (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; National Council for Social

Studies, 2009). However, the majority of research on standards-based elementary settings either quantitatively surveys teachers' perceptions or qualitatively investigates what teachers teach (or don't teach), rather than the interaction between teachers' instructional practices and how students experience and learn social studies (e.g., Barton, 2005; Leming et al., 2006; Libresco, 2005; Rock et al., 2006; Zhao & Hoge, 2005). The present study addresses this gap in the literature by exploring how context, teachers' instruction, and students' classroom experiences and learning interact in a unique elementary classroom context – multi-age – within a standards-based setting in a tested state.

I chose to explore this novel space – an elementary multi-age classroom where students of different ages and grades learn in one space – in order to determine if in a space where leveling is intentionally obviated (Anderson & Pavan, 1993) and developmentally appropriate student progress is encouraged (Song, Spradlin, & Plucker, 2009), social studies is creative in ways that might inform the field more generally. That is, how do elementary teachers implement and students experience standards-based social studies instruction and assessments in a unique and largely unexplored classroom context—multi-age? This work directly addresses the call that O'Connor, Heafner, and Groce (2007) have made for an increased understanding of “what is really happening in schools” (p. 259) in regards to elementary social studies and utilizes classroom-based research to illuminate both elementary teachers' and students' experiences teaching and learning standards-based social studies, respectively.

For the remainder of chapter one, I will provide the statement of the problem and the research questions associated with the study. Next, I will articulate the research purpose and rationale for the study as well as an overview of the study design. I will

conclude chapter one with definitions of key terms as well as a summary of the chapter's content. Figure 1 provides a complete overview of the chapter.

<u>Overview of Chapter I</u>
Statement of the Problem
Research Questions
Research Purpose
Rationale
Overview of the Study
Definitions
Chapter Summary

*Figure 1.* Overview of Chapter I

### **Statement of the Problem**

Studies in states where social studies is taught and tested highlight teachers' reliance on instructional practices, which are not (or are not fully) aligned to best practice in social studies; research has shown that many of these instructional practices lead to uninspired and leveled standards-based social studies instruction that focuses on fact memorization and regurgitation for testing purposes (e.g., Anderson, 2014; Barton & Levstik, 2004; Evans, 2001; Heafner, 2018a; Savage, 2003; Vogler & Virtue, 2007). Yet, the extant research stresses the vital importance of high-quality elementary social studies instruction (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; National Council for Social Studies, 2009), which can support young students' learning of complex knowledge, skills, and dispositions that are inherent to social studies (e.g., MacPhee & Whitecotton, 2011; Strachan, 2015) and necessary for continuous development as informed participants in a culturally diverse and democratic society (e.g., Hubbard, 2013; National Council for Social Studies, 2016). High-quality elementary social studies instruction has been operationalized as the following characteristics:

meaningful, integrative, value-based, challenging, and active. Drawing upon NCSS's (2017) position statement, I have defined these characteristics in the following ways:

- Meaningful – instruction focuses on social studies knowledge, understandings, and skills through a variety of ways to meet students' diverse needs, capitalize on their interests, and encourage connections.
- Integrative – instruction occurs throughout the school day and explores social studies curricular concepts across disciplinary boundaries (e.g., integrating history, geography, economics, and civics) as well as subject areas (e.g., social studies and English Language Arts) in order to integrate students' knowledge, understandings, and skills with authentic action.
- Value-based – instruction involves students in the ethical dimensions of topics as well as controversial issues, promotes critical thinking as well as informed decision-making, and addresses core democratic values (e.g., freedom of speech, equality of opportunity) as well as the common good.
- Challenging – instruction fosters debate, discussion, research, decision-making, problem solving, as well as issue analysis and provides opportunities for students to critically investigate, question, evaluate, and challenge sources.
- Active – instruction supports students as they consider new ideas in relation to their background knowledge, modify misconceptions, and evaluate multiple perspectives. Additionally, instruction facilitates student discovery as well as engagement through a variety of formats, teacher actions, and materials.

These characteristics of best practice in elementary social studies are foundational and largely unopposed in the literature (Curry, 2010). Primarily, in the research, each characteristic of best practice in elementary social studies has been observed as a standalone characteristic (e.g., researchers examining integrative social studies instruction only). However, the characteristics have not frequently been viewed as a collective, overlapping group of best practices in elementary social studies. Misco (2014) argued that meaningful, integrative, value-based, challenging, and active social studies instruction is “often in the form of individual learning experiences or lesson plans [...] and would, in their aggregate, result in powerful curricular units” (p. 242). While research has documented how pre-service elementary teachers incorporate the characteristics of best practice in social studies into their regular practice (Bauml, 2016; Curry, 2010), research has not documented how elementary teachers’ use (or lack of use) of the characteristics of best practice in social studies influences (or does not influence) students’ classroom experiences and learning. Curry (2010) outlined this as a limitation of her work, “While the student teachers each emphasized their own combination of NCSS characteristics of powerful teaching and learning, this study did not determine which of these combinations was the most effective for improving student learning” (p. 39). Given this dearth of research, it is important for the field to empirically explore the interaction between teachers’ instructional practices and how students experience and learn social studies. There is even less research focusing on multi-age, an approach that is slowly gaining popularity in preK-6 settings (Nishida, 2009 as cited in Broome, 2016).

Multi-age is an educational (re)structuring effort, where students of different ages and grade bands (e.g., K-2, 3-5) learn in one space (e.g., Day & Yarbrough, 1998;

Domenech, 1999; Hattie, 2008; Kolstad & McFadden, 1998; Melliger, 2005; Sims, 2008; Veenman, 1995, 1996). Multi-age classrooms serve approximately five percent of the U.S. student population (Thomas, 2012 as cited in Ansari, 2017) and are becoming more common due to administrative necessity, declining enrollment, and, in some cases, a desire to innovate or reform educational practice (Mulcahy, 1992 as cited in Saqlain, 2015). Research has shown mixed results in regards to elementary multi-age students' academic achievement in language arts and mathematics (Song et al., 2009); elementary multi-age students' academic achievement has not been explored in relation to social studies. Moreover, scholars have noted the scant research on instructional practices utilized in multi-age classrooms (e.g., Mason & Burns, 1996; Veenman, 1995) and have called for increased classroom-based research to explore this topic (Bailey, Werth, Allen, & Sutherland, 2016). An elementary standards-based multi-age classroom, with its unleveling and focus on individual students' needs, has the potential to support high-quality social studies instruction (meaningful, integrative, value-based, challenging, and active; e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; National Council for Social Studies, 2009).

This study was conducted in an elementary multi-age classroom with three teachers and six focal students of various ages (eight-, nine-, and ten-year olds), who are representative of one elementary school within one large, county school division in Virginia. I investigated how context, teachers' instruction, and students' classroom experiences and learning interact in a novel space— multi-age — within a standards-based setting in a tested state. Conducting this research illuminated how multiple teachers collaborated to plan and implement elementary social studies instruction for students of

varying ages in a unique elementary classroom context. Thus, this research has implications for elementary co-teaching (Cook & Friend, 1995; Friend, 2008; Ploessi, Rock, Schoenfeld, & Blanks, 2010; Pratt, Imbody, Wolf, & Patterson, 2017; Pugach & Winn, 2011), not only in multi-age, but in grade-leveled classrooms as well. This study contributes to the research on teaching and learning elementary social studies within standards-based settings in a tested state, as the study was conducted in Virginia. Virginia outlines what social studies content is taught when through grade-leveled and subject-based curriculum frameworks (van Hover, Hicks, Stoddard, & Lisanti, 2010) and tests elementary students in social studies one time during their elementary school years (i.e., school districts decide whether to test in fourth grade or fifth grade). In other words, more broadly, this research has the potential to add to the knowledge base on teaching and learning social studies in elementary classrooms, in context.

### **Research Questions**

The research questions for the study are the following:

- How do three elementary co-teachers plan, teach and assess a social studies standards-based unit in one multi-age classroom?
- How did elementary students experience instruction and what did they learn during a social studies standards-based unit in a multi-age classroom?

Answering these research questions provides insight into elementary teachers' and students' experiences teaching and learning social studies, respectively, within a standards-based setting in a tested state. Having a more nuanced understanding of these experiences illuminates how context, teachers' instruction, and students' classroom experiences and learning interact in a unique elementary classroom context, multi-age,



which is intended to be unleveled. Student learning (as measured with the two unit assessments) along with observed and reported teachers' instruction and students' classroom experiences were utilized to describe this interaction.

### **Research Purpose**

The primary goal of this study is to explore how social studies is taught (i.e., varying extents of best practice or not) and learned in an elementary multi-age classroom within a standards-based setting in a tested state. Gaps in the research as well as explicit calls in the fields of elementary social studies (e.g., Curry, 2010; O'Connor et al., 2007) and multi-age education (e.g., Bailey et al., 2016; Kolstad & McFadden, 1998; Stone, 2009) have documented a need for this empirical research. A clearer understanding of elementary teachers' social studies instructional practices is particularly needed, given the evidence that elementary social studies instruction that does not reflect the characteristics of best practice is prevalent in standards-based grade-leveled U.S. elementary classrooms (Anderson, 2014; Barton & Levstik, 2004; Evans, 2001; Heafner, 2018a; Savage, 2003; Vogler & Virtue, 2007). In all elementary classrooms (e.g., grade-leveled or multi-age), elementary students should be exposed to meaningful, integrative, value-based, challenging, active, and inquiry-driven experiences that support their development of foundational social studies competencies that they can use for the rest of their lives (e.g., Casey et al., 2019; Levstik & Barton, 2015; Westheimer & Kahne, 2004). Specifically, in multi-age spaces, social studies could be taught (and learned) in creative ways that align with the characteristics of best practice in social studies (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; National Council for Social Studies, 2009). It is critically important to examine elementary students' classroom experiences

and learning in relation to their teachers' instructional practices in social studies. Further information is needed on the specific social studies instructional practices that are effective in teaching elementary students of differing ages crucial social studies knowledge, understandings and skills.

This study has the potential to illuminate how context, teachers' instruction, and students' classroom experiences and learning interact in a unique elementary classroom context, multi-age, within a standards-based setting in a tested state. Findings have implications for research (elementary social studies education and multi-age education), theory development (Cultural-Historical Activity Theory; CHAT), and practice (elementary teachers and teacher educators).

### **Rationale**

This qualitative case study provided insight into elementary social studies teaching and learning within a school that is implementing multi-age in a standards-based setting in a tested state. Diverse perspectives (multi-age teachers and students) were incorporated in order to gain a better understanding of elementary teachers' instructional practices and students' experiences with and learning of content during a social studies standards-based unit. This study's research questions on teaching and learning require a case study design, which allows for the close investigation of one or more bounded cases (Creswell, 2009), to capture how context, teachers' instruction, and students' classroom experiences and learning interact. The bounded cases in this study shed light on how a social studies standards-based unit is taught, experienced and learned (by students across a grade band) in a particular context, an elementary multi-age classroom, within a tested state (Virginia).

### **Overview of the Study**

For this study, I applied a multiple-case embedded design (Yin, 2017) in order to form a composite portrait (Ragin, 1999) of social studies teaching and learning. A constructivist paradigm informed the data collection and analysis. Constructivism allows for “multiple, apprehendable, and sometimes conflicting social realities” (Guba & Lincoln, 1994, p. 111), which interact with one another and change over time. This paradigm aligns with the conceptual framework, Cultural-Historical Activity Theory (CHAT; Engeström, 2001), which I utilized in this study. CHAT examines how a specific context, such as an elementary multi-age classroom within a standards-based setting in a tested state, can influence participants’ meaning making (Vygotsky, 1978), use of mediating tools and artifacts (Yamagata-Lynch, 2010), and interactions with other individuals (Yamagata-Lynch, 2007). To capture the participants’ varied experiences (social realities), teachers and students were purposefully selected through theoretical sampling “[...] to collect data from [people] that [would] maximize opportunities to develop concepts in terms of their properties and dimensions, uncover variations, and identify relationships between concepts” (Corbin & Strauss, 2015, p. 134). Data sources included classroom observations, document analysis (e.g., student work samples), teacher interviews (i.e., pre- and post-unit) and student interviews. Observations, interviews, and artifacts provided nuanced understandings of teachers’ and students’ experiences teaching and learning social studies, in context. The following methodological considerations were made to ensure the credibility, dependability, and trustworthiness of the study (Merriam, 2002): triangulation of multiple data sources (Gall, Gall, & Borg, 2015), analytic memo writing (Miles, Huberman, & Saldana, 2014), and prolonged

observation (Erickson, 1986). In the third chapter, I will provide additional details about the design of the study.

### **Definitions**

In this study, I employ the following definitions of key terms:

- Social studies – the subject areas that comprise social studies in an elementary classroom include history, civics, geography, and economics (National Council for Social Studies, 2016).
- Multi-age – an educational (re)structuring effort, where students of different ages and grade bands (e.g., K-2, 3-5) learn in one space (e.g., Day & Yarbrough, 1998; Domenech, 1999; Hattie, 2008; Kolstad & McFadden, 1998; Melliger, 2005; Sims, 2008; Veenman, 1995, 1996).
- Teaching- providing classroom experiences for students to "progress from not knowing to knowing" (Hattie & Yates, 2014, p. xv), where they meet or exceed teachers' "intended outcomes" (Nuthall, 1999) for a unit of study. "This process may involve exposing students to new knowledge, engaging students in problem solving, playing with new concepts, exploring new relations, confronting misunderstandings, and correcting errors in ideas or understanding" (Hattie & Yates, 2014, p. xii- xiii).
- Instructional practices – the formats (e.g., whole group, small group, individual) employed, teacher actions (e.g., question and response, direct instruction, content integration) utilized, and materials (e.g., nonfiction text, graphic organizer, YouTube video) used during instruction.

- Standards – “expectations for student learning and achievement in grades K-12 in English, mathematics, science, history/social science [...]” (Virginia Department of Education, 2019, para. 1). These expectations are the content knowledge, understandings, and skills that students must learn in specific content areas, which are associated with particular grade levels.
- Student learning – the ways in which students "progress from not knowing to knowing" (Hattie & Yates, 2014, p. xv) by "developing surface knowledge (an idea or ideas) to form conceptual understanding (by relating ideas and extending ideas)" (p. xii). For this study, student learning will be measured by student achievement on teacher-created assessments (e.g., pre- and post-test, performance task), which are based on teachers’ “intended outcomes” (Nuthall, 1999) for the unit of study.
- Classroom experiences – how students recalled learning social studies content knowledge, understandings, and skills through particular instructional practices (format, teacher actions, and materials) utilized during the unit of study.

### **Chapter Summary**

Students’ learning of vital social studies knowledge, understandings, and skills is crucial at a young age (e.g., Casey et al., 2019; Levstik & Barton, 2015; Westheimer & Kahne, 2004). This learning has become increasingly elusive in U.S. standards-based elementary classrooms as a direct result of the national accountability context that does not privilege, prioritize, or test it (e.g., Heafner, 2018b; Heafner & Fitchett, 2012; Pace, 2007, 2011; VanFossen, 2005; Wills, 2007). When social studies is tested, research has shown that teachers’ social studies instructional practices do not reflect the characteristics

of best practice and instead, prepare students to memorize and regurgitate information (e.g., Anderson, 2014; Barton & Levstik, 2004; Evans, 2001; Heafner, 2018a; Savage, 2003; Vogler & Virtue, 2007). Multi-age, a unique and largely unexplored elementary classroom context, is promising due to the potentially creative approaches to social studies instruction that could be illuminated for the field. There is a need for empirical research exploring “what is really happening in schools” (O’Connor et al., 2007, p. 259) in regards to elementary social studies as well as what teaching and learning in elementary multi-age classrooms entails (e.g., Bailey et al., 2016; Kolstad & McFadden, 1998; Stone, 2009).

In response, I examined how context, teachers’ instruction, and students’ classroom experiences and learning interact in a unique elementary classroom context, multi-age, within a standards-based setting in a tested state. The findings have the potential to contribute to the scant literature on teaching and learning in multi-age classrooms as well as to the field of elementary social studies education, particularly in regards to the ways in which the characteristics of best practice in social studies are implemented within standards-based settings in tested states. These findings address questions related to the ways in which social studies is taught – through teachers’ instructional practices – and learned – through students’ classroom experiences – in elementary multi-age classrooms, as well as generate suggestions for pre-service teacher preparation, in-service teacher professional development, and future research in elementary social studies education and multi-age education.

In the next chapter, I review empirical and theoretical research related to elementary social studies education, as well as multi-age education. Additionally, I

outline the conceptual framework (i.e, CHAT) and controversy surrounding how research defines multi-age classrooms. In the third chapter, I describe the methodology employed during the study. The methodology for this multiple case study (Yin, 2017) directly emerges from a constructivist paradigm (Guba & Lincoln, 1994) and builds on CHAT (Engeström, 2001).

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

The purpose of the review of the literature is to survey scholarly sources, seminal and contemporary, related to this study in order to synthesize and critically analyze key understandings and developments over time. In this study, I will examine how social studies is taught – through teachers’ instructional practices – and learned – through students’ classroom experiences – in an elementary multi-age classroom. Thus, I reviewed empirical and theoretical scholarship from the fields of social studies education and multi-age education. This literature review supports the following research questions as well as the methodological approaches employed in the study:

- How do three elementary co-teachers plan, teach and assess a social studies standards-based unit in one multi-age classroom? In what ways does their instruction reflect best practice in social studies?
- How did elementary students experience instruction and what did they learn during a social studies standards-based unit in a multiage classroom?

During the first section of this chapter, I outline the theoretical framework, Cultural-Historical Activity Theory (i.e., CHAT) that provides the foundation for my conceptual framework. Then, I review literature pertaining to elementary social studies teaching and learning in standards-based settings. Next, I provide an overview of how multi-age education has been defined in the literature as well as a review of the literature on teaching and learning in multi-age classrooms. From the review of the literature, there is



a clear gap in the research regarding how elementary teachers' social studies instructional practices influence (or does not influence) students' social studies classroom experiences and learning within standards-based settings in a tested state. Figure 2 provides an overview of the chapter.

<u>Overview of Chapter II</u>	
Cultural-Historical Activity Theory	
Elementary Social Studies Education	
Definition and Purpose of Elementary Social Studies Education	
Disappearance of Elementary Social Studies Education	
High-Quality Social Studies Instruction in Elementary Classrooms	
Social Studies Student Learning in Elementary Classrooms	
Multi-Age Education	
Defining Multi-Age	
Definition of Multi-Age for the 21 <sup>st</sup> Century	
Research on Elementary Multi-Age Education	
Elementary Multi-Age Education Reviews and Syntheses	
Contemporary Elementary Multi-Age Teaching and Learning	
Elementary Social Studies Teaching and Learning in Multi-Age Classrooms	
Chapter Summary	

*Figure 2. Overview of Chapter II*

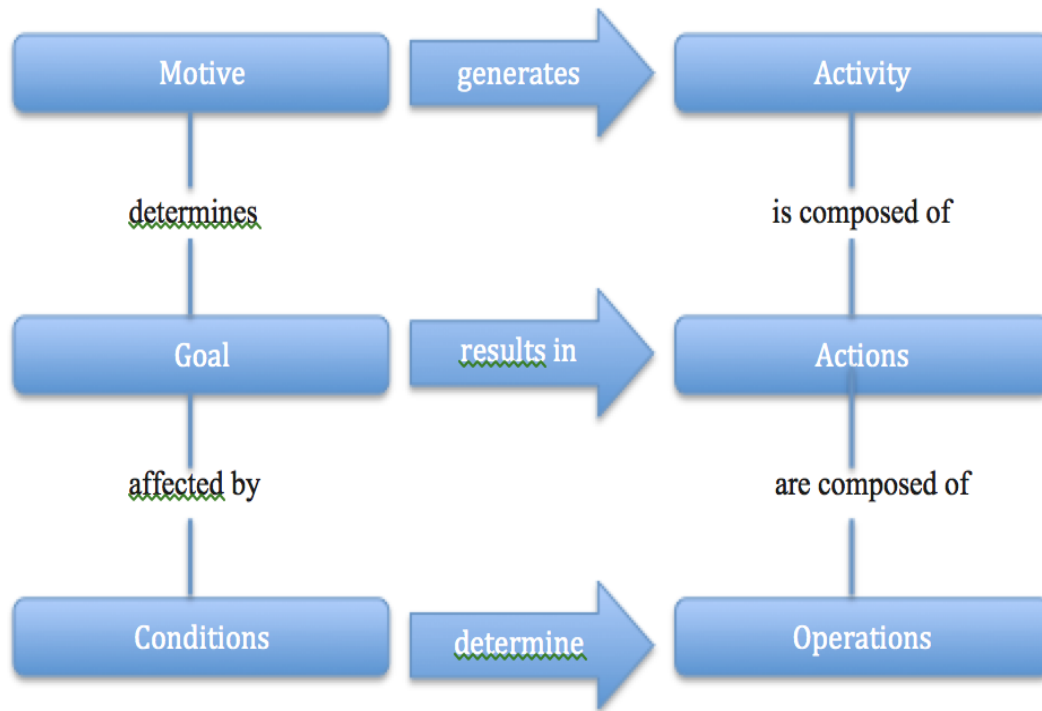
### **Cultural-Historical Activity Theory**

I have utilized CHAT as a theoretical framework because it allows for the close examination of how context, teachers' instruction, and students' classroom experiences and learning interact. CHAT is a theoretical framework that enables description of how humans (subjects), who are embedded in a group (community) with particular regulations (rules), are involved in an activity where they utilize materials (mediating tools and artifacts), assume roles (division of labor), and work towards an individual or collective aim (object). A specific context, such as an elementary multi-age classroom within a standards-based setting in a tested state, can influence participants' meaning making (Vygotsky, 1978), use of mediating tools and artifacts (Yamagata-Lynch, 2010), and

interactions with other individuals (Yamagata-Lynch, 2007). Nussbaumer (2012) argued that CHAT has the potential to be “significant in contributing to the understanding of certain complex situational teaching and learning activities” (p. 46) that occur within classrooms. Specifically, in the field of social studies education, research has shown that CHAT serves as a frame to observe how students are using mediating tools and artifacts to initially develop, adjust or further perpetuate their construction of history (Nuthall, 2000; Schul, 2010, 2012). Researchers in the field of multi-age education have not used CHAT in their work. In this study, CHAT is applied in order to reveal organizational and contextual influences (Yamagata-Lynch, 2007 as cited in Nussbaumer, 2012) that impact teachers’ and students’ experiences teaching and learning social studies, respectively, in an elementary multi-age classroom within a standards-based setting in a tested state.

CHAT’s theoretical foundation has evolved over time, becoming more complex with each iteration. Activity Theory (AT) philosophically stems from Marx’s (1945) belief that change can be best understood through examining human activity. The foundation of CHAT emerged from Vygotsky’s (1978) idea of mediation, where humans interact with one another to process, learn, and construct information. Individuals as well as collaborative groups use tools, which are culturally influenced, in a variety of contexts to support their objectives. Building upon this, Leont’ev (1978) ushered in a new iteration of CHAT, which closely defined the difference between actions, operations, and activity. Actions are “conscious, tool-mediated, and goal-oriented” (Jenlink, 2013, p. 226) whereas operations are how individuals unconsciously accomplish actions. Operations and actions are the component parts of activity. Wilson (2006 as cited in Nussbaumer, 2012) depicted the relationships between actions, operations, and activity in the following

Figure 3.



*Figure 3. The Relationship Between Activity, Actions, and Operations.*

While some researchers embraced CHAT, Cole (1988) critiqued the theoretical framework's focus on the historical development of a single culture and lack of cultural diversity. Cole proposed the notion of artifacts, which are "cultural object[s] that [have been] modified over the course of human history for the purposes of goal-directed behavior" (Jenlink, 2013, p. 227). In a recent iteration of CHAT (See Figure 4), Engeström (2001) developed the concept of activity as a unit of analysis, which could be an individual or collective undertaking. There are eight core assumptions that inform CHAT (Jenlink, 2013):

- (1) Human activity is object-oriented;
- (2) Activities are mediated;
- (3) Activities are shaped by context;
- (4) Relationships are reciprocal;
- (5) Activities are hierarchically structured;
- (6) Activities evolve;
- (7) Historical origins of self and

social interactions are situated in practices focused on the production of artifacts; and (8) Nonreductionist ontology situates human nature and development as rooted in social practices. (p. 221-222)

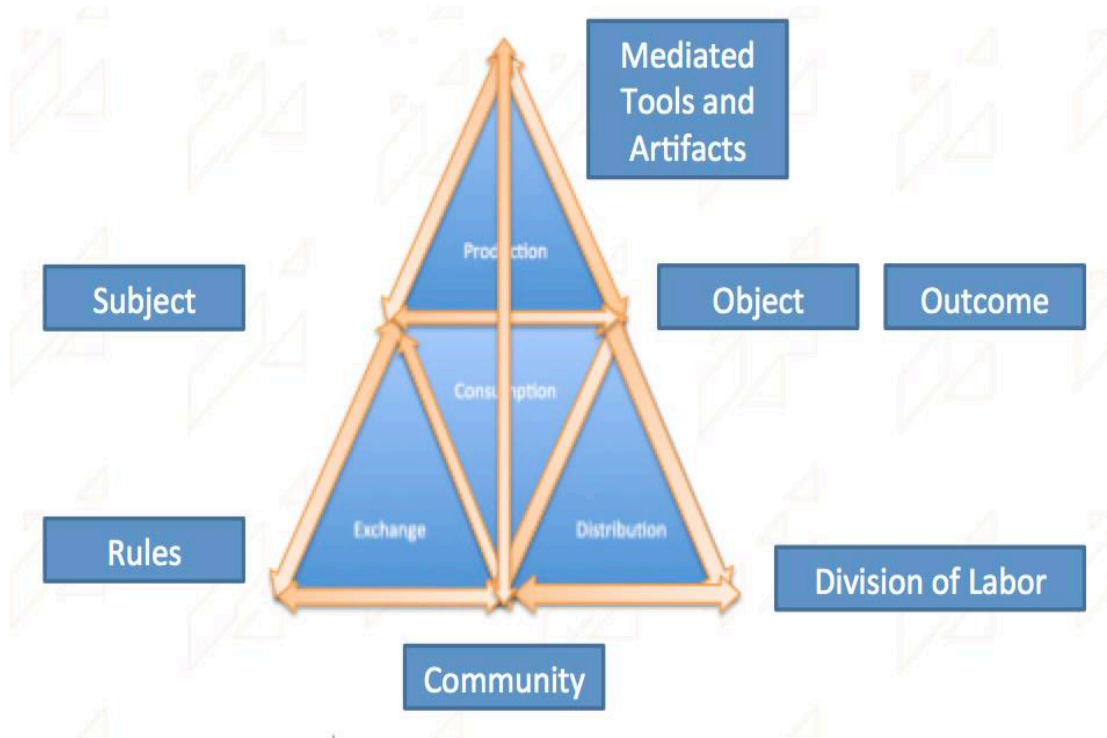


Figure 4. Engeström's (2001) CHAT.

I have adopted Sezen-Barrie, Tran, McDonald, and Kelly's (2014) definitions of the core elements of CHAT:

*Subjects* are participants involved in the activity and motivated towards an object. The *object* is the ultimate aim of the subject through the activity. In order to reach the object, subjects use *tools or mediated artifacts*, which are socially shared cognitive or physical resources. Explicit and implicit *rules* regulate the social interaction in the community. The *community* is the group of people to which subjects belong. As a group of people affiliate over time and construct common ways of being, speaking, acting, and interacting, they construct a community

through these common practices. The *division of labor* is the shared participation of responsibilities in the activity determined by the community members. The *outcome* is the resulting product of the activity system. These outcomes may also affect subjects' decisions on participation in further activities. (p. 678-679)

Keeping this iteration of CHAT in mind, Engeström (2001) argued that CHAT needs to evolve as a theoretical framework to incorporate networks of interacting activity and multiple perspectives as well. Thus, in response to this need, Engeström (2001) proposed the following model (See Figure 5):

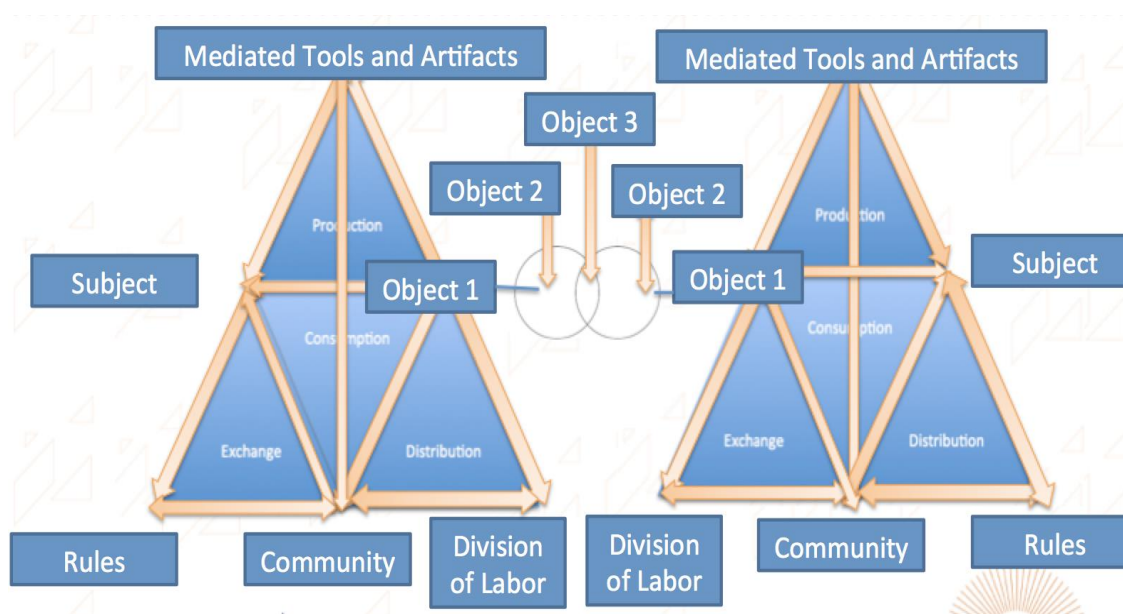


Figure 5. Engeström's (2001) CHAT with Networks of Interacting Activity and Multiple Perspectives.

During the twenty-first century, qualitative researchers across a wide range of disciplines have employed CHAT to inform their collection and analysis of K-12 classroom data (Nussbaumer, 2012). Through Nussbaumer's review of classroom-based research from 2000 to 2009, she found that 21 out of 1577 articles used CHAT constructs

to varying extents; however, only one of those studies examined social studies education (Nuthall, 2000). Nussbaumer stated that Nuthall used CHAT constructs to “provide an exceptionally thorough description of mediation formed by patterns of student participation in class activities and how structures and processes impact such participation” (p. 42). Nuthall explored how fifth and sixth grade students experienced and learned concepts through teacher-developed social studies and science units. Nuthall found that elementary students who learn the most from classroom experiences have the clearest understanding of the systems in which classroom experiences occur as well. More recently, Schul (2010; 2012) adopted CHAT for his secondary history classroom-based research, where he examined how secondary students draw upon their teachers’ instruction and other resources to compose historical documentaries. CHAT enabled him to “analyze the relationships that a student has with various mediators and how these relationships help to shape the process of his or her history making as [he or she composed] a desktop documentary” (2010, p. 22). In this study, I use CHAT to explore networks of interacting activity (i.e., teaching and learning) and multiple perspectives (i.e., teachers and students). Specifically, I examine how teachers’ social studies instruction interacts with students’ classroom experiences and learning of social studies in a unique elementary classroom context – multi-age – within a standards-based setting in a tested state.

### **Elementary Social Studies Education**

Young students learn crucial knowledge, skills, and dispositions through elementary social studies education, which has been disappearing from U.S. classrooms since the rise of curricula standardization and high-stakes testing. Learning (or not

learning) these foundational competencies influences students' current and future participation in society. In places where social studies is taught (and tested), what instructional practices are most effective in regards to student learning? Relatedly, what classroom experiences do students attribute their learning of social studies to? In the following subsections, I will define, describe the purpose of, and outline the disappearance of elementary social studies education. Additionally, I will provide a comprehensive review of the research on high-quality social studies instruction and social studies student learning in U.S. elementary classrooms.

### **Definition and Purpose of Elementary Social Studies Education**

The National Council for the Social Studies (NCSS, 2016) defines social studies by stating:

The subjects that comprise social studies- i.e., history, economics, geography, civics, sociology, anthropology, archeology, and psychology- are rich, interrelated disciplines, each critical to the background of thoughtful citizens. (p. 181)

This definition captures the breadth of disciplines that fall under the larger umbrella of 'social studies.' Elementary social studies (typically preK-5 or 6, depending on the school district) plays a key role in building students' foundational knowledge, skills, and dispositions about the world while focusing on the following subject areas: history, economics, geography, and civics (e.g., Casey, DiCarlo, and Sheldon, 2019; Levstik & Barton, 2015; Westheimer & Kahne, 2004). Through this definition, there is a clear emphasis on students' active engagement with content that supports their development as conscientious and engaged citizens in our culturally diverse and democratic society. Furthermore, NCSS (2016) articulates a vision that the purpose of social studies in

elementary schools should be to teach young learners to “understand, participate in, and make informed decisions about their world” (Berson, Bennett, & Dobson, 2009, para. 6). Through learning about the past and present in social studies, elementary students gain conceptual understandings that they can apply to future experiences (NCSS, 2009; 2017). Therefore, the significance of elementary social studies becomes evident in the valuable knowledge, understandings, and skills that students can acquire at a young age and implement throughout their lives.

### **The Disappearance of Elementary Social Studies Education**

A comprehensive body of research outlines the disappearance, and marginalization, of elementary social studies. This trend started with widespread curricula standardization in the 1980s and continued due to an increased focus on high-stakes testing, which began in the 1990s (Fitchett & Heafner, 2010). National education policies, NCLB and ESSA, have privileged, prioritized, tested, and required states to design challenging and distinctive standards in language arts and mathematics (e.g., Heafner, 2018b; Heafner & Fitchett, 2012; Pace, 2007, 2011; VanFossen, 2005; Wills, 2007). These curricula and testing mandates minimized the role that social studies plays in young students’ continuous development of foundational competencies (e.g., Casey et al., 2019; Levstik & Barton, 2015; Westheimer & Kahne, 2004) that they will use as informed participants in a culturally diverse and democratic society (e.g., Hubbard, 2013; NCSS, 2016). During the 2018-2019 school year, the Education Commission of the States (2019) reported that only 12 states test social studies at the elementary level. This testing occurs in the following elementary grade levels: third, fourth, fifth, and sixth. Thus, no states have a social studies high-stakes test for K-2 students. With the



implementation of these national education policies, barriers emerged that influenced teachers' instruction of and therefore, students' learning of complex knowledge, understandings, and skills that are inherent to social studies (e.g., MacPhee & Whitecotton, 2011; Strachan, 2015).

Researchers have thoroughly documented the barriers that contributed to this disappearance. Surveys have consistently highlighted the dramatic reduction of social studies instructional time in elementary classrooms (e.g., Heafner & Fitchett, 2012; Hubbard, 2013; McCall, 2006; Rock et al., 2006; VanFossen, 2005), which leaves students unequipped, to varying extents, with foundational social studies competencies (i.e., unless they are learning these skills elsewhere in their lives; e.g., outside of the classroom). Instructional minutes have been shifted from social studies to make time for test preparation in language arts and mathematics (e.g., Burroughs, Groce, & Webeck, 2005; McEachron, 2010; VanFossen & McGrew, 2008). Science and social studies compete for the remaining instructional time (e.g., Heafner & Fitchett, 2012), which frequently places those content areas on alternating instructional cycles (e.g., two weeks of social studies and then, two weeks of science; Holloway & Chiodo; 2009). Occasionally, social studies is viewed as 'enrichment' rather than as a core content area (e.g., Hinde, 2005; Houser, 1995; Thornton & Houser, 1996; VanFossen, 2005; VanFossen & McGrew, 2008; Wade, 2002), which leads teachers to believe that social studies can only be taught when there is 'free time' available (e.g., Brophy & VanSledright, 1993; Houser, 1995; Zhao & Hoge, 2005). K-5 pre-service teachers in Bailey et al.'s (2006) study observed that elementary teachers would "teach social studies when, or if, they got around to it" (p. 22). However, time is not the only barrier

elementary teachers face when teaching social studies.

Elementary teachers are often not provided with sufficient resources to teach social studies (e.g., Rock et al., 2006; VanFossen & McGrew, 2008; Zhao & Hoge, 2005), do not have administrative support to teach social studies (e.g., Bisland, 2012; Borroughs et al., 2005; Houser, 1995; VanFossen, 2005; VanFossen & McGrew, 2008), do not feel well prepared to teach the content areas that fall under the umbrella of social studies (history, economics, geography, civics; e.g., Leming et al., 2006; Rock et al., 2006), possess an unclear (or incomplete) understanding of the goals and mission of social studies (e.g., VanFossen, 2005), and perceive social studies as less important to other core subject areas (e.g., Zhao & Hoge, 2005). Even with these national education policies and associated barriers, researchers (e.g., Hubbard, 2013) and professional organizations (National Council for Social Studies, 2016) continue to highlight the vital role high-quality elementary social studies instruction plays in teaching the knowledge, understandings, and skills that young students need to be informed participants in a culturally diverse and democratic society.

### **High-Quality Social Studies Instruction in Elementary Classrooms**

During this era of high-stakes testing, research indicates that elementary teachers make curricular, instructional, and assessment decisions based on what content areas are (or are not) tested (e.g., Au, 2007, 2009; Fitchett, Heafner, & Lambert, 2014a, 2014b). Research in elementary standards-based settings (within non-tested or tested states) either surveys teachers' perceptions and experiences or investigates what and how teachers teach (or don't teach) elementary social studies. Quantitative survey-based research "indicates that testing in social studies has substantive effects on what teachers do,

whereas qualitative research shows more variation and complexity” (Pace, 2011, p. 36). For example, Heafner, Lipscomb, and Fitchett (2014) surveyed elementary teachers’ instructional practices in two neighboring states (i.e., one with and one without a social studies high-stakes test); in the tested state, the researchers found that elementary teachers used a wider range of instructional methods (traditional and best practice, high quality) than in the non-tested state. Elementary teachers in the non-tested state mentioned language arts and mathematics testing pressures as a justification for not teaching social studies as frequently or through a variety of instructional methods. Ultimately, some have concluded, “teachers who work in states where social studies is tested are more likely to teach it” (Heafner, 2018). However, through a meta-analysis, Grant and Salinas (2008) found that when social studies is tested, the amount and type of content taught and the nature of classroom-based assessments are impacted more than instruction. Research has shown that when faced with a high-stakes social studies test, elementary teachers frequently narrow the social studies curriculum, focus on facts found in the standards, and emphasize test preparation (e.g., Evans, 2001; McCall, 2006; Savage, 2003; Stanley & Longwell, 2004).

This is in direct opposition to best practice, high quality elementary social studies instruction, which scholars have argued should be meaningful, integrative, value-based, challenging, and active (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; National Council for Social Studies, 2009). These characteristics of best practice, high-quality elementary social studies instruction have been operationalized and observed as individual characteristics of best practice in social studies (e.g., researchers only examining integrative social studies instruction) rather than as a collective, overlapping

group of best practices in elementary social studies. The ‘typical approach to social studies’ has been consistently observed throughout the 20<sup>th</sup> century. McCall (2006) outlined this approach as including:

teacher-centered instruction, a focus on covering textbook material supplemented by lectures and the occasional use of films and videos, a dominance of teacher talk during ‘discussions,’ individual seatwork interrupted with occasional small-group work, and the use of tests to measure student learning. (p. 161)

Burstein, Hutton, and Curtis (2006) found that California teachers had knowledge of best practice, high-quality elementary social studies instruction, but that knowledge did not result in a change in their instruction. The teachers continued to use traditional instructional approaches (lecture, worksheets) that aligned with test preparation, rather than those that focused on best practice, high quality elementary social studies instruction (using primary sources, inquiry, project-based learning). Some researchers maintain that it takes a highly skilled, some would argue ambitious (Grant, 2007) and/or maverick (Brophy, 1993), elementary teacher to purposefully plan and thoughtfully implement best practice, high quality elementary social studies instruction (e.g., Anderson, 2014; Heafner, 2018a). In the 21<sup>st</sup> century, how often does the ‘typical approach to social studies’ still occur in U.S. elementary classrooms? Conversely, how often does best practice, high-quality elementary social studies instruction occur? Moreover, in what ways does best practice, high-quality elementary social studies instruction occur within standards-based elementary settings that have or do not have an associated high-stakes test? Systematically addressing these questions would be beneficial for the field of elementary social studies education.

Aligning with the “integrative” characteristic of best practice, high quality elementary social studies instruction, “content integration” has been frequently cited as a way to “save” elementary social studies. Content integration is the thematic combination of more than one subject area. Specifically, advocates have called for teachers to integrate social studies content within or alongside other subject areas (e.g., Holloway & Chiodo, 2009; Huck, 2019; Lintner, 2013; Whitlock, 2014), especially with language arts (e.g., Alleman & Brophy, 2010). Research on how teachers structure their social studies curriculum indicates that some teachers only teach social studies through content integration and some utilize content integration as well as teach social studies as a stand-alone subject (e.g., McCall, 2006; Ollila & Macy, 2019; Rock et al., 2006; Whitlock & Brugar, 2019). Scant research has examined *effective* content integration in the elementary social studies classroom (e.g., VanFossen & McGrew, 2008), in part because it requires planning time (Ollila & Macy, 2019), purposeful instructional design (Pace, 2011), and thoughtful implementation (Huck, 2019). In addition to content integration, Halvorsen (2017) outlined other approaches that support student learning (and align with best practice, high quality elementary social studies instruction), which have been observed in the field. She refers to these approaches as alternatives to traditional practices (‘typical approach to social studies’). These alternatives include cultural universals, project-based learning, simulation, inquiry, service-learning/civic action, justice-oriented education, and core knowledge. Research exists on each these alternative approaches, but it could be further developed.

Speaking to this research, Halvorsen (2017) stated, “[...] we still lack comprehensive evidence on which curricula and which instructional approaches are most

effective in [elementary] social studies education” (p. 386). Research must document how best practice, high-quality elementary social studies instruction influences (or does not influence) students’ classroom experiences and learning. Rock et al. (2006) stressed the importance of “collect[ing] and publish[ing] in-depth case studies” that present “data on both the quantity and quality of social studies instruction, both regionally and nationally” because it “can contribute to a much-needed public discourse” (p. 475). These calls highlight the need for more research examining the interaction between teachers’ instructional practices and how students experience and learn social studies in the elementary classroom (e.g., Barton, 2005; Leming et al., 2006; Libresco, 2005; Rock et al., 2006; Zhao & Hoge, 2005). Elementary teachers’ effective social studies instructional practices become more apparent when students have the opportunity to share how they learned particular content knowledge, understandings, and skills through specific classroom experiences.

### **Social Studies Student Learning in Elementary Classrooms**

Despite the widespread disappearance and marginalization of the content area, elementary students learn social studies content knowledge, understandings, and skills in U.S. standards-based elementary classrooms- to varying extents. In these classrooms, students are provided with differing opportunities to learn social studies. These opportunities influence their classroom experiences and ultimately, their learning of the content. Heafner, Lipscomb, and Fitchett (2014) found that these opportunities to learn constrict or expand based on “(1) state testing policies in social studies, (2) curriculum content, (3) how social studies is delivered (e.g., stand-alone versus integration), and (4) time allocated to social studies” (Abstract). However, even when instructional time is

allocated to social studies, elementary teachers report that students are not prepared to learn the next grade level's social studies content. Specifically, in North Carolina, Rock et al. (2006) found that 3-5 teachers spent more time teaching social studies than K-2 teachers, but 3-5 teachers were more likely to believe that their students were not prepared for future social studies experiences. Pre-service teachers have observed similar issues; for example, pre-service teachers in Hubbard's (2013) mixed-methods study remarked that K-6 students did not have the requisite social studies background knowledge and skills, were unaccustomed to new social studies activities, possessed underdeveloped thinking skills, and lacked experiences with technology (and other resources) in social studies. While these student issues were in-service or pre-service teacher reported rather than researcher observed, the classroom experiences that lead to these perceived issues, and potentially, (lack of) student learning need to be evaluated. In what ways are elementary students learning crucial social studies content knowledge, understandings, and skills?

The majority of social studies research in elementary classrooms has been quantitative, focusing on pre-service and in-service teachers' perspectives, experiences, and instruction. Scant research has qualitatively explored elementary students' perspectives, experiences, and learning of social studies. Elementary social studies classroom-based research has investigated students' thinking and learning; furthermore, it should be noted, "research on student *thinking* is distinct from research that explores student *learning* in classrooms, in context" (van Hover & Hicks, 2017, p. 271). When exploring student learning, researchers have knowledge of and the opportunity to incorporate information about context. For example, the following would be considered

more in-depth contextual information: students' social studies classroom experiences and perspectives on social studies, their teachers' instructional practices, and enacted policies in the context (nation, state, district-level, school-level, grade-level/multi-age team level). This contextual information is often missing from studies on student thinking.

Several researchers have conducted in-depth qualitative studies examining elementary students' thinking and learning (e.g., Barton & Levstik, 1996; VanSledright & Brophy, 1992; VanSledright, 2002a, 2002b), particularly in regards to history. VanSledright and Brophy (1992) investigated fourth grade students' understanding of U.S. history (e.g., early explorations and the colonization of America, the birth of the country, westward expansion, the Civil War), prior to their introduction to U.S. history in fifth grade. The researchers used an open-ended interview format with 10 students: four high achievers, four average achievers, and two low achievers. Students' responses included pattern-seeking elements and details, but generally lacked organizational structure as well as historical context and included imaginative elaborations. Barton and Levstik (1996) interviewed 56 students from kindergarten through sixth grade on their understanding of historical time. Students were provided with pictures from differing time periods of U.S. history. Then, they were asked to put the pictures in order and talk through their ordering decisions. K-2 students ordered the pictures from long ago to close to now, 3-5 students grouped the pictures with at least three distinct time periods, and 5-6 students utilized historical information to compare all of the pictures, individually. The researchers concluded that instruction should focus on people's lived experiences at different times and places rather than on dates. VanSledright (2002a, 2002b) conducted researcher-practitioner research in his fifth grade classroom with 23 students. He studied



his own instructional practices and students' learning over the span of four months. During lessons on Jamestown's Starving Time (2002a), VanSledright "engaged students in the practice of historical investigation as a means of enabling them to think historically, understand the past, and produce historical products themselves" (p. 1093). As VanSledright anticipated, students used primary and secondary sources on the Starving Time and constructed conflicting interpretations of what happened based on competing viewpoints. When asked to revisit their interpretations and think about the trustworthiness of each source, students were overly suspicious and no longer trusted the majority of the evidence they read and gathered. With that same group of fifth grade students, VanSledright (2002b) conducted a design experiment with two similar performance tasks: the Boston Massacre and the battle of Lexington Green. Eight focal students (two reading somewhat above grade level, four reading roughly on grade level, and two reading somewhat below grade level) were asked to analyze historical documents and images one time before and one time after instruction. With both of the performance tasks, the students relied on comprehension- monitoring strategies (level 1) and intratextual evaluations (level 2); however, during the second performance task, many of the students began to use event knowledge (level 3) and intertextual evaluations (level 4) to refine their interpretations. These seminal works laid the foundation for research on elementary student thinking and learning in social studies.

In a recent handbook chapter, Halvorsen (2017) synthesized research from the last 20 years on children's thinking and learning in social studies. Particular subject areas within social studies (history, geography, civics and government, economics, anthropology/sociology) as well as social studies topics such as diversity and equity,

civic identity and participation, and morality issues were explored. Halvorsen concluded that the field of social studies education needs “more empirical studies from the elementary classrooms where teachers are experimenting with new materials and new methods” and the field should be questioning “whom these materials and methods are benefiting and why” (p. 407). This call further stresses the importance of examining how teachers’ social studies instructional practices and students’ classroom experiences and learning of social studies interact, in context. Multi-age, a unique and largely unexplored elementary classroom context, is gaining in popularity and offers a promising space to research elementary social studies.

### **Multi-Age Education**

Defining multi-age has been a challenging and arguably, controversial undertaking as multi-age classrooms have not been envisioned and executed in a consistent manner. In the following subsections, I will outline how multi-age has been historically defined as well as what features, ideally, should be included when we define multi-age in the present day.

#### **Defining Multi-Age**

Terminology and characteristics associated with nontraditional classes (do not fit the grade-leveled organizational structure) in elementary schools “have [...] not been well described in research publications; therefore, it is not always possible to clarify which type of class is being studied” (Cornish, 2013, p. 122). These nontraditional classes include, but are not limited to combination/composite, family group, horizontal group, multi-age, multi-grade, nongraded, open, split, stage, and vertical group (e.g., Cornish, 2013; Hattie, 2008; Lloyd, 1999). In the literature, multi-age classrooms have

been considered: (1) an approach (Carter, 2005), (2) a program (Palmer, 2005), (3) a way to flexibly group students (Day & Yarbrough, 1998), (4) a design (Bailey, Werth, Allen, & Sutherland, 2016), and (5) an organizational structure (Lloyd, 1999). These descriptions highlight how stakeholders from schools, districts, and states use multi-age classrooms in differing ways and to varying extents. For example, when ‘program’ is employed, a state or school has fully mandated or adopted multi-age classrooms throughout a particular context (all state elementary schools or one school within a district). Furthermore, scholars (e.g., Bailey et al. 2016; Cornish, 2013; Day & Yarbrough, 1998; Hattie, 2008; Lloyd, 1999; Stone, 2009) have explicitly defined multi-age in a variety of ways; Table 1 highlights these definitions.

Table 1

*Multi-Age Definitions in the Literature*

Citation	Multi-age Definition
Bailey, G. J., Werth, E. P., Allen, D. M., & Sutherland, L. L. (2016). The prairie valley project: Reactions to a transition to a schoolwide, multiage elementary classroom design. <i>School Community Journal</i> , 26(1), 239–264.	Bailey et al. (2016) did not propose a formalized definition of multi-age; however, the researchers outlined elements of multi-age, which included: “differentiated instruction, looping, family-school relationships, teacher collaboration, class size stability, social skills improvement, teacher assignment stability” (p. 250).
Cornish, L. (2013). Mixed-grade elementary-school classes and student achievement. In J. Hattie & E. M. Anderman (Eds.), <i>International Guide to Student Achievement</i> (pp. 122-124). New York, NY: Routledge.	“Multiage classes [...] consist of children from at least two but commonly three school grades or years. Students usually have the same teacher for [two] or [three] years as they progress from being a younger to a middle to an older learner. A student’s association with grade is nominal only, though some grade-specific activities do occur (e.g., standardized tests, grade excursions). The permanence of the class and the teacher are crucial, allowing for an ongoing focus on each child’s learning needs. Thus students work up or down at their nominal grade level for different subjects, in flexible learning

	groups which are usually mixed age” (Cornish, 2013, p. 123)
Day, B., & Yarbrough, T. (1998). Revisiting the multi-age classroom: An old concept for a new millenium. <i>Delta Kappa Gamma Bulletin</i> , 64(4), 37.	“[...] children are flexibly grouped according to performance level, not age, and proceed through the levels at their own rates” (Day & Yarbrough, 1998, para. 3).
Hattie, J. (2008). <i>Visible learning: A synthesis of over 800 meta-analyses relating to achievement</i> . New York, NY: Routledge.	“Multi-age classes include students from more than one year level who are taught in the same classroom by the same teacher (also called multi-grade, multi-age, combination, split-grade, vertically grouped, mixed-age, family group, and non-graded).” (Hattie, 2008, p. 91).
Lloyd, L. (1999). Multi-age classes and high ability students. <i>Review of Educational Research</i> , 69(2), 187-212.	“Children of different ages form one class. The range is commonly three or more years. The teacher does not see the children as members of a particular grade though for administrative reasons the classes are usually referred to as, for example, K-1-2, 2-3, 3-4, 5-6-7. Some grade-specific teaching may occur because of state-mandated curricula and testing but cross- grade teaching is the norm, based on the teacher's judgement of the developmental level of each child. Children usually stay with the same teacher or teachers for several years (team teaching is also common).” (Lloyd, 1999, p. 189).
Stone, S. J. (2009). Multiage in the era of NCLB. In R. Song, T. E. Spradlin, and J. A. Plucker (Eds.), <i>The advantages and disadvantages of multiage classrooms in the era of NCLB accountability</i> (p. 5).	“Multi-age education is a child-centered approach, which is founded in an understanding of child development and research on how children learn, and considers the uniqueness of each learner in terms of learning rate, background, learning styles, multiple intelligences, and interests. Multi-age education does not compare children. The philosophy sees each child on his own continuum of learning within a whole child context: social, emotional, cognitive, and physical. Multi-age does not try to fit the child to the pre-determined curriculum, but rather chooses a broad-based curriculum to fit the needs of the child. Multi-age is grounded in constructivist and social learning theory” (Stone, 2009, p. 5)

These definitions illuminate distinguishing features of multi-age, which are associated with organizational structure, teacher roles, student roles, instructional practices, and learning (See Table 2).

Table 2

*Distinguishing Features of Multi-Age*

	<b>Multi-Age Education</b>
Organizational Structure	<ul style="list-style-type: none"> <li>• Children are from at least two (e.g., K-1), but occasionally three school grades or years (e.g., K-2)</li> <li>• With the same peers and teacher(s) for multiple years               <ul style="list-style-type: none"> <li>○ Looping</li> <li>○ Class size stability</li> <li>○ Teacher assignment stability</li> </ul> </li> </ul>
Teacher Roles	<ul style="list-style-type: none"> <li>• Collaborative with co-teachers</li> <li>• Teacher as facilitator, guide, or partner               <ul style="list-style-type: none"> <li>○ Student-centered (i.e., not teacher-centered)</li> </ul> </li> </ul>
Student Roles	<ul style="list-style-type: none"> <li>• Progression from being younger learner to older learner</li> </ul>
Instructional Practices	<ul style="list-style-type: none"> <li>• Focus on each child's individual needs               <ul style="list-style-type: none"> <li>○ Differentiated instruction</li> </ul> </li> <li>• Grouping based on student developmental levels, not age               <ul style="list-style-type: none"> <li>○ Flexible grouping</li> </ul> </li> <li>• Some grade-level specific instruction due to state-mandated curricula</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Each student is on his or her own continuum of learning               <ul style="list-style-type: none"> <li>○ Social</li> <li>○ Emotional</li> <li>○ Cognitive</li> <li>○ Physical</li> </ul> </li> </ul>

These distinguishing features are found in the definitions of nongraded, combination, and multi-grade classrooms as well. Cornish (2013) noted, “Multi-age classes are a less-developed form of nongraded classes” (p. 123). Formed by choice, nongraded classes do not use age or grade level to identify students and have younger and older students interacting with one another. Meanwhile, multi-grade classrooms are located in primarily rural schools, formed out of necessity and are usually permanent. Combination classrooms, located in urban and suburban schools, are a subset of multi-grade classrooms. Burns and Mason (1998) associated multi-age or nongraded classes

with “philosophical or pedagogical reasons” and combination or multi-grade classes with “uneven enrollments and fiscal constraints” (p. 743). Thus, some researchers (Burns & Mason, 1998; Mason & Burns, 1997a) have used similar terms interchangeably such as combination and multi-grade as well as multi-age and nongraded. Do these terms have to be dichotomously delineated, pitting innovation (philosophy and pedagogy) against pragmatism (administrative challenges)? Is there room for overlap? Multi-age is where this overlap could potentially occur- especially since researchers have struggled to categorize multi-age between two silos for decades, as illustrated with the following (Veenman, 1997, p. 268 as cited in Mason & Burns, 1997b):

A study was only placed in the multi-age studies category when at school level no mention was made of the formation of combination classes for administrative or economic reasons. Pedagogical and didactic motives [...] had to be clearly visible. When in doubt, I always chose the category of combination/multigrade studies, because this category is much more prevalent.

The definition of multi-age should exist along a gradient, fluidly moving between nongraded and multi-grade/combination classrooms, adjusting with stakeholders’ (students, teachers, school-based and district-based administrators, school board members, parents) context-specific priorities. These priorities include reasons associated with pragmatism as well as innovation. Pragmatic reasons include, but are not limited to maximizing space in a school facility (Domenech, 1999), teacher shortages (Kolstad & McFadden, 1998), and fluctuating student enrollments (Sims, 2008). Reasons linked with innovation tend to be based on philosophical (Melliger, 2005) or pedagogical beliefs (Day & Yarbrough, 1998). In some cases, various stakeholders have divergent reasons

tied to their support of multi-age; however, if they engaged in discourse, would their divergent reasons coalesce into a more nuanced vision of multi-age? For this study, I intend to work from a more nuanced definition of multi-age. Additional distinguishing features will be added based on the extant literature as well as from the data in this study.

### **Definition of Multi-Age for the 21<sup>st</sup> Century**

Multi-age is an educational (re)structuring effort, where students of different ages and grade bands (K-2, 3-5) learn in one space (e.g., Day & Yarbrough, 1998; Domenech, 1999; Hattie, 2008; Kolstad & McFadden, 1998; Melliger, 2005; Sims, 2008; Veenman, 1995, 1996). Organizationally, a multi-age classroom is more reflective of the child's society outside school (Stuart, Connor, Cady, Zwiefel, 2006, p. 13), which is not divided by age, than a grade-leveled classroom. With multi-age, children have the opportunity to learn from and with the same teacher(s) and peers for a number of consecutive years (looping; Bailey et al., 2016). Multi-age encourages student continuous progress (Mack, 2008) along a continuum of learning, which is individualized based on each child's social, emotional, cognitive, and physical needs (Stone, 2009). Multi-age teachers collaboratively work with one another to develop and implement (Bailey et al., 2016) instruction that is student-centered as well as responsive to state-mandated curricula and testing. Creative instructional and assessment approaches are utilized in multi-age classrooms including, but not limited to differentiated direct instruction (Gutierrez & Slavin, 1992), personalized learning plans (Pardini, 2005), collaborative learning (Hoffman, 2002; Peterson, 2016), flexible grouping (Day & Yarbrough, 1998), and portfolios (Hall & Hewitt-Gervais, 2000).

Stakeholders' context-specific priorities shape why, how, to what extent, and when multi-age is implemented as a (re)structuring effort in a state, school division, or school. For example, multi-age can exist as a program for a whole school or as a "school within a school" (multiple multi-age classrooms within a pod, separated from the grade-leveled classrooms; Stone, 2009, p. 5). However, if multi-age is unsuccessful in an educational context, stakeholders can remove multi-age and transition to a grade-leveled organizational structure. Throughout history, researchers have studied multi-age education to varying extents- in waves of great interest and then, periods of little to no interest.

### **Research on Elementary Multi-Age Education**

As outlined in the previous section, multi-age classrooms are not a new way to (re)structure schools (Pratt, 1986). Over the years, many stakeholders turned to multi-age because of their frustration with the following: (1) grade labels (third grade, fifth grade), (2) the use of a promotion-retention system, and (3) competitive/comparative evaluation systems (Anderson & Pavan, 1993). Throughout educational history, multi-age classrooms have experienced fluctuating attention. U.S. policy, historical context, and classroom practice have influenced this attention and ultimately, have impacted the timing, amount, and quality of research that has been published. However, much of the research on multi-age classrooms is outdated and offers mixed results (Song et al., 2009); thus, supporting the need to explore multi-age classrooms through a more contemporary lens, further developing and solidifying our understandings.



### **Elementary Multi-Age Education Reviews and Syntheses**

The 1960s and 1970s emerged as a time of interest in relation to multi-age and nongradedness (Pavan, 1992); thus, researchers of the 1980s (e.g., Pratt, 1986; Slavin, 1987) reviewed the prior research to survey the results. In his review, Slavin (1987) examined several differing types of elementary grouping practices, in which two options (Joplin Plan and nongraded plans) most closely mirror the modern multi-age classroom. The Joplin Plan regroups students “for reading without regard for grade levels” (p. 113-114), whereas nongraded plans abolish formal grade levels “in favor of flexible cross-age groupings for different subjects” (p. 114). He found these grouping practices to be “positive” (Joplin Plan) or “generally positive” (nongraded plans; p. 114) and “instructionally effective” (p. 121); however, achievement effects were inconsistent with nongraded plans. Slavin did not outline the criteria used to select studies for his review, how many studies were reviewed in total, or his process for analyzing the studies. Pratt (1986) appraised 30 experimental studies, conducted between 1948 and 1983, which explored grouping in multi-age classrooms, containing students aged within a range of two to three years. These studies indicated that multi-age classrooms serve as learning environments where students experience social and emotional development gains; however, Pratt stated, “multi-age grouping has no consistent effect on academic achievement” as measured by “reading and mathematics scores on standardized tests” (p. 113). Moving into the 1990s, grade-leveled classrooms remained popular, but an increasing number of states, districts, and schools were using elementary multi-age classrooms to rectify inequitable learning environments and opportunities.

In the early 1990s, many researchers began to compare multi-age classrooms to grade-leveled classrooms. Assessing qualitative studies, Miller (1991a) reported on teachers' problems and needs as well as instruction in multi-grade classrooms. Miller concluded, "Multi-grade classroom instruction places greater demands on teachers than teaching in a single-grade," (p. 6). Miller outlined six key variables that impact the effectiveness of multi-grade instruction: (1) classroom organization, (2) classroom management and discipline, (3) instructional organization and curriculum, (4) instructional delivery and grouping, (5) self-directed learning, and (6) peer tutoring (p. 10-11). Through the evaluation of 64 studies, published between 1968 and 1990, Pavan (1992) suggested, "Students in nongraded settings do as well as or better than students in traditional self-contained classes in terms of both academic achievement and mental health" (p. 68). Pavan found these results despite the fact that the instruments employed in these studies were standardized in grade-leveled settings. Gutierrez and Slavin (1992) critiqued Pavan's review, citing a lack of information on the particular forms of nongrading used in the studies as well as the quality of each study's methods. In their synthesis, Gutierrez and Slavin discussed how using cross-age groupings with increased "direct instruction, delivered at students' precise instructional level" (p. 369), positively impacts student achievement in nongraded classrooms. Gutierrez and Slavin's work started a shift towards unpacking teaching and learning in multi-age classrooms, without focusing entirely on comparisons to grade-leveled classrooms.

During the mid-1990s, Veenman (1995) noted that few studies have highlighted instructional practices utilized in multi-age classrooms. Instructionally, Mason and Burns (1996) found that teachers in multi-age classrooms, in a similar manner to grade-leveled

classrooms, were neglecting subject areas such as social studies due to factors such as time constraints and standardized testing. However, Veenman (1996) used meta-analytic procedures to reanalyze Mason and Burns's (1996) data and stated that the small number of studies examining social studies, science, and English as a foreign language could not reliably contribute to the researchers' estimates of effect sizes. Thus, Mason and Burns's assumption that teachers in multi-age classrooms neglect subject areas such as social studies warrants further investigation. In a recent synthesis of meta-analyses, Hattie (2008) suggested that structural changes such as multi-age did not appear to influence the teaching in classrooms. Lloyd (1999) reviewed research on multi-age education with a specific focus on high ability students' learning. Lloyd (1999) stated, "The probability of being able to provide [high ability children with daily opportunities to interact with their intellectual peers] may be increased in a multi-age class" (p. 206). Thus, multi-age is one potentially effective (re)structuring effort that could impact high ability students' achievement. Largely drawing upon the work of Veenman (1995, 1996, 1997) as well as Mason and Burns (1996, 1997a, 1997b), Hattie (2008) concluded, "Overall, the effects from multi-grade classes compared to single-age classes are not compelling enough to argue for the effectiveness of one over the other" (p. 93). Similarly, Cornish (2013) argued, "What goes on inside the classroom is more important than the type of class" (p. 124). Therefore, it is crucial that researchers examine what goes on inside elementary multi-age classrooms- teaching and learning.

### **Contemporary Elementary Multi-Age Teaching and Learning**

Aligned with my intention to shift conversations about elementary multi-age education into the 21<sup>st</sup> century, I will focus on empirical studies published from 2000-

2019 (contemporary) for this subsection of the literature review. In regards to elementary students' learning, researchers (e.g., Fosco, Schleser, & Andal, 2004; Ong, Allison, & Haladyna, 2000) have explored English language arts and mathematics achievement in multi-age classrooms as well as social-emotional development. In a quasi-experimental study, Ong et al. (2000) compared reading, writing, and mathematics achievement (on Arizona standardized tests) between Title 1 and non-Title 1 students (designated as third graders) in single-age and multi-age classrooms. The researchers hypothesized that multi-age students would outperform their single-age counterparts; however, "the hypothesis that multi-age grouping might benefit Title 1 students and other traditionally lower-achieving students was not borne out in [the] study" (Abstract). Fosco et al. (2004) compared student cognitive developmental levels and reading achievement in multi-age and single-age classrooms (K-2). While reading achievement differences were not apparent between the two class types, "children in the multi-age classrooms attained a higher cognitive developmental level at a faster pace compared to children in traditional classrooms" (p. 14). Working with the Los Angeles Unified School District, Mariano and Kirby (2009) found that the context of multi-age had "consistently small and negative effects" (p. 14) on grades 3-5 students' achievement, as measured by the California Standards Test in English language arts and mathematics. The researchers hypothesized that their findings "may be due to the lack of teacher preparation and training to teach in these alternative classrooms [...] rather than some inherent characteristic of the multi-grade classroom" (p. 15). From exploring these studies on multi-age student learning, the quality of instruction (or some other factor; e.g., student characteristics, resources, etc.)

had a greater influence on students' learning than the structure in which the students learned, multi-age.

Elementary multi-age teaching has been studied through teachers' instructional practices (e.g., Hoffman, 2002; Peterson, 2016). Peterson explored merits and drawbacks of decentralized small group discussions of literature ("the teacher is not present"; p. 30) in a multi-age (3-4) classroom. She focused on the decentralized small group as an educational context rather than the broader multi-age classroom. Thus, throughout the article, multi-age, which departs from the traditional grade-leveled structure, was not addressed as a unique educational structure. Peterson's findings demonstrated that decentralized small group discussions of literature provided students with opportunities "[...] to build beneficial relationships with other students, [to] position themselves positively by claiming expertise on particular subjects, and [to] practice collaborative problem solving and reasoning with their peers" (p. 55). Although these findings can be supported within the research base of multi-age education literature, Peterson situates her findings within the research base of reading education literature. Are some or all of these findings attributed to the type of classroom, multi-age, or quality of instruction rather than the type of group within the classroom (i.e., decentralized)? When conducting studies in multi-age classrooms, researchers should consider a myriad of factors that might influence students' classroom experiences and learning including, but not limited to the type of classroom, instructional practices (format, teacher actions, materials), and student characteristics.

Furthermore, elementary multi-age teaching has been explored through teachers' use of particular assessment measures to gauge student learning (Hall & Hewitt-Gervais,

2000). Through surveys and interviews, Hall and Hewitt-Gervais examined portfolios as an instructional and assessment tool in self-contained (single-age) and multi-age elementary classrooms. While the Florida school district provided professional development on gathering and organizing assessments as well as a timeline for portfolio usage, the researchers reported uncertainty about whether the elementary teacher participants “were using portfolios in meaningful ways for instruction, learning, and assessment” (p. 212) since the teachers did not receive explicit training on portfolio usage in the classroom. Hall and Hewitt-Gervais failed to mention that they lacked classroom observations in their study. Noting this as a limitation would have worked to quell their reported uncertainty, and this is an important oversight due to the continued call for more descriptive, observational data from multi-age classrooms (e.g., Bailey et al., 2016; Ong et al., 2000). In the elementary multi-age classrooms, teachers were more likely to “[conference] with individual students about their working portfolios, [allow students to make] decisions about their performance and working portfolios,” and provide “more extensive opportunities for student-student and teacher-teacher” (Hall & Hewitt-Gervais, 2000, p. 227) sharing of working portfolios.

Lastly, researchers (e.g., Aina, 2001; Bailey et al., 2016; Broome, 2009, 2016; Hoffman, 2003) have been interested in exploring teacher, student, and parent perceptions of multi-age. Aina (2001) interviewed and outlined the perspectives of one multi-age teacher, four elementary students and their parents on multi-age education. This was the only study reviewed in which the researcher captured the elementary student perspective; however, Aina (2001) only provided student responses to general questions about their “class” (p. 222) while distinguishing the ‘class’ as multi-age when

interviewing the students' parents. The researcher asked the students' parents more targeted questions about how they feel having their son or daughter in a multi-age classroom. The parent responses detailed dynamics associated with multi-age while the student responses could have been associated with single-age or multi-age classrooms. Researchers should conduct interviews with elementary students in order to capture their perceptions of and experiences with multi-age. Bailey et al.'s (2016) explanatory multiple-case study described "the impact of transitioning from a single-age to multi-age classroom design on students, parents, and teachers" (p. 243) at two elementary schools. Although this purpose includes elementary students, they were not interviewed or surveyed about the multi-age programs at these schools; thus, impacts on students were solely based on teachers' and parents' perceptions, which is a limitation that the researchers did not explicitly mention. The researchers explored within school factors (differentiated instruction, looping, collaboration) as well as outside factors (family-school relationship and student social skills). With the multi-age design, parents largely supported the transition and perceived that "their children liked school more" and "were doing better in the classroom" (p. 255); teachers were "more neutral in their responses to the design's overall impact" (p. 255) and "more hesitant regarding the benefits" (p. 255-256). Broome (2009) found that 52.78% of his surveyed multi-age art teachers in Florida "reported that they did not have any training that was helpful for multi-age preparation" and 8.33% participated "in training that was specifically designed for multi-age educators" (p. 177). In a follow-up study, which focused on professional development experiences in multi-age education, Broome's (2016) survey results illustrated that arts educators (identified as music, physical education, visual art, instrumental ensemble, and

visual/performing arts teachers) want increased training, covering topics such as “organizational strategies, collaboration with colleagues, assessment, integrated curriculum, collaborative student work, research, and thematic instruction” (p. 70). Hoffman (2003) conducted pre- and post- interviews with four multi-age teachers (serving grades 3-5) to learn more about their beliefs as well as instructional and organization practices. Additionally, each teacher was observed for one full day to detail experiences associated with teaching and learning in elementary multi-age classrooms. Teachers beliefs, supported by their instructional and organizational practices, included developing relationships with students, facilitating learning, flexibly grouping, modifying instruction to meet students’ needs, incorporating student choice into the curriculum, supporting social-emotional experiences, and celebrating diversity.

In summary, very little research explicitly investigates elementary teaching and learning in multi-age classrooms. Observing multi-age teachers’ subject-specific instructional practices will provide nuanced understandings of their everyday practice as well as elementary students’ subject-specific classroom experiences and learning. Additionally, teacher and student interviews will capture their perceptions on teaching and learning in an elementary multi-age classroom within a standards-based setting.

### **Elementary Social Studies Teaching and Learning in Multi-Age Classrooms**

No studies in the U.S. have explored how teachers’ social studies instructional practices and students’ classroom experiences and learning of social studies interact in the unique elementary classroom context – multi-age. Only one study in the world started to examine pieces of this intersection. In Turkey, Palavan (2012) surveyed 1,154 fourth grade students in multi-age classrooms and 724 fourth grade students in grade-leveled



classrooms. Palavan collected data on the students through a researcher-created “Information Form” and “Social Studies Achievement Test.” The “*İyi ki Var*” unit’s (i.e., *luckily it is present*; Kahveci & Atalay, 2015) objectives in the fourth grade students’ social studies course textbook served as the curriculum goals for the study. Kahveci and Atalay (2015) have extensively described this unit:

The social studies unit was specified as comprehensive for different relevant disciplines under a comprehensive theme entitled ‘change.’ The unit was designed with real-world problems and activities to be solved with higher order thinking skills such as critical thinking, creativity, decision-making, and problem solving. The unit also used structured activities and questions as a part of the interdisciplinary unit proposed by in the Integrated Curriculum Model to make students active learners. (p. 95)

Palavan reported a significant difference between fourth grade students’ attainment levels of social studies curriculum goals in multi-age and grade-leveled classrooms. Students in the grade-leveled classrooms scored higher on the “Social Studies Achievement Test” than the students in the multi-age classrooms. Comparing students’ attainment levels of social studies curriculum goals within multi-age classrooms with one teacher and those with two or more teachers showed no significant difference. Additionally, there was no significant difference between fourth grade female and male students’ attainment of curriculum goals in multi-age classrooms.

Palavan’s quantitative findings highlighted elementary students’ learning of social studies in multiple multi-age classrooms on a single assessment; however, the study did

not capture the instruction they received during that unit or their classroom experiences in that context. Moreover, the researcher only utilized assessment data from one grade-level of students (fourth) within the multi-age context rather than surveying a range of grade levels and did not include teachers in the study. This study will use observations, interviews, and artifacts to examine how teachers' social studies instructional practices and elementary students' classroom experiences and learning of social studies interact in a multi-age classroom within a standards-based setting in a tested state. Furthermore, this study will capture the perspectives of third, fourth, and fifth grade students as well as their three multi-age co-teachers. Potentially, exploring elementary social studies education and multi-age education concurrently could illuminate if in a space where leveling is intentionally obviated (Anderson & Pavan, 1993) and developmentally appropriate student progress is encouraged (Song, Spradlin, & Plucker, 2009), social studies is taught in creative ways that reflect elements of best practice and might inform both research and practice.

### **Chapter Summary**

Researchers have produced an extensive body of knowledge on the disappearance and marginalization of social studies in standards-based grade-leveled U.S. elementary classrooms (e.g., Bailey, Shaw, & Hollifield, 2006; Fitchett & Hefner, 2010; Hubbard, 2013; Leming, Ellington, & Schug, 2006; Rock et al., 2006; VanFossen & McGrew, 2008; Zhao & Hoge, 2005). Even as social studies instructional time decreases, scholars stress the importance of students learning vital social studies knowledge, skills, and dispositions at a young age (e.g., Casey et al., 2019; Levstik & Barton, 2015; Westheimer & Kahne, 2004). To address this need, best practice, high-quality elementary

social studies instruction (meaningful, integrative, value-based, challenging, and active) has been operationalized and observed as individual characteristics of best practice in social studies (e.g., researchers examining integrative social studies instruction only), but not viewed as a collective, overlapping group of best practices. Also, the majority of social studies research in elementary contexts surveys teachers' perceptions and experiences or investigates what and how teachers teach (or don't teach). In regards to student learning, qualitative researchers have examined elementary students' social studies knowledge, understandings, and skills, particularly in regards to history (e.g., Barton & Levstik, 1996; VanSledright & Brophy, 1992; VanSledright, 2002a, 2002b). This line of social studies research (elementary social studies teaching and learning) has not explored the interaction between elementary teachers' instructional practices and how students experience and learn social studies (e.g., Barton, 2005; Leming et al., 2006; Libresco, 2005; Rock et al., 2006; Zhao & Hoge, 2005), in context.

Scholarship from the field of multi-age education has examined elementary U.S. student achievement in language arts and mathematics (e.g., Fosco, Schleser, & Andal, 2004; Ong, Allison, & Haladyna, 2000), but not social studies. In Turkey, one research study captured elementary multi-age student achievement in social studies (Palavan, 2012). In regards to elementary multi-age teaching, researchers have studied teachers' instructional practices (e.g., Hoffman, 2002; Peterson, 2016) and assessment choices (Hall & Hewitt-Gervais, 2000), but not how they interact with students' classroom experiences and learning. As a unique and largely unexplored elementary classroom context, multi-age exhibits promise as a space that could potentially highlight creative approaches to social studies instruction. Drawing on literature from the fields of

elementary social studies education and multi-age education, there is a clear need for empirical research exploring “what is really happening in schools” (O’Connor et al., 2007, p. 259) in regards to elementary social studies as well as what teaching and learning in elementary multi-age classrooms entails (e.g., Bailey et al., 2016; Kolstad & McFadden, 1998; Stone, 2009). This study addresses those separate calls and unifies the two fields. In the third chapter, I detail the methods used to conduct this study.

## **CHAPTER III**

### **METHODS**

In this study, I explored how context, teachers' instruction, and students' classroom experiences and learning of social studies interacted in a multi-age classroom within a standards-based setting in a tested state. Specifically, the study addressed the following research questions:

- How do three elementary co-teachers plan, teach and assess a social studies standards-based unit in one multi-age classroom? In what ways does their instruction reflect best practice in social studies?
- How did elementary students experience instruction and what did they learn during a social studies standards-based unit in a multiage classroom?

I conducted a case study to capture the differing perspectives of participants (i.e., teachers and students) regarding their experiences (i.e., social realities; Guba & Lincoln, 1994) teaching and learning social studies in an elementary multi-age classroom.

In this chapter, I describe the methodology that informed this research. Next, I outline the conceptual framework that guided the design of this study. Then, I provide contextual information about the setting and participants. Thereafter, I present my data collection and data analysis plans. Lastly, I address my positionality, followed by the criteria for trustworthiness. Figure 6 provides an overview of the chapter.

### Overview of Chapter III

#### Methodology

#### Conceptual Framework

#### Setting and Participants

##### Site Selection

##### State, Division, and School Contexts

Virginia.

Choice County Public Schools and Multi-Age Classrooms.

World Elementary School.

3-5 Standards-Based Multi-Age Classroom.

##### Participants

##### Educational Stakeholders.

*Dr. Meredith Rand.*

*Mr. Tom Potter.*

*Mr. Antonio Gomez.*

*Ms. Dorothy Corbin.*

*Mrs. Pat Cooper.*

*Mr. Nate Wright.*

##### Teacher Participants.

*Mr. Bill Otto.*

*Ms. Nancy Skeen.*

*Mrs. Allison Lily.*

*Mrs. June Avery.*

*Ms. Loretta Barber.*

##### Case Study Students.

*Molly.*

*Maria.*

*Will.*

*Randall.*

*Jamie.*

*Fabricao.*

#### Data Collection

##### Classroom Observations

##### Document Collection

##### Interviews

##### Educational Stakeholder Interviews.

##### Teacher Interviews.

*Pre-Unit Individual Teacher Participant Interview.*

*Pre-Unit Focal Group Teacher Participant Interview.*

*Post-Unit Individual Teacher Participant Interview.*

##### Student Interviews.

#### Data Analysis

#### Positionality Statement

#### Criteria for Trustworthiness

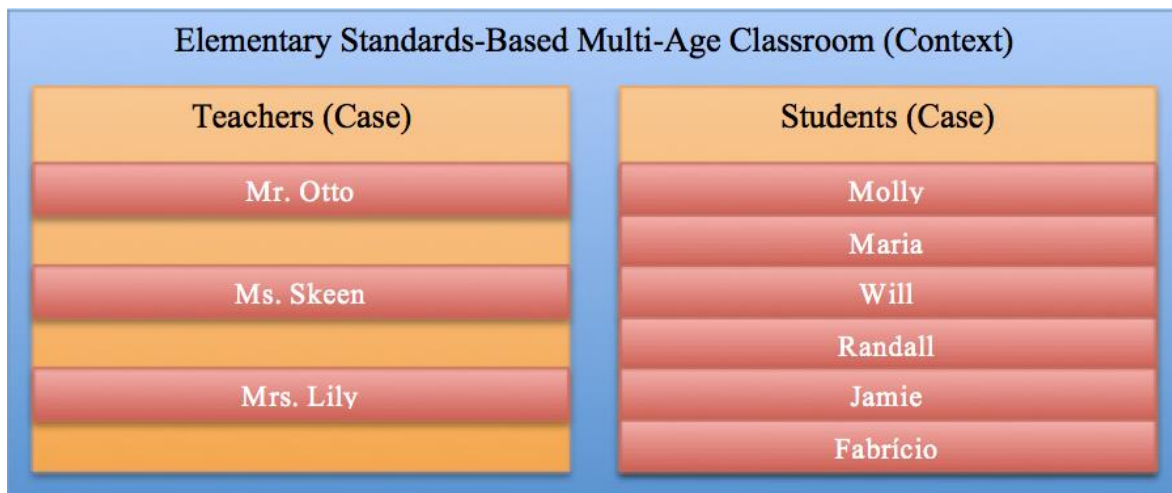
#### Chapter Summary

*Figure 6. Overview of Chapter III*

## **Methodology**

Cultural-Historical Activity Theory (CHAT; Engeström, 2001) and a constructivist research paradigm informed the design of this study. CHAT recognizes the varied interactions of the study participants (Vygotsky, 1978) with mediating tools and artifacts (Yamagata-Lynch, 2010) in the elementary multi-age classroom within a standards-based setting in a tested state, particularly as a constructivist paradigm illuminates the “multiple, apprehendable, and sometimes conflicting social realities” (Guba & Lincoln, 1994, p. 111) experienced by the study participants in the context. An interpretivist epistemology (Rossman & Rallis, 2017), “aim[ing] to mak[e] sense of the social world” (p. 8), supported the qualitative research questions.

Aligning with these assumptions, I conducted a multiple-case embedded design (Yin, 2017) in order to form a composite portrait (Ragin, 1999) of elementary multi-age teachers’ instructional practices and students’ experiences and learning of social studies. This case study design allowed for an in-depth inquiry of a novel context (i.e., multi-age classroom; See Figure 7). To explore both teaching and learning in this context, two “cases” (i.e., teachers and students) were pursued. The embedded units of analysis within each case were the individual teachers and individual students.



*Figure 7.* Multiple-Case Embedded Design for this Study

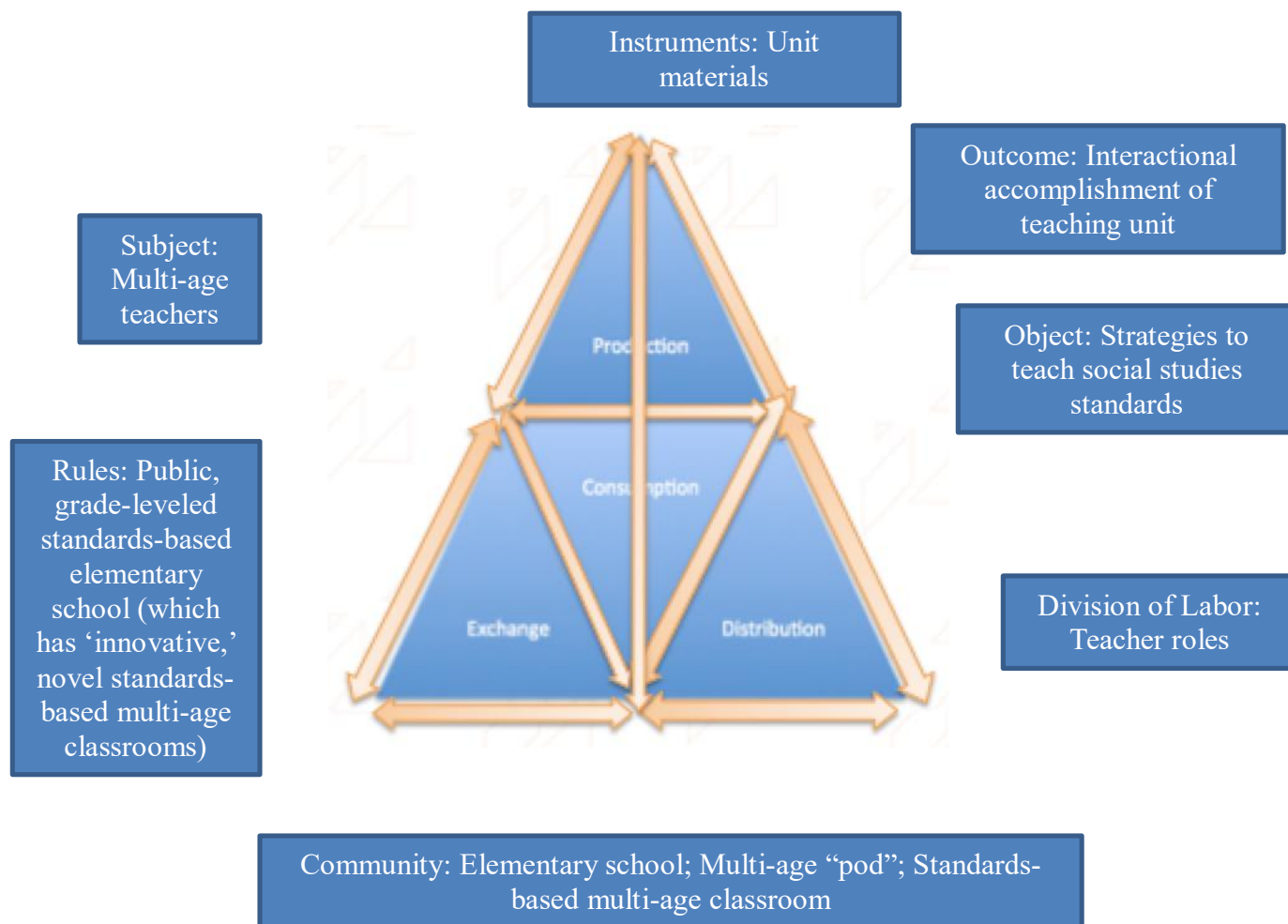
Cases are bounded “at a single point in time or over some delimited period of time” (Gerring, 2004, p. 342). The unit on Jamestown, occurring over 19 days of instruction and assessment, serves as the bounds to define this multiple case study. The unit on Jamestown was used because the three co-teachers chose to teach that particular unit while the researcher was with them. Multiple data sources were collected and analyzed: observations, documents, and interviews. These data sources provided insight into the lived experiences and perspectives of the study participants. In the next section, I outline the conceptual framework that influenced the methods.

### **Conceptual Framework**

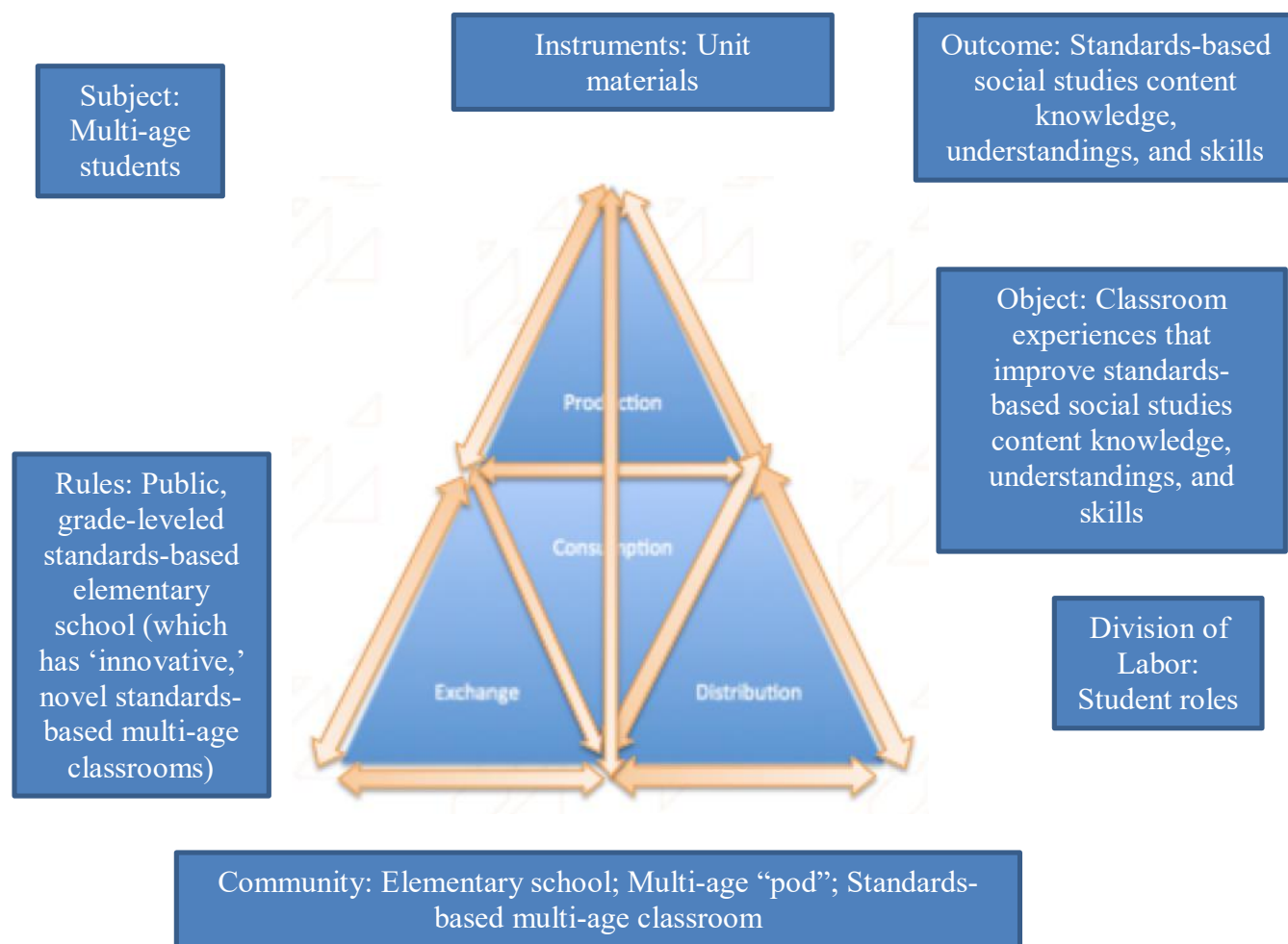
The conceptual framework employed in an empirical qualitative study should allow readers “to see the world, and not just the literature, in a new way” (Siggelkow, 2007, p. 23). I utilized CHAT to inform the multiple-case embedded design and implementation of this study. CHAT highlights how “individuals engage in goal-directed activities within cultural contexts while relying on ‘others’ who are more experienced, and using artifacts to mediate learning” (Jenlick, 2013, p. 219-220). Activity is used to



interpret participation in a particular context. In this study, I explore two differing activities: teaching (See Figure 8) and learning (See Figure 9).



*Figure 8.* CHAT for Teaching in an Elementary Standards-Based Multi-Age Social Studies Classroom



*Figure 9.* CHAT for Learning in an Elementary Standards-Based Multi-Age Social Studies Classroom

Specifically, I examined how teachers' instructional practices and students' classroom experiences and learning interact in a unique elementary classroom context – multi-age – within a standards-based setting in a tested state. To examine these networks of interacting activity (i.e., teaching and learning) and multiple perspectives (i.e., teachers and students), I have employed Engeström's (2001) most recent iteration of CHAT (Figure 10).

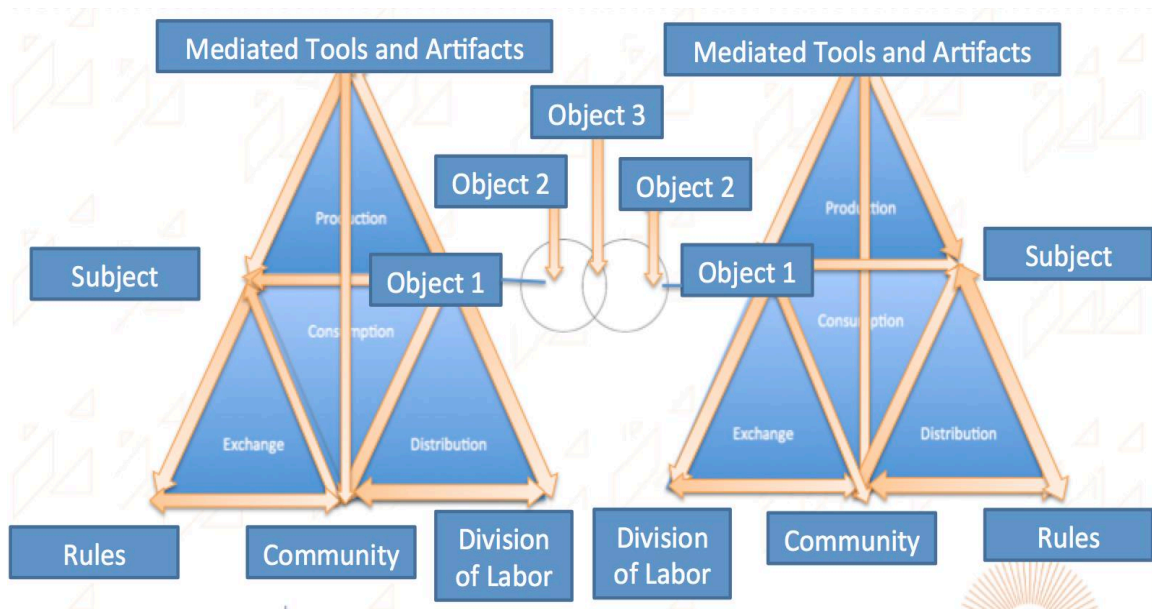


Figure 10. Engeström's (2001) Most Recent Iteration of CHAT

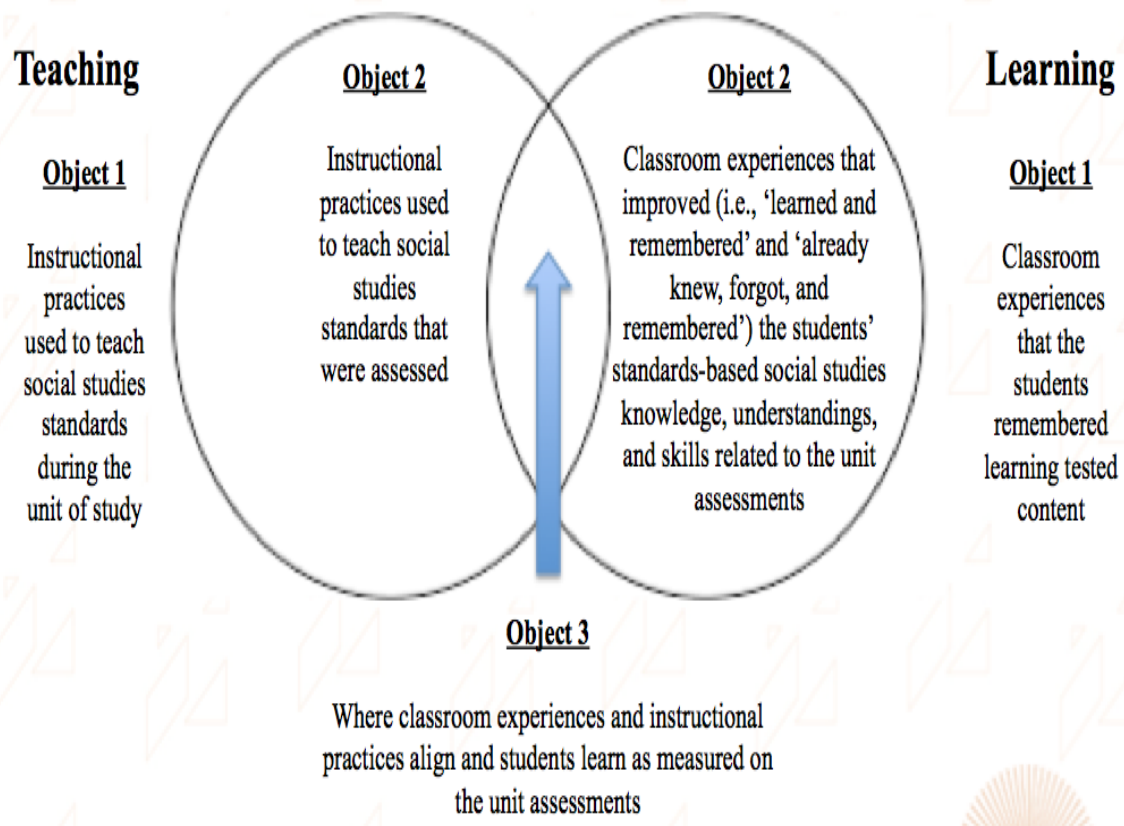


Figure 11. CHAT for Teaching and Learning in an Elementary Standards-Based Multi-Age Social Studies Classroom

In Figure 11, Object 1 on the teaching side is comprised of the instructional strategies used to teach social studies standards during the unit of study (unit on Jamestown).

Object 2 on the teaching side is comprised of the instructional strategies used to teach the social studies standards that were assessed (on the multiple choice unit test and Minecraft performance assessment). Object 1 on the learning side is comprised of the classroom experiences that students remembered learning tested content (standards-based social studies content knowledge, understandings, and skills). Object 2 on the learning side is comprised of the classroom experiences that improved the students' standards-based social studies content knowledge, understandings, and skills in relation to the unit assessments (multiple choice unit test and Minecraft performance assessment). Object 3 highlights the interesection of teaching and learning. Object 3 is the overlap where classroom experiences and instructional practices aligned and students learned, as measured by the unit assessments (multiple choice unit test and Minecraft performance assessment).

### **Setting and Participants**

I applied a constructivist paradigm (Guba & Lincoln, 1994) in order to gain a greater understanding of teachers' and students' perspectives and form a composite portrait (Ragin, 1999) of social studies teaching and learning in an elementary multi-age classroom within a standards-based setting in a tested state. I utilized purposeful sampling strategies (Creswell, 2014) to find cases of elementary multi-age social studies teaching and learning. In this section of the chapter, I provide contextual information about the setting and participants.

## Site Selection

I used theoretical sampling (Eisenhardt & Graebner, 2007) to identify four elementary schools with multi-age classrooms in a school division, which served a county around a small city in Virginia. Those sites were “particularly suitable for illuminating and extending relationships and logic” (i.e., because they had been multi-age for a few years; Eisenhardt & Graebner, 2007, p. 27) about how context, teachers’ instruction, and students’ classroom experiences and learning of social studies interacted in a multi-age classroom within a standards-based setting in a tested state. Out of those four elementary schools, three were experiencing administrative or programmatic changes with multi-age. While I initially wanted to conduct a multisite study because I believed that “cross-site comparison” (Herriott & Firestone, 1983, p. 14) would prove beneficial to answering my research questions, I decided to only contact the elementary school (i.e., World Elementary School; pseudonym) without current administrative and programmatic changes (which has also been implementing multi-age for the longest period of time). Working with World Elementary School (WES) provided me with greater within-site understanding and comparison amongst study participants.

However, before contacting WES, I submitted the Institutional Review Board (IRB) paperwork for Choice County Public Schools (CCPS; pseudonym) and received approval to conduct research in CCPS. Additionally, I already had IRB approval from my university. Then, I emailed the current principal of WES, Mr. Nate Wright. In the email, I provided him with a brief description of the study in order to gauge his interest. He responded that he was interested and volunteered to provide me with a tour of the school. On the tour, I was able to observe instruction, interact with multi-age teachers and

students, and further discuss the study with Mr. Wright. He signed the IRB paperwork and consented to site participation. At my request, Mr. Wright emailed a list with all of the WES multi-age teachers' names so that I could reach out to them about participating in the study. There were nine names in total; four of the teachers worked in K-2 multi-age classrooms while five of the teachers worked in 3-5 multi-age classrooms.

### **State, Division, and School Contexts**

**Virginia.** I conducted the study in the state of Virginia. It is important to outline the curricular, instructional, and assessment history of Virginia in order to provide contextual information for the study. In 1995, the Virginia Standards of Learning (SOLs) were created with mixed reactions from constituents (van Hover, Hicks, Stoddard, & Lisanti, 2010). As a result, Virginia designed a seven-year revision timeline. Revisions have occurred in 2001, 2008, and 2015. When *No Child Left Behind* (NCLB; U.S. Department of Education, 2002) was released, which required states to establish challenging and distinctive standards in language arts and mathematics, Virginia already had standards that they could strengthen with future iterations. According to the Virginia Department of Education (2019), SOLs are “expectations for student learning and achievement in grades K-12 in English, mathematics, science, history/social science [...]” as well as several other content areas. These expectations are the content knowledge, understandings, and skills that students must learn in specific content areas, which are associated with particular grade levels.

At the elementary school level, the Virginia history/social science SOLs focus on the content knowledge, understandings, and skills associated with the following subject areas: history, civics, geography, and economics. To illustrate, Table 3 showcases the

2015 Virginia history/social science SOLs addressed in the study's unit on Jamestown, as identified in the elementary multi-age teachers' unit plans. Virginia Studies (VS) is the Virginia history/social science content that is typically taught in fourth grade classrooms. Each grade level's history/social science SOLs build upon one another over time (i.e., resulting in a spiraling curriculum).

Table 3

*Jamestown Unit's 2015 Virginia History/Social Science SOLs*

- |      |   |
|------|---|
| VS.2 | <p>The student will demonstrate an understanding of the relationship between physical geography and the lives of the native peoples, past and present, of Virginia by</p> <ul style="list-style-type: none"> <li>c) locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, Rappahannock River, and Lake Drummond and the Dismal Swamp)</li> </ul>  |
| VS.3 | <p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <ul style="list-style-type: none"> <li>a) explaining the reasons for English colonization;</li> <li>b) describing the economic and geographic influences on the decision to settle at Jamestown;</li> <li>c) describing the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement;</li> <li>d) identifying the importance of the General Assembly (1619) as the first representative legislative body in English America;</li> <li>e) identifying the impact of the arrival of Africans and English women to the Jamestown settlement;</li> <li>f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival; and</li> <li>g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in the survival of the settlers.</li> </ul> |
| VS.4 | <p>The student will demonstrate an understanding of life in the Virginia colony by</p> <ul style="list-style-type: none"> <li>a) explaining the importance of agriculture and its influence on the institution of slavery;</li> <li>b) describing how the culture of colonial Virginia reflected the origins of American Indians, European (English, Scots-Irish, German) immigrants, and Africans;</li> <li>c) explaining the reasons for the relocation of Virginia's capital from Jamestown to Williamsburg;</li> <li>d) describing how money, barter, and credit were used; and</li> <li>e) describing everyday life in colonial Virginia.</li> </ul>   |

Currently, in Virginia at the elementary school level, history/social science is only assessed with a high-stakes test in the fourth or fifth grade (depending upon the school district). The high-stakes test occurs at the end of the school year and is formatted with multiple-choice questions. These questions cover history/social science content that elementary students have learned across grades K-5. For example, the following (See Figure 12) is a released question that is aligned with VS.3g:

**Which of these happened last?**

- ☐ **A** Settlers learned survival skills from Powhatan and other native peoples.
- ☐ **B** Native peoples saw the settlers as invaders taking their land.
- ☐ **C** Settlers communicated with the native peoples through Pocahontas.
- ☐ **D** Native peoples taught the settlers to plant corn and other crops.

*Figure 12. Example High-Stakes Test Question in Virginia*

**Choice County Public Schools and Multi-Age Classrooms.** I conducted this study in CCPS, a school division that serves a county surrounding a small city. During the 2018-2019 school year, the school division had a total enrollment of almost 14,000 PK-12 students. 9.7% of those students were identified as English learners, with 74 languages and 89 countries represented. 29.5% of those students were classified as economically disadvantaged and 12.5% were identified as students with disabilities. CCPS has 15 elementary schools (i.e., PK-5) with an average class size of 19.4 students. The school division's student-to-computer ratio is 3:2 for grades PK-2 and 1:1 for grades 3-12. CCPS spent roughly \$13,000 per student during the 2018-2019 school year.



The idea of “multi-age” emerged in CCPS after Dr. Meredith Rand, CCPS’s former superintendent, and Mr. Tom Potter, CCPS’s former Chief Technology and Innovation Officer, went on a trip to Ireland. In Ireland, many of the elementary classrooms are multi-age. Dr. Rand recounted talking with a teacher of eight to 11-year-olds (i.e., 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grade) and she asked, “So, wouldn’t you rather have all your eight-year-olds together?” (Interview, 2/22/19). The teacher remarked, “But if I had all eight-year-olds together, how would they learn to be nine?” Dr. Rand said that she remembered this teacher’s question and how differently classrooms functioned in Ireland (e.g., older students modeling expectations for younger students) in comparison with U.S. classrooms.

While the label of “multi-age” was not assigned to elementary classrooms in CCPS until 2013 (i.e., when conversations about multi-age began at WES), several smaller elementary schools in the county had been doing “combinations” (Mason & Burns, 1997a, 1997b) for years due to student enrollments. Ms. Dorothy Corbin, the current deputy superintendent, stated, “You would teach a 2-3 and I would teach a 2-3, but we weren’t co-teaching” (Interview, 3/8/19). After observing the initial success of the multi-age “pod” at WES, CCPS became curious about converting elementary “combination” classrooms into “multi-age” classrooms, “Can we open up the space [between two classrooms] so you two can be in the same room and we can get the advantage of two educators with 30 kids?” (Corbin, Interview, 3/8/19). Thus, the school division renovated classrooms (i.e., by tearing down walls) in order to create open spaces for multi-age classrooms. However, CCPS discovered that these longer classrooms did not function like the “pod” at WES.

**World Elementary School.** In 1992, WES opened and drew students from four surrounding, overcrowded elementary schools. WES is committed to providing a welcoming learning environment built on the pillars of perseverance, compassion, and relationships. As one of the most diverse schools in CCPS, WES serves roughly 575 students in grades PK-5. Around 50% of the WES students are classified as economically disadvantaged, and roughly 25% of the WES students are identified as English learners (Mr. Wright, Interview, 6/27/19). Twenty-three different languages are spoken at the school, and the students are from 16 differing countries. Out of the 104 staff members at WES, 56 are classroom teachers (i.e., 9 multi-age and 47 grade-leveled). WES has both standards-based grade-leveled and multi-age classrooms; 75% of the school is grade-leveled while 25% of the school is multi-age. Mr. Wright remarked, “To sustain [multi-age] in a public school for four years and actually grow and get better is really good” (Interview, 6/27/19).

In CCPS, WES was going to build an addition onto the school due to their growing student enrollment, which was a result of redistricting. Division- and school-level administrators as well as the architect, Mr. Antonio Gomez, talked about designing six classroom spaces in the addition. However, Dr. Rand inquired, “What would it look like if it was multi-age?” (Interview, 2/22/19). Then, the team engaged in several discussions about the design of the space (e.g., walls, hallways, kitchen, gathering space) if it was going to be multiage. The division- and school-level administrators discussed the characteristics of elementary multi-age that they had already witnessed in CCPS such as looping (i.e., teachers moving to the next grade level with their students from a previous year), co-teaching, combinations, and multi-age summer programs. The team decided to

move forward with the idea and the school board approved the plan. Mr. Wright stated that the school board was “very innovative. They had already adopted a coaching model [and] an immersion foreign language program. They had looked at project-based learning [...] so they were pretty innovative at the time and then they funded [multi-age]” (Interview, 6/27/19).

Before opening the multi-age addition at WES, not only did the space have to be built and furnished, but teachers and administrators had to be logistically and instructionally prepared for students as well. For a full year, the original multi-age team of six teachers along with the school-level administrators focused on further educating themselves about how multi-age works. They visited schools across the U.S. with multi-age classrooms to observe. They worked together to read multi-age literature and plan curriculum with the 2015 Virginia SOLs. Ms. Dorothy Corbin, provided an example of the conversations that teachers had about standards-based multi-age curriculum development (Interview, 3/8/19):

I've got the social studies content for second grade and now I've got third grade and how does that work together? And I'm really not super interested in it looking like, “Okay all the second graders go over here and all the third graders over here.” [...] What are the strands that I can spiral? How do I do that? Can I teach this [content] this year and this the second year cause I'm going to have the kids for two years?

During the first year of multi-age at WES (i.e., 2015-2016), the original multi-age team was provided with release days to plan and observe their teammates. The following highlights the development and continuation of multi-age at WES (See Table 4):

Table 4

*Multi-Age Classroom Development and Continuation at WES*

Year	Activity
Spring 2013	Dr. Rand and Mr. Potter visited Ireland.
Fall 2013-Spring 2014	A team designed the architectural plans for multi-age at WES.
Summer 2014	Construction began at WES.
Fall 2014-Spring 2015	Construction continued at WES.  Original group of six teachers engaged in professional learning around multi-age teaching (i.e., philosophy, pacing guides, curriculum, co-teaching).
Fall 2015-Spring 2016	The multi-age “pod” or “wing” (i.e., the addition) was slated to open with six teachers and around 100 K-5 students in one large K-5 class.  However, shortly before opening, the teachers decided to adjust the larger class into to three grade bands (i.e., K-1, 2-3, and 4-5).
Fall 2016-Spring 2017	The multi-age “pod” had three classrooms: one K-2 class, one 3-5 class, and one 1-3 class. The 1-3 class had students from the 2015-2016 K-1 and 2-3 classes. The students looped into the 1-3 class with their K-1 and 2-3 teachers.  In the original portion of the school (i.e., with the grade-leveled classrooms), there were two multi-age classrooms: one 2-3 class and one 4-5 class. These were spaces where the wall was taken down between two classrooms to make one long classroom.
Fall 2017-Spring 2018	The multi-age “pod” had three classrooms: one K-2 class, one 3-5 class, and one 1-3 class.  In the original portion of the school, there were two multi-age classrooms: one 2-3 class and one 4-5 class.
Fall 2018-Spring 2019 (Year of the Study)	In the multi-age “pod,” there were three classrooms; two of the classrooms were K-2

	<p>and one of the classrooms was 3-5.</p> <p>In the original portion of the school, there was one 3-5 classroom.</p> <p>Thus, there are four multi-age classrooms in total. They serve 25% of the students in the school.</p>
Summer 2019	<p>At this point in time, the school wants to proceed towards a 50/50 model with half of their students in multi-age classrooms and half of their students in grade-leveled classrooms.</p>

**3-5 Standards-Based Multi-Age Classroom.** The 3-5 standards-based multi-age classroom had 51 students of various ages (i.e., 8-11 year olds) and three teachers (i.e., Mr. Bill Otto, Ms. Nancy Skeen, and Mrs. Allison Lily). Ms. Skeen described the students as “an eclectic group” (Interview, 10/24/18), elaborating:


They're very comfortable in multi-age. So they've been through it, they were the first group to start. So having that background with them is interesting versus the new students that come in have not experienced multi-age. Being able to talk with them or partner them up with other students has been huge for them.

Mr. Otto described the co-teaching dynamic with Ms. Skeen and Mrs. Lily as “really tight” and they are able to “bounce things off each other” (Interview, 10/23/18). In terms of the physical classroom space, the 3-5 standards-based multi-age classroom was located within a larger addition, the “pod,” which is attached to WES’s main building. There were two other multi-age classrooms in the “pod”; however, they served K-2 students. There were three main spaces in the “pod” that Mr. Otto, Ms. Skeen, and Mrs. Lily utilized for classroom experiences: (1) arena, (2) cove, and (3) think tank. Table 5

provides an image and description of those spaces as well as how those spaces are used for instruction and assessment purposes.

Table 5

*3-5 Standards-Based Multi-Age Classroom Space and Usage*

3-5 Standards-Based Multi-Age Classroom Space	Description of the Space and How Space is Used
Arena	<p>Image:</p>  <p>Description of Space: Tables, chairs, sliding wall whiteboards, windows, Smartboard</p> <p>How Space is Used: Where students complete their morning work as well as independent work throughout the day; Students are “doing ST Math together, working toward their goals, or doing some quiet reading and responding, or doing must-do activities and projects” (Mr. Otto, Interview, 10/23/18)</p>
Cove	Image:



Description of Space: Couches, benches, TV, projector, rolling whiteboards

How Space is Used: Where students gather for morning meeting and teachers pull small groups for instruction; “More relaxed, doesn’t seem as formal as the arena” (Mrs. Lily, Interview, 11/16/18)

Think Tank

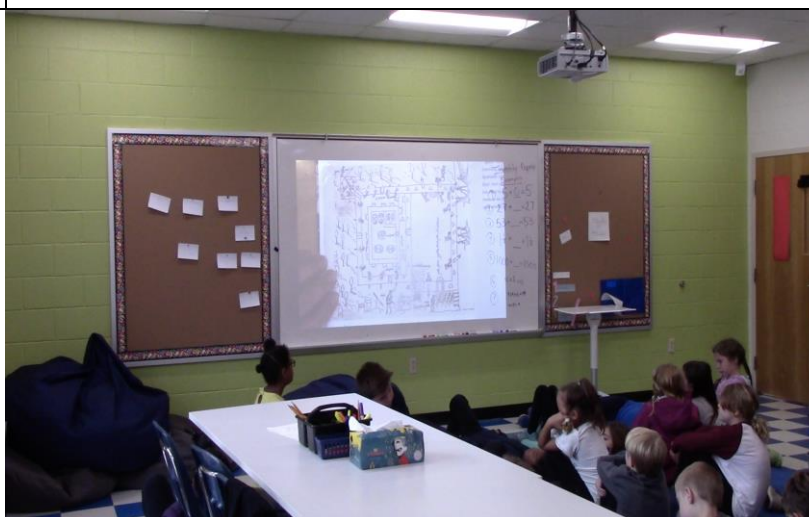


Image:

Description of space: Four walls, door, windows, desks, projector, whiteboard

How Space is Used: Teachers pull small groups for instruction as well as testing; “More like a traditional style classroom” (Mrs. Lily, Interview, 11/16/18); “Closed off space [...] and a quieter area to

	work” (Ms. Skeen, Interview, 10/2/18)
--	---------------------------------------

In this 3-5 standards-based multi-age classroom, a visitor could walk in and “probably not see the same thing twice, to a degree” (Mr. Otto, Interview, 10/23/18). The teachers worked together to design task sheets “where the students are able to complete different tasks. [...] There’s content, there’s math, there’s literacy” (Mrs. Lily, Interview, 11/16/18). For example, Appendix A is the task sheet for Week 2 of the Jamestown unit. Mr. Otto mentioned that the classroom can look “disorganized and chaotic” to some people, yet “balanced” (Interview, 10/23/18) to other people because teachers and students exercise choice and comfort in their teaching and learning.

### **Participants**

In the following subsections, I describe the educational stakeholders’, elementary multi-age teachers’, and elementary students’ backgrounds as well as perspectives on teaching and learning social studies in a standards-based multi-age classroom.

#### **Educational Stakeholders.**

I interviewed numerous knowledgeable educational stakeholders (i.e., individuals other than teachers and students), who were involved with the initial adoption, implementation, and continuation of elementary multi-age education at WES in order gain contextual information. I employed snowball sampling (Rossman & Rallis, 2017) with the educational stakeholders. Initially, I was only going to interview the former superintendent (i.e., Dr. Meredith Rand), the former principal of WES (i.e., Mrs. Pat Cooper), and the current principal (i.e., Mr. Nate Wright). However, Dr. Rand suggested that I reach out to Mr. Tom Potter, CCPS’s former Chief Technology and Innovation



Officer, as well as Mr. Antonio Gomez, the architect. Additionally, Mrs. Pat Cooper encouraged me to reach out to Ms. Dorothy Corbin, CCPS's former director of elementary education and current deputy superintendent. I describe their background and roles below.

***Dr. Meredith Rand.*** Dr. Meredith Rand is the executive director of a statewide education organization (Interview, 2/22/19). Dr. Rand received her Ph.D. in Curriculum and Instruction from an American public university in the southeast. Dr. Rand retired from the public education system in 2018 after serving for 44 years in numerous positions across two school divisions. She started her career as a middle school science teacher and then, middle school principal in a small, rural county in Virginia. Then, Dr. Rand moved to Choice County and started working for CCPS as a professional development coordinator for science and gifted education. Next, she served as an elementary principal for 10 years, where she was later recruited to come to the division-level after her school had been highly successful on SOL measures during the first few years of SOL testing in Virginia. At the division-level, she was the director of curriculum and instruction, assistant superintendent, interim superintendent, and lastly, superintendent. Dr. Rand was the superintendent of CCPS for a total of 13 years. During her time as superintendent, she piloted, adopted, and continued several reform efforts, including elementary multi-age education.

***Mr. Tom Potter.*** Currently, Mr. Tom Potter is promoting his recently published book and serving as an education consultant (Interview, 5/22/19). Mr. Potter has a Bachelors degree as well as certifications in assistive technology and employment training. He has served in several different careers during his adult life: New York City

police officer, university instructional technology support staff, high school network administrator, and educational coordinator for students with disabilities at a vocational rehabilitation agency. Mr. Potter connected with Dr. Rand through Twitter. They started communicating with one another on a regular basis and Dr. Rand invited Mr. Potter to CCPS, where he became the assistant director of educational technology and then, the chief technology and innovation officer. During his time as chief technology and innovation officer, he oversaw how learning environments (e.g., multi-age) were designed to align with individual student interests and needs.

**Mr. Antonio Gomez.** Mr. Antonio Gomez is an architect, who has spent 20 years designing learning environments (Interview, 5/29/19). He remarked that creating great learning spaces required not only thinking about functionality, but also about the people and communities that will be using the learning environment. Mr. Gomez's initial involvement with CCPS and the multi-age "pod" at WES emerged from answering a request for proposals. After an interview, division-level administrators thought he was a good fit for the WES project and hired him for the job. However, Mr. Gomez mentioned, at the proposal stage, no one knew that the addition was going to house multi-age classrooms; thus, "it went from a very traditional process to very abnormal design process [...], but we were discovering together what the learning community looked like." While an abnormal design for this part of the U.S., Mr. Gomez commented on national architectural changes with designing learning environments:

There's a trend in school design. We're seeing more proposals for K-8 schools. So that seems to be coming back- with an understanding that separating middle-

schoolers and [elementary-schoolers], there may not actually be this biological reason that they should be somewhere else. And keeping them in their own community with people they know, allowing them to be role models, and to see and be seen because I can imagine that at a larger scale, not separating students from the younger grades to the older grades might be beneficial.

Mr. Gomez remarked that WES is “happy place” and that he wishes his children could learn in the multi-age “pod.”

**Ms. Dorothy Corbin.** Ms. Dorothy Corbin is the deputy superintendent of CCPS with a total of 39 years in the field of education (Interview, 3/8/19). Ms. Corbin received her Masters in Curriculum and Instruction from an American public university in the southeast. Ms. Corbin has been a teacher in elementary, middle, and high schools as well as a principal at three elementary schools in CCPS. At the division-level, she has been a director of K-12 instruction, director of elementary instruction, assistant superintendent, and deputy superintendent. As the deputy superintendent, Ms. Corbin serves “the instructional side of the house,” where she is “in charge of policy and processes around instruction, [...] principal oversight and supervision, [and] budget oversight and supervision.” Holistically, she reflects on “what the division needs as far as direction, support, and resources.” She believes that the addition of elementary standards-based multi-age classrooms in CCPS has been a natural transition because “sports [have] been multi-age for decades” and “families are multi-age.”

**Mrs. Pat Cooper.** Mrs. Pat Cooper is the director of elementary instruction for CCPS (Interview, 3/5/19). Mrs. Cooper received her Masters in K-12 Administration

and Supervision from an American public university in the southeast. She started her career in education teaching in an elementary multi-age context:

[W]e planned curriculum in an integrated manner around key concepts. I remember specifically one of the big concepts was basically, ‘We the People,’ understanding our history and our nation. And I remember allowing students the freedom to pursue what interested them. I remember their joy in creating projects and also sharing their work with their classmates in an authentic way. My experiences as a teacher actually have inspired me in my leadership role to create those experiences for kids.

After her time in the classroom, Mrs. Cooper served as an assistant principal and principal at three different elementary schools in CCPS, one of which was WES. Mrs. Cooper was eager to implement multi-age at WES because it was a “match” in regards to her prior experiences and “flexible mindset.” She recalled, “I was very open to learning and growing with the new experience. And I think [Dr. Rand] knew at my core, [...] my philosophy is reflected in multi-age.”

**Mr. Nate Wright.** Mr. Nate Wright is the principal of WES (Interview, 6/27/19). Mr. Wright received his Masters in K-12 Administration and Supervision from an American public university in the southeast. He has taught high school chorus and band, been an assistant principal at a middle school and at WES, and served as an instructional coach for fine arts at the division-level in CCPS. Mr. Wright has been the assistant principal at WES for six years and the principal for two years (i.e, not consecutively). He remarked, “I’ve spent eight years married to this school and I love it.”

Mr. Wright was working at the division-level as the instructional coach for fine arts when multi-age was initially presented and discussed with educational stakeholders. He recalled that WES “needed more square footage because [the] community was growing.” Additionally, Mr. Wright recounted the story of Dr. Rand and Mr. Potter going to Ireland, remarking that they returned “impressed with the culture of the schools” and how “most of life organically happens in multi-age.” When Mr. Wright returned to WES as the principal, he was a little bit hesitant about multi-age, but now, he exclaimed, “I wouldn’t do it any other way. I would be in favor of the whole school being multi-age. [...] I see multi-age as the most natural approach to learning.”

### **Teacher Participants.**

Five out of the nine multi-age teachers at WES agreed to participate in this study. The four multi-age teachers who did not participate in the study declined due to the pressures associated with their first year teaching or because their schedules did not align with the researcher’s schedule. All five of the participating teachers taught in 3-5 standards-based multi-age classrooms (See Table 6).

Table 6

### *Teacher Participant Demographic Information*

<b>Teacher Participant Pseudonym</b>	<b>Grade Band</b>	<b>Gender</b>	<b>Race</b>	<b>Years Teaching</b>	<b>Years Teaching in Multi-Age (Out of a Possible 4)</b>
Mr. Bill Otto	3-5	Male	White	18	4
Ms. Nancy Skeen	3-5	Female	White	15	3
Mrs. Allison Lily	3-5	Female	White	6	1
Mrs. June Avery	3-5	Female	White	8	3
Ms. Loretta Barber	3-5	Female	African American	33	3

I was able to observe a unit on Jamestown in one of the 3-5 standards-based multi-age classrooms, where three of the teachers taught (i.e., Mr. Bill Otto, Ms. Nancy Skeen, and Mrs. Allison Lily). Mr. Otto, Ms. Skeen, and Mrs. Lily taught in the multi-age “pod.” I was only able to interview the other two teachers (i.e., Mrs. June Avery and Ms. Loretta Barber) due to conflicts scheduling a time to observe a social studies unit. Mrs. Avery and Ms. Barber taught in the grade-leveled portion of the school in a long classroom (i.e., where the dividing wall had been torn down between two classrooms). I describe their background, perspectives of multi-age, and experiences teaching social studies below.

**Mr. Bill Otto.** Mr. Bill Otto is a White male 3-5 standards-based multi-age teacher. He was trained through a teacher preparation program at a college in the northeast. In total, Mr. Otto has been teaching for 18 years and during that time, he has taught K-7 in New York and Virginia. Additionally, those years of teaching were not concurrent; he left teaching for another career, but decided to return to the profession (Interview, 10/23/18):

I'm not meant to teach to a test. That's actually why I quit teaching. It just kind of sucked a lot of my creativity out so I decided to leave teaching, try something else. Then, I realized that I was meant to come back and be a teacher.

Mr. Otto has spent eight years at WES. Mr. Otto has been teaching in a multi-age class for the past four years. He taught K-2 for one year, 1-3 for two years, and then, 3-5 for one year. He mentioned, “So essentially, I’ve followed some of the same kids since kindergarten”; for example, he has taught Maria and Will (i.e., focal students) for the past four years. Mr. Otto volunteered as one of the original six members of the multi-age team

at WES. He stated, “I was looking for something different and something more risky, groundbreaking, flexible, and it’s totally fulfilled that and then some.”

Mr. Otto’s teaching philosophy focuses on building relationships, developing real life skills, remaining flexible with his teaching, and having fun. Teaching in an elementary standards-based multi-age classroom has provided Mr. Otto with a “family vibe” that you feel when “you are with the same kids for multiple years.” He remarked, “In my 18 years, I’ve never felt more part of a family than when I’m in here.” Some of his favorite things about working in a multi-age classroom include, but are not limited to working with other teachers as well as students’ families and implementing collaborative projects. Some challenges that Mr. Otto has observed are effectively reaching all students of different ages (i.e., across the 3-5 grade band), recognizing when multi-age is not a good fit for students, processing other people’s perceptions of multi-age, and co-teaching.

When asked to define social studies, Mr. Otto remarked, “A study of our world, cultures, and beyond, and its people. And a dialogue about it, since it’s social” (Interview, 12/13/18). Mr. Otto described his teaching of social studies standards in both standards-based grade-leveled (i.e., teaching alone) and multi-age classrooms (i.e., co-teaching with one or more teachers):

When you teach it yourself, you get to fully immerse yourself in it. You understand it, and it becomes your baby. But then, when you team teach it, you can see there were certain things that I didn’t get to or didn’t know, because somebody else did it.

Mr. Otto mentioned that the 3-5 multi-age team was able to “divide and conquer and delegate” the social studies standards for the Jamestown unit.

**Ms. Nancy Skeen.** Ms. Nancy Skeen is a White female 3-5 standards-based multi-age teacher. She was trained through a teacher preparation program at a university in the northeast. In total, Ms. Skeen has been teaching for 15 years and during that time, she has taught K-5 in Virginia at WES. When multi-age was initially implemented at WES, Ms. Skeen did not want to participate because she “was not comfortable with [it]” and she thought students would be “missed” (Interview, 10/2/18). Along with another teacher, Ms. Skeen asked the principal at the time, Mrs. Cooper, “about giving another option, not just three grade bands, but two grade bands.” Ms. Skeen and the other teacher developed a 2-3 pacing guide and started teaching in a 2-3 standards-based multi-age classroom during WES’s second year of multi-age. Thus, this is Ms. Skeen’s third year teaching in a multi-age classroom. She taught grades 2-3 for two years and grades 3-5 for one year.

Ms. Skeen’s teaching philosophy focuses on student inquiry and project-based learning. Teaching in an elementary standards-based multi-age classroom has provided Ms. Skeen with colleagues that she can collaborate with on a daily basis:

Having a teammate, because teaching can be very isolating. You get kind of, I don't wanna say stuck, but you're in kind of the same space with the same kids every day. You don't always see things, or you miss things because you're so focused on specific things. So having that collaboration with another person or two other teachers, I think for me has been huge.

She also enjoys the emphasis on choice and comfort in multi-age classrooms, which can be visibly seen through flexible spaces and seating as well as students of various ages working with each other on differing subject areas. Being able to spend consistent one-



on-one time with each multi-age student has presented a challenge for Ms. Skeen because she feels like she is “constantly on the go” with 51 students.

When asked to define social studies, Ms. Skeen remarked, “Just learning about the past and the present and the future. Learning from that, so what changes have occurred because of the paths that were taken” (Interview, 12/13/18). She enjoys how the 3-5 multi-age team teaches social studies, “where we go through, break the SOLs apart and each pick different component and that way it’s a rotation. So if [Mr. Otto] is taking part A, I’ll do B [...], and [Mrs. Lily] will do C.” However, she wants to make sure that they do a “better job” of teaching social studies standards consistently and in a chronological manner for students.

***Mrs. Allison Lily.*** Mrs. Allison Lily is a White female 3-5 standards-based multi-age teacher. She was trained through a teacher preparation program at a college in the southeast. In total, Mrs. Lily has been teaching for six years and during that time, she has taught first grade in Maryland and 3-5 in Virginia. This is her first year teaching at WES as well as in a standards-based multi-age classroom. Mrs. Lily thought multi-age “was an interesting concept and [she] was very much open to the idea” (Interview, 11/16/18).

Mrs. Lily’s teaching philosophy focuses on students being comfortable in their learning environment, having fun, and showing their learning in their own way. Teaching in an elementary standards-based multi-age classroom has provided Mrs. Lily with opportunities to observe how students take control of their learning:

[It's] been awesome to see them want to create morning work or create a task that we could then use with other students. I think that they're really empowered in here. It's different for them so [...] they see that, they noticed that.

Some challenges that Mrs. Lily has identified with teaching in a multi-age classroom is co-teaching and navigating students' sense of privilege being in the multi-age "pod."

When asked to define social studies, Mrs. Lily remarked, "I guess the study of people, events, history, culture, what brings people together, commonalities and differences" (Interview, 12/13/18). Mrs. Lily was excited that the 3-5 multi-age team used "plethora of avenues to get to the learning" with the Jamestown unit. She elaborated, "[We used] a bunch of different approaches to meet the kids' needs, different projects so the kids [were] getting taught by a variety of methods, [...] whether it [was] by Minecraft, posters, [or] worksheets."

**Mrs. June Avery.** Mrs. June Avery is a White female 3-5 standards-based multi-age teacher. She was trained through a teacher preparation program at a college in the southeast. In total, Mrs. Avery has been teaching for eight years and during that time, she has taught K-5 in Virginia at WES. Mrs. Avery taught on the same fifth grade team with Ms. Barber for several years. Then, they co-taught a 4-5 standards-based multi-age classroom for two years. Now, they have been co-teaching a 3-5 standards-based multi-age classroom for one year.

Mrs. Avery's teaching philosophy focuses on putting students' needs and interests first. Teaching in an elementary standards-based multi-age classroom has provided Mrs. Avery with a colleague to plan and teach with on a daily basis, capitalizing on one another's strengths (Interview, 10/23/18):

So with [Ms. Barber's] amount of experience and then me coming from the kind of more technological way of teaching, we really have a good blend of when we come together, and I think that's so powerful and important to love what we do and be successful at what we do.

Additionally, Mrs. Avery has enjoyed being able to incorporate project-based learning into her standards-based multi-age classroom. Through projects, she and Ms. Barber have been able to partner with community organizations (e.g., Virginia Film Festival) and businesses (e.g., Kroger). Mrs. Avery expressed the challenge of experiencing an “us versus them” feel in the school because her multi-age classroom is not located in the “pod.” Also, she mentioned that presenting the multi-age program to guardians has been challenging, at times.

***Ms. Loretta Barber.*** Ms. Loretta Barber is an African American female 3-5 standards-based multi-age teacher. She was trained through a teacher preparation program at a university in the southeast. In total, Ms. Barber has been teaching for 33 years and during that time, she has taught K-5 in Virginia in CCPS. She has been at WES for the past 14 years. As previously mentioned, Ms. Barber partnered to teach in a 4-5 and then, a 3-5 standards-based multi-age classroom with Mrs. Avery. Ms. Barber explained that she and Mrs. Avery started teaching 4-5 because they worked well together and “when we were going to add the third graders in, I sort of convinced June [to continue]” (Interview, 10/23/18).

Ms. Barber's teaching philosophy focuses on empowering students to make decisions on what they want to learn, providing real life experiences, and incorporating an integrated problem-based learning curriculum. Teaching in an elementary standards-

based multi-age classroom has provided Ms. Barber with an opportunity to give students more time with topics and provide a wider variety of classroom experiences, which she felt that she could not do in a standards-based grade-leveled classroom:

You're on your own schedule. So it's not like when you're departmentalized. It's like, oh, you have an hour. It's time to switch classes. We basically have our kids close to two hours in the morning. So I do two hours of language arts with one group. She does it with one group, and then we swap the next day. So it's not even like we do an hour and a half and an hour and a half. I think actually, it is actually better for the children.

Ms. Barber mentioned that she holds high expectations for students of all ages and pushes them more as a collective group; for example, “[Students will] say, ‘Oh, but I’m only in the fourth grade.’ I’m like, ‘Oh, I just see you as a big class, not necessarily grade by grade.’ So I think that has helped.” Planning and going on field trips has been a big challenge with multi-age for Ms. Barber due to the logistics of scheduling, gathering resources (i.e., monetary, food, supplies), and monitoring large groups of students in places outside of the classroom.

### **Case Study Students.**

Out of the 51 students in Mr. Otto’s, Ms. Skeen’s, and Mrs. Lily’s 3-5 standards-based multi-age classroom, six students were selected as student participants (i.e., Molly, Maria, Will, Randall, Jamie, Fabrício). There were two students to represent each grade level (See Table 7).

Table 7

### *Focal Student Demographic Information*

Student Pseudonym	Age	Grade	Gender	Race	Years Learning in Multi-Age (Out of a Possible 4)
Molly	8	3 <sup>rd</sup>	Female	White	3
Maria	8	3 <sup>rd</sup>	Female	Hispanic	4
Will	9	4 <sup>th</sup>	Male	White	4
Randall	10	4 <sup>th</sup>	Male	African American	1
Jamie	10	5 <sup>th</sup>	Male	African American	4
Fabrício	10	5 <sup>th</sup>	Male	Hispanic	3

Additionally, the student participants mirrored the demographics of the 3-5 standards-based multi-age classroom, writ large. I describe their schooling experiences, perspectives of multi-age, and thoughts on learning social studies below.

**Molly.** Molly is an eight-year-old (i.e., 3<sup>rd</sup> grade in a grade-leveled classroom) female White student. She has spent all of her schooling years at WES; however, not all of those years have been in multi-age. She was in a standards-based grade-leveled kindergarten class and then, she moved over to the K-2 standards-based multi-age classroom in first grade. Molly recounted moving from a standards-based grade-leveled to multi-age classroom: “I just didn’t fit in that class [i.e., standards-based grade-leveled kindergarten], it just wasn’t right for me. [...] They moved me over to multi-age and I do well here” (Interview, 12/14/19). Molly enjoyed art, reading, and answering questions. She mentioned that she likes working with students of different ages in multi-age because “you might be able to help the younger kids learn, or the older kids can help you.” Additionally, she highlighted the unique design of the multi-age classroom:

And then I like [multi-age] because it's different from the other classes, in which it's a big space [...] I'm like wow. This is so cool. And then they have all these weird chairs and couches and everything. So it's really fun. It's like a moving around space. And it's also, it's not like a wall, so you can actually see the other classes.

The only concern that Molly expressed was the noise level because it gets loud in the multi-age “pod.” When asked about social studies, Molly initially communicated uncertainty, but then, provided associated content with a detailed description:

Social studies is learning about history maybe, I think. I don't know. It's hard to describe social studies, because I've never actually gotten what it exactly was. But social studies is like learning about, Jamestown. I think the Greek gods, social studies, I forgot, the Roman times. That would be social studies, because they're totally different things, but they happened in the past and they're all one big thing. All these things happened in Jamestown, all these things happened with the Aztecs, and everything. So they're like groups of stuff that happened in history in different places. And all the little things, and how their story is. It's their story and the things they go through. Groups and things, and the ways they solved their problems.

Molly enjoyed learning social studies because “it's like, what happened back then. It's a mystery. [...] We just have stories and clues and everything, of what we think. [...] So it's just cool to see what it was like.”

***Maria.*** Maria is an eight-year-old (i.e., 3<sup>rd</sup> grade in a grade-leveled classroom) female Hispanic student. Also, Maria is a non-native English speaker; she

does not receive English as a Second Language (ESOL) services. She has spent all of her schooling years at WES in multi-age; thus, she was in one of the K-2 standards-based multi-age classrooms before moving to the 3-5 standards-based multi-age classroom. Maria mentioned that she enjoyed learning with “fun activities” and going outside at school (Interview, 12/14/18). She said, “The thing that I mostly like is writing. Because when I write, it gets me more focused, and I know more.” Maria liked multi-age because she could work with older students and “if I’m stuck, they could help me because they might have already learned it.” However, she stated that multiage “feels weird because with a bigger class, it’s more louder and people have to tell them to quiet down more often.” Maria defined social studies as “when you work independently.” Maria was not able to express a description of social studies with associated content, even when asked additional questions.

**Will.** Will is a nine-year-old (i.e., 4<sup>th</sup> grade in a grade-leveled classroom) male White student. He has spent all of his schooling years at WES; however, not all of those years have been in multi-age. He was in a standards-based grade-leveled kindergarten class and then, he moved over to the K-2 standards-based multi-age classroom in first grade (Interview, 12/14/18). Will recounted moving from a standards-based grade-leveled to multi-age classroom: “When I was in kindergarten, they actually didn't have multi-age. And so when they made multi-age, my parents- they saw it and they just moved me to the multi-age instead of going to a first grade classroom.” He mentioned that his favorite subject is math and he enjoys recess. Also, Will works on the morning announcements team as the tri-caster specialist (i.e., “controlling when [the video is] streaming, when it’s not streaming, the volume and all that”). He said that he

likes multi-age because “people in the grade higher than you, they can help you. And you can help the people in the grade lower than you.” Mentioning some of the same concerns as other students, Will stated, “There's always a lot of people running around and there's three teachers and 49 kids. [...] We talk a lot. It's really loud because it's all open. You can hear the other classes talking really loud too.” Will defined social studies as “like history and geography combined. In middle school, it's a bunch of different things, but they all come together in elementary school.” He continued to express, “I like learning about different places on the earth, and also learning about different times.”

**Randall.** Randall is a ten-year-old (i.e., 4<sup>th</sup> grade in a grade-leveled classroom) male African American student. This was Randall’s first year at WES as well as his first year in a standards-based multi-age classroom. Randall mentioned that his family moves often, but stays in this area (i.e., attended other CCPS schools as well as a school in the city; Interview, 12/14/18). He came to WES because of redistricting in CCPS. Randall said that he enjoys learning new things at school and he likes the “mix of all grades” in multi-age. He did not express any concerns with multi-age. Randall stated that social studies is “one of the important [content areas] that are like behind math and reading.” When asked to talk about this in more depth, Randall elaborated, “Math and reading can help you a lot with stuff. I'm saying [social studies is] one of the important ones because it's one of the ones you probably learn about a lot.” Similar to Maria, when asked further questions, Randall could not express a description of social studies with associated content.

**Jamie.** Jamie is a ten-year-old (i.e., 5<sup>th</sup> grade in a grade-leveled classroom) male African American student. He has spent all of his schooling years at WES; however,



not all of those years have been in multi-age. Jamie moved from a standards-based grade-leveled classroom to a standards-based multi-age classroom when he was in the second grade. He mentioned that he enjoys school because “it’s a place to learn and a place to socialize” (Interview, 12/14/18). Jamie stated that he likes multi-age because there is “more freedom and space.” He did not express any concerns with multi-age. Jamie stated that social studies is when “you learn about one unit [...] and [you] kind of just study everything that happened. Specifically our social studies unit that we did was Jamestown. We went deeply into what Jamestown was, what happened, [and] why they were there.”

**Fabrício.** Fabrício is a ten-year-old (i.e., 5<sup>th</sup> grade in a grade-leveled classroom) male Hispanic student. Also, Fabrício is a non-native English speaker; he receives English as a Second Language (ESOL) services. He has been at WES for three years and has spent all of those years in the 3-5 standards-based multi-age classroom. At his previous CCPS elementary school, he was in standards-based grade-leveled classrooms. Fabrício came to WES because of redistricting in CCPS. Fabrício enjoys school because you get to play and have fun (Interview, 12/14/18). He stated that he liked multi-age because “we can have more recess than just one to burn our energy out.” Fabrício was concerned about the noise in the multi-age classroom because he has gotten in trouble due to others talking:

Cornett (Author): Is there anything you dislike about multi-age?

Fabrício: That it's always loud and sometimes it gets really annoying.

Cornett: Why is it really annoying?

Fabrício: The loudness- people talking when they're not supposed to and sometimes people talk to me. I sometimes say leave me alone and I end up getting in trouble myself.

Cornett: Why do you get in trouble when somebody else is the one doing it?

Fabrício: Because they [teachers] do not know. They were not looking or they are looking at someone else.

Fabrício described social studies as “where you have to look at your words and sort them and do activities.” His description sounded like word study, a Daily Five choice (i.e., part of English language arts), which students could choose as part of their task sheet. When asked further questions about social studies (i.e., emphasizing *social* studies rather than *word* study), Fabrício could not express a description of social studies with associated content.

### **Data Collection**

In this section of the chapter, I outline the data collection procedures (See Table 8) employed during this study.

Table 8

#### *Timeline and Data Collection Procedures*

Timeline	Data Collection Procedures
December 2017	Secured university IRB permission
January 2018	Secured CCPS IRB permission
March 2018	Obtained School Site Consent (from Mr. Nate Wright)

June 2018	Awarded IDEA grant to support data collection and data analysis <ul style="list-style-type: none"> <li>• Funding for teacher participant gift cards and interview transcription services</li> </ul>
September 2018	Contacted potential standards-based multi-age teacher participants ( $N = 9$ )  Obtained consent from teacher participants ( $N = 5$ )
October-November 2018	Conducted pre-unit teacher interviews ( $N = 5$ )
November 2018	Began observations and document collection during a unit of study (i.e., Jamestown) in one of the 3-5 standards-based multi-age classrooms with three teachers ( $N = 3$ ) and six focal students ( $N = 6$ )
December 2018	Concluded observations and document collection  Conducted focal student interviews ( $N = 6$ )  Conducted post-unit teacher interviews ( $N = 3$ )

Data triangulation was utilized because “any case study finding or conclusion is likely to be more convincing and accurate if it is based on several different sources of information, following a similar convergence” (Yin, 2017, p. 128). The sources of information used in this study include observation, document collection, and interviewing. The research questions for this study along with the associated data collection methods are provided in Table 9.

Table 9

*Research Questions and Data Collection Methods*

Research Questions	Data Collection Methods
How do three elementary co-teachers plan, teach and assess a social studies standards-based unit in one multi-age classroom? In what ways does their instruction reflect best practice in social studies?	Pre-unit teacher interviews, post-unit teacher interviews, daily classroom observations, teacher unit plans
How did elementary students experience instruction and what did they learn during a social studies standards-based unit in a multiage classroom?	Focal student interviews, daily classroom observations, student work samples, pre-unit test results, post-unit test results, Minecraft project presentation, Minecraft project rubric

For the first research question, which deals with how the three elementary co-teachers planned, taught, and assessed a social studies standards-based unit in one multi-age classroom, teacher unit plans and interviews provide information about teachers' instructional goals and planning while the daily classroom observational data showcases the teachers' actual implementation social studies instruction and assessments during the unit on Jamestown. With the second research question that focuses on students' classroom experiences and learning, interviews and daily classroom observational data captures their experiences while student work samples, pre-unit test results, post-unit test results, Minecraft project presentation, and Minecraft project rubric form a holistic of their learning during the unit on Jamestown. In the following subsections, I provide further information about the data collection methods.

### **Classroom Observations**

There were three main goals associated with the classroom observations: (1) investigate how teachers and students make sense of multi-age as an elementary school context, (2) explore elementary teachers' enactment of social studies across a grade band (i.e., 3-5) to students of various ages during a standards-based unit on Jamestown, and (3)

examine elementary students' classroom experiences with and learning of social studies. Observations are fundamental to qualitative studies in order to develop patterns pertaining to participants' actions and understand a particular context as well as the events that take place within it (Rossman & Rallis, 2017). In Mr. Otto's, Ms. Skeen's, and Mrs. Lily's 3-5 multi-age classroom, this study was conducted during a unit of study on Jamestown for 5 weeks (November 5 to December 7) during the middle of the 2018-2019 academic year. In total, the unit lasted for 19 days; I observed for 15 days of the unit and another doctoral student, Ms. Carol Murray, observed for 4 days of the unit. I asked Ms. Murray to observe because I was going to be away at a conference. She observed from November 27 to November 30 and I trained her via email, Skype, and in person on November 26.

Observations took place throughout the entire of the school day in order to understand how teachers and students made sense of multi-age as well as to capture all social studies instruction (i.e., occurring during structured and unstructured times). The school day started at 7:40am and ended at 2:35pm (i.e., 6 hours and 55 minutes; See Appendix B). Students spent 4 hours and 45 minutes of the school day in the 3-5 standards-based multi-age classroom. During that time, students had instructional experiences in language arts, mathematics, science, and social studies as well as community building (i.e., morning and closing meeting) and management (e.g., attendance, packing up) activities. Recess, specials, and lunch occurred during the other 2 hours and 10 minutes of the school day.

The unit on Jamestown addressed three Virginia history/social science standards (VS.2, VS.3, and VS.4), according to Mr. Otto's, Ms. Skeen's, and Mrs. Lily's unit plans.

These Virginia SOLs focus on the relationship between physical geography and the lives of the native peoples (past and present) of Virginia, the first permanent English settlement in America (i.e., Jamestown), and life in the Virginia colony (See Table 3).

Table 10 depicts the timeline in which the Virginia SOLs were enacted during the unit on Jamestown.

Table 10

*Enactment of the Virginia SOLs*

Date and Day of the Unit on Jamestown	Enactment of the Virginia SOLs	
November 7, 2018 (Day 1)	VS.3	<p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <ul style="list-style-type: none"> <li>a) explaining the reasons for English colonization;</li> <li>b) describing the economic and geographic influences on the decision to settle at Jamestown;</li> <li>c) describing the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement;</li> <li>f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival; and</li> <li>g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in the survival of the settlers.</li> </ul>
November 8, 2018 (Day 2)	VS.3	<p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <ul style="list-style-type: none"> <li>g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in the survival of the settlers.</li> </ul>
November 9, 2018	VS.2	The student will demonstrate an understanding

(Day 3)	<p>of the relationship between physical geography and the lives of the native peoples, past and present, of Virginia by</p> <p>c) locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, Rappahannock River, and Lake Drummond and the Dismal Swamp)</p> <p>VS.3 The student will demonstrate an understanding of the first permanent English settlement in America by</p> <p>a) explaining the reasons for English colonization;</p> <p>b) describing the economic and geographic influences on the decision to settle at Jamestown;</p> <p>c) describing the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement</p>
November 12, 2018 (Day 4)	<p>VS.2 The student will demonstrate an understanding of the relationship between physical geography and the lives of the native peoples, past and present, of Virginia by</p> <p>c) locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, Rappahannock River, and Lake Drummond and the Dismal Swamp)</p> <p>VS.3 The student will demonstrate an understanding of the first permanent English settlement in America by</p> <p>a) explaining the reasons for English colonization;</p> <p>b) describing the economic and geographic influences on the decision to settle at Jamestown;</p> <p>c) describing the importance of the charters of</p>

		<p>the Virginia Company of London in establishing the Jamestown settlement;</p> <p>f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival; and</p> <p>g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in the survival of the settlers.</p>
November 13, 2018 (Day 5)	VS.3	<p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <p>b) describing the economic and geographic influences on the decision to settle at Jamestown</p>
November 14, 2018 (Day 6)	VS.3  VS.4	<p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <p>f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival</p> <p>The student will demonstrate an understanding of life in the Virginia colony by</p> <p>a) explaining the importance of agriculture and its influence on the institution of slavery;</p> <p>b) describing how the culture of colonial Virginia reflected the origins of American Indians, European (English, Scots-Irish, German) immigrants, and Africans;</p> <p>c) explaining the reasons for the relocation of Virginia's capital from Jamestown to Williamsburg;</p> <p>d) describing how money, barter, and credit were used; and</p> <p>e) describing everyday life in colonial Virginia.</p>
November 16, 2018 (Day 7)	VS.3	<p>The student will demonstrate an understanding of the first permanent English settlement in</p>



		<p>America by</p> <ul style="list-style-type: none"> <li>a) explaining the reasons for English colonization;</li> <li>b) describing the economic and geographic influences on the decision to settle at Jamestown;</li> <li>c) describing the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement;</li> <li>f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival; and</li> <li>g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in the survival of the settlers.</li> </ul>
November 19, 2018 (Day 8)	N/A	
November 20, 2018 (Day 9)	N/A	
November 26, 2018 (Day 10)	VS.3	<p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <ul style="list-style-type: none"> <li>a) explaining the reasons for English colonization;</li> <li>b) describing the economic and geographic influences on the decision to settle at Jamestown;</li> <li>f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival; and</li> <li>g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in the survival of the settlers.</li> </ul>
November 27, 2018 (Day 11)	VS.3	<p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <ul style="list-style-type: none"> <li>d) identifying the importance of the General Assembly (1619) as the first representative legislative body in English America</li> </ul>



	<p>VS.4 The student will demonstrate an understanding of life in the Virginia colony by</p> <ul style="list-style-type: none"> <li>a) explaining the importance of agriculture and its influence on the institution of slavery;</li> <li>c) explaining the reasons for the relocation of Virginia's capital from Jamestown to Williamsburg</li> </ul>
December 5, 2018 (Day 17)	<p>VS.3 The student will demonstrate an understanding of the first permanent English settlement in America by</p> <ul style="list-style-type: none"> <li>f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival; and</li> </ul> <p>VS.4 The student will demonstrate an understanding of life in the Virginia colony by</p> <ul style="list-style-type: none"> <li>c) explaining the reasons for the relocation of Virginia's capital from Jamestown to Williamsburg</li> </ul>
December 6, 2018 (Day 18)	<p>VS.2 The student will demonstrate an understanding of the relationship between physical geography and the lives of the native peoples, past and present, of Virginia by</p> <ul style="list-style-type: none"> <li>c) locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, Rappahannock River, and Lake Drummond and the Dismal Swamp)</li> </ul> <p>VS.3 The student will demonstrate an understanding of the first permanent English settlement in America by</p> <ul style="list-style-type: none"> <li>a) explaining the reasons for English colonization;</li> <li>b) describing the economic and geographic influences on the decision to settle at</li> </ul>

	<p>Jamestown;</p> <ul style="list-style-type: none"> <li>c) describing the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement;</li> <li>d) identifying the importance of the General Assembly (1619) as the first representative legislative body in English America;</li> <li>e) identifying the impact of the arrival of Africans and English women to the Jamestown settlement;</li> <li>f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival; and</li> <li>g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in the survival of the settlers.</li> </ul> <p>VS.4 The student will demonstrate an understanding of life in the Virginia colony by</p> <ul style="list-style-type: none"> <li>a) explaining the importance of agriculture and its influence on the institution of slavery;</li> <li>b) describing how the culture of colonial Virginia reflected the origins of American Indians, European (English, Scots-Irish, German) immigrants, and Africans;</li> <li>c) explaining the reasons for the relocation of Virginia's capital from Jamestown to Williamsburg;</li> <li>d) describing how money, barter, and credit were used; and</li> <li>e) describing everyday life in colonial Virginia.</li> </ul>
December 7, 2018 (Day 19)	<p>VS.2 The student will demonstrate an understanding of the relationship between physical geography and the lives of the native peoples, past and present, of Virginia by</p> <ul style="list-style-type: none"> <li>c) locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, Rappahannock River, and Lake Drummond</li> </ul>

	and the Dismal Swamp)
VS.3	<p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <ul style="list-style-type: none"> <li>a) explaining the reasons for English colonization;</li> <li>b) describing the economic and geographic influences on the decision to settle at Jamestown;</li> <li>c) describing the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement;</li> <li>d) identifying the importance of the General Assembly (1619) as the first representative legislative body in English America;</li> <li>e) identifying the impact of the arrival of Africans and English women to the Jamestown settlement;</li> <li>f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival; and</li> <li>g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in the survival of the settlers.</li> </ul>
VS.4	<p>The student will demonstrate an understanding of life in the Virginia colony by</p> <ul style="list-style-type: none"> <li>a) explaining the importance of agriculture and its influence on the institution of slavery;</li> <li>b) describing how the culture of colonial Virginia reflected the origins of American Indians, European (English, Scots-Irish, German) immigrants, and Africans;</li> <li>c) explaining the reasons for the relocation of Virginia's capital from Jamestown to Williamsburg;</li> <li>d) describing how money, barter, and credit were used; and</li> <li>e) describing everyday life in colonial Virginia.</li> </ul>

During this study, I either assumed the role of “complete observer” or “participant observer” (Junker, 1960, as cited in Lofland et al., 2005, p. 33) in the field. I attempted to be a complete observer during standards-based social studies instructional time in order to solely observe teachers’ instructional practices and students’ classroom experiences. I served as a participant observer during other portions of the school day in order to build rapport with the teachers, focal students, and other students in the classroom. As a participant observer, I interacted with teachers and students mainly through answering questions and listening to comments or concerns.

I developed a protocol (See Appendix C) with the following observational foci to guide the creation of field notes: (1) context, (2) instructional approaches, (3) participants’ behaviors, (4) participants’ interactions, and (5) materials. I used a three-column organizer with a time stamp, detailed observational protocol foci, and in-the-moment as well as post-observation researcher inferences and questions. Detailed ethnographic field notes were written during standards-based social studies instructional time as well as during morning meeting and closing meeting (which usually had social studies mini-lessons incorporated). Standards-based social studies instructional time, morning meeting, and closing meeting were video-taped. Any standards-based social studies instructional time where the students collected group or independent work was also audio-recorded; each focal student received an individual recorder. I transcribed portions of the video-recordings and audio-recordings that were needed to support the findings. Formal and informal interactions with the teachers (e.g., lunch, planning periods) and students (i.e., recess, snack) were also documented in the field notes. The

observational field notes were uploaded to a password protected qualitative computer software system, Dedoose. I wrote analytic memos (Miles, Huberman, & Saldana, 2014) after each classroom observation. In the analytic memos, I developed initial themes with classroom observational evidence from the field notes.

### **Document Collection**

After each classroom observation, I collected instructional and assessment documents. These artifacts included teachers' daily lesson plans (i.e., task sheets), unit materials (e.g., textbook excerpts, hand-outs, PowerPoint presentations), the pre-test and post-test, exit slips, and student work samples. These artifacts were scanned, photographed, or downloaded to Dedoose. Triangulation with interview and observational data was achieved with the inclusion of these instructional and assessment documents. The task sheets and daily instructional documents (e.g., graphic organizer, PowerPoint, reading passage) document how the Virginia elementary social studies standards were enacted in the 3-5 multi-age classroom. The student assignments (i.e., used formatively) and summative assessments (i.e., used summatively) provide insight into focal students' classroom experiences as well as learning of the Virginia elementary social studies standards. Table 11 outlines the unit materials and corresponding student work samples collected during each day of the unit on Jamestown.

Table 11

#### *Unit Materials and Student Work Samples*

Date and Day of the Unit on Jamestown	Unit Materials	Student Work Samples
November 7, 2018 (Day 1)	<ul style="list-style-type: none"> <li>• Task Sheet [Independent]</li> <li>• "Meet the Ships" [Close Reading- Independent]</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

November 8, 2018 (Day 2)	<ul style="list-style-type: none"> <li>• Pre-Test [Independent]</li> <li>• Jamestown Explained (HipHughes History) [Video- Whole Group]</li> <li>• <i>Jamestown, Virginia</i> (Fradin) [Read Aloud- Whole Group]</li> <li>• Jamestown KWL [Graphic Organizer- Whole Group]</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-Test Results [Multiple Choice Test on a Computer]</li> </ul>
November 9, 2018 (Day 3)	<ul style="list-style-type: none"> <li>• The Jamestown Online Adventure (Dunn, 2002) [Game- Whole Group]</li> <li>• “Asking Questions” [Graphic Organizer- Small Group]</li> <li>• <i>Jamestown Colony</i> (Yarborough, 2016) [Close Reading- Small Group]</li> </ul>	<ul style="list-style-type: none"> <li>• Filled out “Asking Questions” [Worksheet]</li> <li>• Highlighting <i>Jamestown Colony</i> and Answering four questions about <i>Jamestown Colony</i> [Worksheet]</li> </ul>
November 12, 2018 (Day 4)	<ul style="list-style-type: none"> <li>• Task Sheet [Independent]</li> <li>• Jamestown Kahoot [Game- Whole Group]</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
November 13, 2018 (Day 5)	<ul style="list-style-type: none"> <li>• <i>Jamestown, Virginia</i> (Fradin) [Read Aloud- Whole Group]</li> <li>• Choosing the Location of Jamestown [PowerPoint - Small Group]</li> <li>• Minecraft [Virtual Reality Software- Small Group and Independent]</li> </ul>	<ul style="list-style-type: none"> <li>• Writing questions about Jamestown [Content Notebook]</li> <li>• Writing “3 Reasons Jamestown Location was Picked” [Content Notebook]</li> <li>• Designing Minecraft Jamestown [Content Notebook]</li> <li>• Minecraft [Computer]</li> </ul>
November 14, 2018 (Day 6)	<ul style="list-style-type: none"> <li>• Life in Colonial America [PowerPoint- Small Group]</li> </ul>	<ul style="list-style-type: none"> <li>• Everyday Life in Colonial Jamestown</li> </ul>



	<ul style="list-style-type: none"> <li>• <i>Surviving in Jamestown</i> [Close Reading- Small Group]</li> <li>• Everyday Life in Colonial Jamestown [Graphic Organizer- Small Group]</li> </ul>	[Worksheet]
November 16, 2018 (Day 7)	<ul style="list-style-type: none"> <li>• Jamestown [Video- Whole Group]</li> </ul>	<ul style="list-style-type: none"> <li>• Minecraft [Computer]</li> </ul>
November 19, 2018 (Day 8)	<ul style="list-style-type: none"> <li>• Jamestown Exit Slip [Independent]</li> </ul>	<ul style="list-style-type: none"> <li>• Jamestown Exit Slip [Multiple Choice Test on a Computer]</li> <li>• Minecraft [Computer]</li> </ul>
November 20, 2018 (Day 9)	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
November 26, 2018 (Day 10)	<ul style="list-style-type: none"> <li>• Task Sheet [Independent]</li> <li>• Jamestown Exit Slip Review [Small Group]</li> </ul>	<ul style="list-style-type: none"> <li>• Jamestown Exit Slip Review [Printed Tests]</li> </ul>
November 27, 2018 (Day 11)	<ul style="list-style-type: none"> <li>• Virginia Assembly Vs. Virginia House of Burgesses (Orr, 2005) [Graphic Organizer- Small Group]</li> </ul>	<ul style="list-style-type: none"> <li>• Virginia Assembly Vs. Virginia House of Burgesses [Worksheet]</li> </ul>
November 28, 2018 (Day 12)	<ul style="list-style-type: none"> <li>• Powhatan Contributions to Survival [Graphic Organizer- Small Group]</li> <li>• <i>Chief Powhatan and the Powhatan Confederacy</i> [Close Reading- Small Group]</li> <li>• The Arrival of Women and Africans to Jamestown [Close Reading- Small Group]</li> <li>• Guardians of Jamestown, 1619: The First English Thanksgiving [Video- Small Group]</li> </ul>	<ul style="list-style-type: none"> <li>• Powhatan Contributions to Survival [Worksheet]</li> <li>• Highlighting <i>Chief Powhatan and the Powhatan Confederacy</i> and Answering five questions about <i>Chief Powhatan and the Powhatan Confederacy</i> [Worksheet]</li> <li>• The Arrival of Women and Africans to Jamestown [Poster]</li> </ul>
November 29,	<ul style="list-style-type: none"> <li>• Cause and Effect:</li> </ul>	<ul style="list-style-type: none"> <li>• Cause and Effect:</li> </ul>

2018 (Day 13)	<p>Agriculture's Influence on Slavery (Orr, 2005) [Graphic Organizer- Small Group]</p> <ul style="list-style-type: none"> <li>• Jamestown: Reasons to Choose the Site [Graphic Organizer- Small Group]</li> <li>• Packing for Jamestown [Writing Prompts- Small Group]</li> </ul>	<p>Agriculture's Influence on Slavery [Worksheet]</p> <ul style="list-style-type: none"> <li>• Jamestown: Reasons to Choose the Site [Worksheet]</li> <li>• Packing for Jamestown [Maker Space Product]</li> </ul>
November 30, 2018 (Day 14)	<ul style="list-style-type: none"> <li>• Jamestown Exit Slip 2 [Independent]</li> </ul>	<ul style="list-style-type: none"> <li>• Jamestown Exit Slip 2 [Multiple Choice, Fill in the Blank, Short Response]</li> </ul>
December 3, 2018 (Day 15)	<ul style="list-style-type: none"> <li>• Task Sheet [Independent]</li> <li>• </li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
December 4, 2018 (Day 16)	<ul style="list-style-type: none"> <li>• Jamestown: 5 Facts and 5 Questions [Morning Work- Independent]</li> <li>• Jamestown (MrBettsClass, X) [Video- Whole Group]</li> <li>• <i>The Jamestown Colony</i> [Close Reading- Small Group]</li> </ul>	<ul style="list-style-type: none"> <li>• Writing 5 facts and 5 questions about Jamestown [Content Notebook]</li> <li>• Highlighting <i>The Jamestown Colony</i> and Answering five questions about <i>The Jamestown Colony</i> [Worksheet]</li> </ul>
December 5, 2018 (Day 17)	<ul style="list-style-type: none"> <li>• Reviewing Jamestown Facts in Content Notebook [Morning Work- Independent]</li> <li>• Jamestown- Providing Examples and Facts [Small Group]</li> <li>• Jamestown Exit Slip 2 Review [Small Group]</li> <li>• Jeopardy [Game- Whole Group]</li> </ul>	<ul style="list-style-type: none"> <li>• Jamestown- Providing Examples and Facts [Worksheet]</li> <li>• Jamestown Exit Slip 2 Review [Printed Tests]</li> </ul>
December 6, 2018 (Day 18)	<ul style="list-style-type: none"> <li>• Jamestown Field Trip [Tour Guide- Small</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

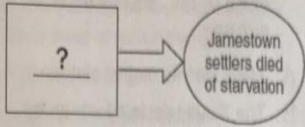
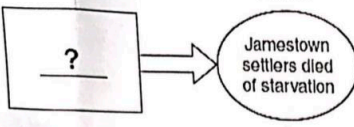
	Group]	
December 7, 2018 (Day 19)	<ul style="list-style-type: none"> <li>• Post-Test [Independent]</li> <li>• Jamestown Field Trip [PPT- Whole Group]</li> <li>• Minecraft Presentations Rubric [Small Group- Individual]</li> </ul>	<ul style="list-style-type: none"> <li>• Post-Test Results [Multiple Choice Test on a Computer]</li> <li>• Minecraft Presentation [Small Group- Individual]</li> </ul>

The pre-test and post-test had some similarities and differences (See Table 12). On the pre-test, question 4 and question 9 were the same question (i.e., How did the arrival of women at Jamestown in 1620 affect the colony?). There were fewer answer choices on question 4 (i.e., A-C) than question 9 (i.e., A-D); however the correct answer was the same (i.e., It was possible to establish a more permanent colony.). Similarly, fewer answer choices were provided on question 2 of the pre-test than question 7 on the post-test as well (i.e., both were the same question and had the same correct answer). Question 2 on the pre-test, with only three answer choices, is not on the post-test. Question 10 on the post-test is not on the pre-test at all. For the purposes of this study, I will only be analyzing the questions that were found on both the pre-test and post-test; thus, I will analyze nine questions in total. Out of those nine questions, two questions are the same (i.e., How did the arrival of women at Jamestown in 1620 affect the colony?), but with varying answer choices.

Table 12

*Pre-Test and Post-Test Similarities and Differences*

Question Number	Pre-Test	Post-Test	Comparison

1	<p>1 Cause Effect</p>  <p>Which cause replaces the question mark?</p> <p>A. Lack of survival skills B. Conflict with the Spanish C. Lack of farm lands</p> <p>The correct answer is A.</p>	<p>1 Cause Effect</p>  <p>Which cause replaces the question mark?</p> <p>A. Lack of survival skills B. Conflict with the Spanish C. Lack of farm lands</p> <p>The correct answer is A.</p>	The question is the same on the pre-test and post-test.
2	<p>2 All of the following were hardships faced by the Jamestown settlers EXCEPT:</p> <p>A. Many starved or died of disease. B. The Siouan declared war on the settlement. C. They lacked safe drinking water.</p> <p>The correct answer is B.</p>	<p>2 What was Virginia's first cash crop?</p> <p>A. Peanuts B. Apples C. Tobacco</p> <p>The correct answer is C.</p>	The pre-test question (with only three answer choices) is not found on the post-test. The post-test question is question 3 on the pre-test.
3	<p>3 What was Virginia's first cash crop?</p> <p>A. Peanuts B. Apples C. Tobacco</p> <p>The correct answer is C.</p>	<p>3 How did the arrival of women at Jamestown in 1620 affect the colony?</p> <p>A. It was possible to expand the tobacco economy. B. It was possible to meet more American Indians. C. It was possible to establish a more permanent colony.</p> <p>The correct answer is C.</p>	The pre-test question is question 2 on the post-test. The post-test question is question 4 on the pre-test.

4	<p>4 How did the arrival of women at Jamestown in 1620 affect the colony?</p> <p>A. It was possible to expand the tobacco economy.</p> <p>B. It was possible to meet more American Indians.</p> <p>C. It was possible to establish a more permanent colony.</p> <p>The correct answer is C.</p>	<p>4 The Virginia Company was granted the right to establish colonies by —</p> <p>A. The queen of Spain</p> <p>B. John Smith</p> <p>C. the king of England</p> <p>The correct answer is C.</p>	The pre-test question is question 3 on the post-test. The post-test question is question 5 on the pre-test.
5	<p>5 The Virginia Company was granted the right to establish colonies by —</p> <p>A. The queen of Spain</p> <p>B. John Smith</p> <p>C. the king of England</p> <p>The correct answer is C.</p>	<p>5 The main reason it was hard for the Jamestown colony to survive was because the settlers —</p> <p>A. had few of the needed skills</p> <p>B. arrived in the middle of the winter</p> <p>C. lost supply ships to French pirates</p> <p>D. wanted to return to England</p> <p>The correct answer is A.</p>	The pre-test question is question 4 on the post-test. The post-test question is question 6 on the pre-test.
6	<p>6 The main reason it was hard for the Jamestown colony to survive was because the settlers —</p> <p>A. had few of the needed skills</p> <p>B. arrived in the middle of the winter</p> <p>C. lost supply ships to French pirates</p> <p>D. wanted to return to England</p> <p>The correct answer is A.</p>	<p>6 The charters granted by King James to the Virginia Company of London allowed all of the following EXCEPT:</p> <p>A. rights for the Powhatans</p> <p>B. rights for the colonists</p> <p>C. the right to settle in North America</p> <p>D. the right to raise funds to start a new colony</p> <p>The correct answer is A.</p>	The pre-test question is question 5 on the post-test. The post-test question is question 7 on the pre-test.
7	<p>7 The charters granted by King James to the Virginia Company of London allowed all of the following EXCEPT:</p> <p>A. rights for the Powhatans</p> <p>B. rights for the colonists</p> <p>C. the right to settle in North America</p> <p>D. the right to raise funds to start a new colony</p> <p>The correct answer is A.</p>	<p>7 All of the following were hardships faced by the Jamestown settlers EXCEPT:</p> <p>A. Many starved or died of disease.</p> <p>B. The Siouan declared war on the settlement.</p> <p>C. They lacked safe drinking water.</p> <p>D. They lacked necessary survival skills.</p> <p>The correct answer is B.</p>	The pre-test question is question 6 on the post-test. The post-test question is question 8 on the pre-test.

8	<p><b>8</b> All of the following were hardships faced by the Jamestown settlers <b>EXCEPT</b>:</p> <p>A. Many starved or died of disease.  B. The Siouan declared war on the settlement.  C. They lacked safe drinking water.  D. They lacked necessary survival skills.</p> <p>The correct answer is B.</p>	<p><b>8</b> How did the arrival of women at Jamestown in 1620 affect the colony?</p> <p>A. It was possible to expand the tobacco economy.  B. It was possible to meet more American Indians.  C. It was possible to explore the western regions of Virginia.  D. It was possible to establish a more permanent colony.</p> <p>The correct answer is D.</p>	<p>The pre-test question is question 7 on the post-test. The post-test question is question 9 on the pre-test.</p>
9	<p><b>9</b> How did the arrival of women at Jamestown in 1620 affect the colony?</p> <p>A. It was possible to expand the tobacco economy.  B. It was possible to meet more American Indians.  C. It was possible to explore the western regions of Virginia.  D. It was possible to establish a more permanent colony.</p> <p>The correct answer is D.</p>	<p><b>9</b> Jamestown became a wealthier and more permanent settlement because of the arrival of which two groups?</p> <p>A. Africans and women  B. Africans and French settlers  C. American Indians (First Americans) and Spanish colonists  D. American Indians (First Americans) and English prisoners</p> <p>The correct answer is A.</p>	<p>The pre-test question is question 8 on the post-test. The post-test question is question 10 on the pre-test.</p>
10	<p><b>10</b> Jamestown became a wealthier and more permanent settlement because of the arrival of which two groups?</p> <p>A. Africans and women  B. Africans and French settlers  C. American Indians (First Americans) and Spanish colonists  D. American Indians (First Americans) and English prisoners</p> <p>The correct answer is A.</p>	<p><b>10</b> The charters of the Virginia Company of London gave the company the right to establish settlements in -</p> <p>A. North America  B. South America  C. Europe</p> <p>The correct answer is A.</p>	<p>The pre-test question is question 9 on the post-test. The post-test question is not a question on the pre-test.</p>

## Interviews

Interviews served to solidify abstract relationships, patterns, and concepts through educational stakeholder, teacher, and student language. Interviews provided “insight

reflecting participants' [...] perspectives" (Yin, 2017, p. 118) about multi-age as an elementary educational context as well as the teaching and learning of social studies in a 3-5 elementary multi-age classroom within a standards-based setting in a tested state. When participants' perspectives were not clear or required additional detail, I "follow[ed] up, ask[ed] for clarification, [sought] concrete details, and request[ed] stories" (Seidman, 2006, p. 81). Interviews supplied important contextual information, which supported data analysis and efforts to "conceptualize events" (Corbin & Strauss, 2015, p. 99) from observational data. All of the interviews were audio-recorded and transcribed through Rev (i.e., an online transcription company). Additionally, I checked for the accuracy of transcription. During the interviews, I collected interview field notes. Audio-recordings, transcribed interviews, and interview field notes were uploaded to Dedoose.

**Educational Stakeholder Interviews.** I conducted a semi-structured interview with each of the educational stakeholders. This interview explored educational stakeholders' experiences and perspectives about designing and implementing multi-age education in CCPS and particularly at WES (See Appendix D and Appendix E). Specific questions covered educational stakeholders' roles in the field of education or architecture, how they define multi-age, how multi-age started in CCPS, and considerations that were made when adopting multi-age at WES (e.g., professional development, curricula, assessments). With each educational stakeholder, the interview typically lasted from 25 to 60 minutes in length. The interviews occurred several months (i.e., Spring 2019) after the conclusion of data collection at WES.

**Teacher Interviews.** I conducted three semi-structured interviews with teacher participants. The pre-unit individual teacher participant interview was used with all five

teacher participants. However, the pre-unit focal group teacher participant interview and post-unit individual teacher participant interview were only used with the three teacher participants (i.e., Mr. Otto, Ms. Skeen, and Mrs. Lily) who taught the observed social studies unit on Jamestown in the 3-5 standards-based multi-age classroom. The two pre-unit interviews occurred during October and November of 2018 (i.e., before the unit on Jamestown started). The post-unit interview occurred one week after the unit concluded in December of 2018.

***Pre-Unit Individual Teacher Participant Interview.*** The pre-unit individual teacher participant interview focused on the teachers' prior teaching experiences, descriptions of their current classroom and students, why they teach in a multi-age classroom, multi-age professional development, and the strengths and challenges of multi-age (See Appendix F). This interview ranged from 25 to 30 minutes in length with each teacher.

***Pre-Unit Focal Group Teacher Participant Interview.*** The pre-unit focal group teacher participant interview focused on the 3-5 team's social studies unit on Jamestown (i.e., goals, planning process, content objectives, potential instructional approaches, potential assessments of student learning) as well as their individual teaching styles and the roles that they will each assume during the unit (See Appendix G). This interview lasted for 60 minutes with Mr. Otto, Ms. Skeen, and Mrs. Lily.

***Post-Unit Individual Teacher Participant Interview.*** The post-unit individual teacher participant interview focused on multi-age education as well as standards-based social studies education (See Appendix H). First, each teacher shared his or her experiences with multi-age and his or her perspectives about continuing to teach in a



multi-age classroom. Then, each teacher defined social studies, described how the 3-5 team typically enacts social studies standards, and expressed how he or she thought the unit on Jamestown went (i.e., how the 3-5 team accomplished goals and met content objectives, the instructional approaches used, the Minecraft project, the post-test results, and what he or she would change about the implementation). This interview ranged from 25 to 30 minutes in length with each teacher.

**Student Interviews.** I conducted a semi-structured interview with each of the focal students. This interview posed questions about the focal students' lives, experiences in multi-age, and understanding of social studies (See Appendix I). Additionally, they were asked to describe their Minecraft project and what they learned from that experience. Then, focal students were provided with a blank version of the unit post-test. I asked each focal student a series of questions about each multiple-choice question on the unit post-test. The series of questions were adapted from Nuthall's (2001) post-testing questions. Nuthall's (2007) work addresses how students' learning is contextually driven and shaped by their experiences with the content. Thus, these questions allowed focal students to elaborate on the classroom experiences that helped them learn particular social studies standards about Jamestown. With each focal student, the interview typically lasted from 25 to 45 minutes in length. These interviews occurred one week after the unit concluded in December of 2018.

### **Data Analysis**

My data analysis procedures focus on "the process of making meaning" (Merriam, 1998, p. 178, as cited in Yazan, 2015) from the various sources of data collected (i.e., observations, documents, and interviews). The first phase of data analysis

began with analytic memos (Miles et al., 2014), which were simultaneously prepared while observational fieldnotes and interviews were written and transcribed, respectively. Through the preparation of the analytic memos, initial themes were generated with evidentiary support from observations, documents, and interviews. These initial themes largely stemmed from the literature on multi-age education as well as elementary social studies education; thus, deductive data analysis procedures were utilized for this first phase.

The second phase of data analysis was inductive. It occurred after my dissertation proposal defense (December 2018). First, I analyzed student test responses from pre-test to post-test to interview. Then, I generated “item files” (Nuthall & Alton-Lee, 1993), which traced the instructional interactions that the focal students had with tested content, how the focal students remembered learning the tested content, and if they learned the tested content or not. Next, I analyzed my collected data with (1) descriptive coding, (2) subcodes, (3) In Vivo coding, and (4) process coding (Miles et al., 2014). Descriptive codes were generated along with subcodes, which provided further nuance to the descriptive codes. The descriptive codes and subcodes focused on instructional practices (format, teacher actions, materials), best practice in social studies (meaning, integrative, active, challenging, and value-based), and best practice in history education. In Vivo coding was also used to pull repetitious or emphasized (i.e., perceived to be important) “words or short phrases from the participant’s own language” (Miles et al., 2014, p. 74). Lastly, process coding was employed “to connote observable and conceptual action” (Miles et al., 2014, p. 75) in regards to teachers’ instructional practices as well as students’ classroom experiences and learning. Throughout data analysis, coding provided

opportunities to focus on individual co-teachers and focal students as well as complete cross-case analysis comparing co-teacher to co-teacher and focal student to focal student.

### **Positionality Statement**

In order for readers to understand my interpretations of participants' experiences teaching and learning social studies in an elementary multi-age classroom within a standards-based setting in a tested state, I must share how my own identities (Norton & Early, 2011) potentially influence the study. I am a Virginian, White female educator (i.e., of elementary students, pre-service teachers, and in-service teachers), and elementary social studies education researcher. In the following section, I describe these identities that comprise my personal and professional self.

I was born, raised, and educated in Wise County (i.e., Southwest Virginia). Therefore, I am highly aware of the state context in which the study takes place. During my K-12 experience (i.e., 1996-2009), Virginia developed and used high-stakes tests (i.e., SOLs) in social studies. Thus, I have childhood memories of instructional experiences, which were informed by differing iterations of the Virginia history/social science standards (i.e., 1995, 2001, and 2008). Vividly, I recall the stress associated with taking SOLs and the pressure to make a perfect score or at least, pass with an achievement level of "advanced." I would check, double check, and triple check my answers on the multiple-choice, fill-in-the-bubble scantron sheets. My perfectionistic tendencies from childhood did not align with the high-stakes nature of the SOLs. I think a great deal of my anxiety stemmed from the test preparation leading up to the SOLs. I have reflected on standards-based experiences with the SOLs; those reflections have led to curiosities about

teachers' instructional practices and students' learning in standards-based settings with an associated high-stakes test.

I started my educational career as an elementary teacher in Virginia. As a Virginia elementary teacher (i.e., 2013-2016), I taught language arts, mathematics, science, and social studies. I was hired in Choice County, where this study was conducted, to teach in a standards-based first grade classroom. Subsequently, I taught in a standards-based kindergarten classroom and a standards-based third grade classroom as well. I did not teach at WES or any of the other elementary schools in CCPS with multi-age classrooms. Thus, I am a division 'insider' with knowledge pertaining to initiatives and adopted curricula as well as a school site 'outsider' (Lofland, Snow, Anderson, & Lofland, 2005). To my benefit as a researcher, being a division 'insider' helped to establish and support my credibility with division- and school-level gatekeepers (Creswell, 2014), individuals with the power to make decisions regarding my access as a researcher in CCPS. As a graduate teaching assistant, intern, and instructor, I have taught several university courses including, but not limited to *Teaching Social Studies in the Elementary School*, *Teaching Associateship Seminar: Elementary Education*, and *Curriculum and Instruction for Elementary and Special Education*. Through these courses, I have prepared pre-service teachers (PSTs) with general elementary education and elementary social studies education methods (i.e., curriculum, instruction, and assessment strategies, resources, and theoretical understandings) to employ during their practicum, student teaching, and future teaching experiences. In the elementary social studies methods course, my instruction focused on the characteristics of best practice in elementary social studies. Additionally, I present social studies research, which is useful for PSTs and in-service teachers, at

conferences such the *Virginia Council for Social Studies* (VCSS), *National Council for Social Studies* (NCSS), and *College and University Faculty Assembly* (CUFA). Lastly, for the past couple of summers, I have returned to my hometown (i.e., Big Stone Gap, VA) to lead an elementary teacher professional development workshop at the Southwest Virginia Museum Historical State Park on standards-based social studies education and utilizing place (e.g., a student's community) as an anchor for curriculum, instruction, and assessment.

During my doctoral program, as a researcher, I have conducted other research studies (i.e., unrelated to this study) in CCPS with university faculty members. Those research studies were conducted with secondary and elementary standards-based grade-leveled teachers and students. Therefore, I possess contextual knowledge of CCPS that extends beyond my employment as a CCPS elementary standards-based grade-leveled teacher. At the secondary level, our research focus was on teaching and learning in public, high school history and economics classrooms (Fitzpatrick, van Hover, Cornett, & Hicks, 2018). Through case studies, we explored how high school teachers taught and students learned history and economics standards (i.e., knowledge, understandings, skills) with an associated high-stakes test. At the elementary level, we explored one elementary teacher's home visiting and differentiated literacy practices (Cornett, Paulick, & van Hover, in press). Our findings demonstrated how information and strategies (i.e., knowledge about students), obtained from home visits, can be used to inform an elementary teacher's decisions regarding differentiated instruction in the classroom. Moreover, teachers' heightened awareness of students' place (i.e., home as a unique context) illuminates assets that families and communities possess, which can be

incorporated into the curriculum and utilized during instructional experiences. Therefore, my doctoral research experiences have led me to ask the questions that guide my current research and prepared me to conduct this study.

My work as an educator and researcher in K-6 and university classrooms, at conferences, and through leading professional development highlights my active engagement with the field of elementary social studies education. My multiple identities (Norton & Early, 2011) as a Virginian, White female educator and researcher influence the research questions that I ask, how I collect data, how I analyze data, and my sense making in presenting the information in the findings, discussion, and conclusion (Flyvbjerg, 2001). In the following section, I detail the ways in which I addressed these limitations.

### **Criteria for Trustworthiness**

This study involves 19 days of observation (i.e., 124 hours and 45 minutes); I was able to observe instructional practices as well as classroom experiences and learning throughout the school day. During those classroom observations, I collected artifacts (e.g., daily lesson plans and student work samples) as well. Additionally, I interviewed educational stakeholders, teachers, and students. Thus, I used multiple data sources (i.e., observation, documents, and interviews) to generate preliminary themes. These preliminary themes were developed through the use of analytic memos (Miles et al., 2014), which I started writing at the beginning of data collection. These analytic memos serve as an audit trail (Lincoln & Guba, 1985) for my fieldwork. Triangulation, or crystallization, with numerous data sources allowed me to check for convergence and contradictions in regards to the findings (Gall, Gall, & Borg, 2015).

I utilized thick, rich description (Denzin, 1989) to describe my findings. With this detailed description, it increases the likelihood that a reader could extend the findings to his or her own context, which supports transferability or “user generalizability” (Merriam, 2002) in qualitative studies. Due to my role as a division “insider” (Lofland, Snow, Anderson, & Lofland, 2005) as well as the amount of time I spent in the field collecting data, I developed rapport with the educational stakeholders, teachers, and students. Knowledge gained from these close relationships through semi-structured interviews as well as informal conversations shaped my sense making. Spending extensive time in the 3-5 multi-age classroom also increased my ability to notice disconfirming evidence (Erickson, 1986). In the final section of this chapter, I summarize the chapter and provide information about the next chapter.

### **Chapter Summary**

In this chapter, I described the methodology that informed this research, outlined the conceptual framework that guided the design of this study, provided contextual information about the setting and participants, presented my data collection and data analysis plans, addressed my positionality, and specified criteria for trustworthiness. In the next chapter, I describe the findings from this study.

## **CHAPTER IV**

### **FINDINGS**

The purpose of this study was to explore the interaction between elementary teachers' instructional practices and how students experience and learn social studies in one multi-age classroom within a standards-based setting in a tested state. From the fields of elementary social studies education and multi-age education, research suggests that social studies could be taught (and by extension learned) in multi-age classrooms in creative ways that align with best practice in social studies (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; National Council for Social Studies, 2009). These bodies of knowledge informed the following research questions:

- How do three elementary co-teachers plan, teach and assess a social studies standards-based unit in one multi-age classroom? In what ways does their instruction reflect best practice in social studies?
- How did elementary students experience instruction and what did they learn during a social studies standards-based unit in a multi-age classroom?

#### **Overview of Findings for Research Question 1**

Data analysis indicates that the three co-teachers described the importance of teamwork and collaboration in their elementary multi-age classroom, yet when planning for a social studies standards-based unit, they employed an informal “divide and



conquer” approach. There was no evidence the three co-teachers sat together and systematically decided the aims of the unit, or who would be responsible for teaching what content. During the day-to-day instruction for the unit, all three co-teachers used a number of instructional approaches (formats, teacher actions, and materials), some of which reflected elements of best practice. The three co-teachers reported that they adjusted the format (e.g., whole group, small group, individual) in response to student needs as well as the unique elementary classroom context, multi-age. The teacher actions (e.g., question and response, direct instruction, content integration) that the three co-teachers utilized and their use of varied materials (i.e., nonfiction text, graphic organizer, YouTube video) reflected best practice in social studies to varying extents; however, only some of these teacher actions and none of the materials reflected best practice in history education. The three co-teachers heavily relied on materials (e.g., nonfiction text, graphic organizer, YouTube video) and made decisions based on the Virginia SOLs to cover factual content that students would need to be successful on the multiple choice unit test. In regards to assessment, Mrs. Lily taught the vast majority of the content, but Mr. Otto, who taught the least during the unit, developed the unit test. The third teacher, Ms. Skeen, adapted the performance assessment (borrowed from colleagues) for the unit.

### **Overview of Findings for Research Question II**

Despite experiencing the same instruction (through rotations), when asked to talk aloud about why they chose specific answers on the unit test, the focal students answered in different ways (Fitzpatrick, van Hover, Cornett, & Hicks, 2019). Additionally, particular instructional approaches resonated with certain focal students more so than

other instructional approaches. On the unit test, the focal students ‘already knew,’ ‘learned and remembered,’ or ‘already knew, forgot, and remembered’ more than they ‘already knew and forgot,’ ‘learned and forgot,’ or ‘did not learn.’ In comparison to the unit test, which only tested four Virginia social studies substandards, the performance assessment provided greater opportunity for students to apply their knowledge of what was taught during the unit. The students demonstrated knowledge; however, they primarily focused on facts, rather than conceptual understandings or historical thinking skills.

### **Overview of Chapter IV**

To explore these findings, I begin with a snapshot of a day in the multi-age classroom to highlight what the elementary teachers and students experienced in regards to social studies teaching and learning during a standards-based unit on Jamestown. Next, I present findings from my analysis of the three co-teachers’ “parallel” approach to planning, instruction, and assessment during the Jamestown unit. Then, I detail findings from my analysis of the focal students’ social studies classroom experiences and learning. In the final section of the chapter, I examine the interaction between the three co-teachers’ instructional practices and how the focal students experienced and learned social studies in the elementary multi-age classroom. Figure 13 provides an overview of the chapter.

### Overview of Chapter IV

#### A Day in Multi-Age

Arrival, Morning Work, and Morning Announcements

Morning Meeting

Learning Rotations

Lunch, Recess, and Specials

Homeroom Time

Clean-up/Pack-up, Closing Meeting, and Dismissal

“Divide and Conquer”: “Parallel” Planning in an Elementary Multi-Age Classroom

“I’m one third of a great team”: Teamwork and Collaboration?

“Know the facts”: Aims and Content Objectives for the Unit on Jamestown

“I don’t know exactly what they’re teaching”: Responsibility for Instruction

“A plethora of avenues to get to the learning”: Teaching a Unit on Jamestown

“One size doesn’t fit all”: Instructional Practices Utilized During the Unit

“They took people’s land and that’s not fair”: Instructional Practices That Reflect Elements of  
Best Practice in Social Studies

“Do you think they were packing their iPad?:” Best Practice in Social Studies and More  
Specifically, History Education

“Best representation of Jamestown that they could make”: Assessing a Unit on Jamestown

“We don’t always tell each other what we’re going to be teaching”: Unit Test

“All of them did have aspects of Jamestown”: Minecraft Performance Test

“They told us”: Student Classroom Experiences and Learning

“They use the board and they write questions”: Remembered Classroom Experiences

“I learned it in class”: Unit Test

“We actually learned that the houses [...]”: Minecraft Performance Assessment

Interaction Between Instructional Practices and How Students Experienced and Learned Social Studies

Chapter Summary

*Figure 13. Overview of Chapter IV*

### **A Day in Multi-Age**

In the following subsections, I describe regular educational practice during different parts of the school day in the 3-5 multi-age classroom. In each subsection, I provide examples from a variety of days rather than just one day during the unit on Jamestown. These examples focus more heavily on social studies, as opposed to math and language arts (i.e., science was not taught during the social studies standards-based

unit), in order to provide a snapshot of what elementary teachers and students experienced in regards to social studies teaching and learning during any given day of the unit on Jamestown.

### **Arrival, Morning Work, and Morning Announcements**

Students arrived in the 3-5 multi-age classroom around 7:40am each day. After they unpacked their belongings, students had roughly 20 minutes to complete their morning work in the arena (See Table 5). For their morning work on the 16<sup>th</sup> day of the unit (Observation, 12/4/2018), students were asked to write down five facts and five questions about Jamestown in their content notebooks. The focal students completed this task to varying extents. For example, Molly completely finished the morning work and wrote the following:

1. tobacco was a cash crop.
2. the water was'ent Good for Drinking.
3. ton's of Peaple Died in the starving time.
4. the Native amircin's welcomed them.
5. they traveld for 4 month's.
6. Why was the starving time caused?
7. What Did the Native amircian's Belive in?
8. Did the Native amircian's Help them Build Homes?
9. How many Peaple Died During the starving time?
10. Were they homesick?

Randall was able to write three facts:

1. it was the first permanent settlement

2. woman arrived 1620
3. Africans arrived in 1619

Maria, Will, Jamie, and Fabrício did not complete the morning work. Maria was building 3D shapes with a 'Power Solids' kit, Will was recording the morning news broadcast, Jamie was with the gifted resource teacher, and Fabrício was eating his breakfast in the classroom. From 8:00-8:05am, the morning announcements could be heard across the intercom system and then, the students moved from the arena to the cove for morning meeting.

### **Morning Meeting**

During every day of the unit, all of the students gathered on the large carpet in the cove for morning meeting from 8:05-8:25am. A morning meeting consists of four parts: greeting, share, activity, and message. On the third day of the unit (Observation, 11/9/2018), the students greeted each other by counting the number of syllables in their names and then, they said good morning to that number of people (e.g., Randall has two syllables in his name, so he said good morning to two people). For the share, students shared their responses to the following question: What are you looking forward to learning about Jamestown? Student responses included "more facts," "how to build a Jamestown fort in Minecraft," and "John Smith." The focal students did not volunteer their responses to the question. For the activity, Mr. Otto guided students through the Jamestown Online Adventure game (Dunn, 2002). The game opens with the following message that has information about Jamestown and directions (See Figure 14):

# The Jamestown Online Adventure

In 1606, some 105 adventurers set off from England to try and establish the first permanent English colony in the New World. They settled in what is now the state of Virginia and called their colony first James Fort, and then James Towne, in honor of James I, the King of England. The early years of the colony were nearly a total disaster. Almost half of the settlers died due to poor choices in settlement location, management of resources, and quarrels with the indigenous Powhatan Indians.

## You are the Captain of the Jamestown Colony:

Can you do any better than the real colonists? You will have a copy of the London Company's Instructions to help guide you. Also, you can ask your fellow colonists and the Native Americans for advice. Be careful, though, because some advice is better than others!

## Scoring Factors:

After you make all your decisions, you will receive a report on the state of your colony based on these factors:

- Food: How well can you provide it for your colonists?
- Health: Can you keep your colonists from dying due to disease, starvation, and attacks?
- Wealth: Can you make yourself and your sponsors at the London Company rich from the discovery of gold and silver?
- Morale: Can you keep yourself in power by keeping everyone happy?

## Make History:

You will get to compare your colony to the historical Jamestown at the end. By examining the "Now we know..." section, you can learn from the mistakes of history so you do not repeat them when you play again.

Good luck and Godspeed!

Figure 14. Jamestown Online Adventure Information and Directions

The Jamestown Online Adventure game began with the question, "Where do you want to land?," and four options on a map (See Figure 15).



Figure 15. Jamestown Online Adventure First Question

The options from left to right were 1) inland, 2) bay marsh, 3) sea coast, and 4) bay island. Mrs. Lily pointed to each X as students raised their hands to vote on a landing spot. The students chose the bay marsh and continued the game. Mr. Otto read the second question, “A Native American chief, Lord Powhatan appears with several hundred warriors. He asks, ‘What gives you the right to invade our land?’” and the options included: 1) attack, 2) offer to trade, and 3) ignore (See Figure 16).

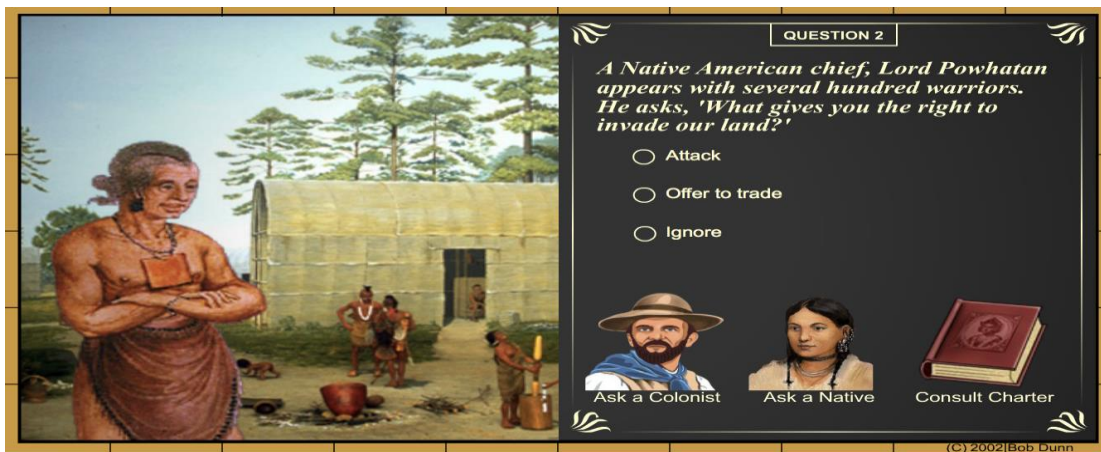


Figure 16. Jamestown Online Adventure Second Question

Some students called out “trade” and some students called out “attack.” Mrs. Lily said, “Woah, woah. You can also ask a colonist, ask a Native, or consult the charter.” Mr. Otto suggested, “It sounds like we aren’t sure between trading and attacking, so let’s ask a colonist.” He clicked on the ask a colonist option. The colonist had a speech bubble that Mr. Otto read, “Who are these strange people who don’t look like us, talk like us, or worship the same god as us? Surely they can only be the evil spawn of the Devil. I say attack!” Many students called out “attack,” but others could be heard saying, “No, no, no.” Mr. Otto submitted the decision to attack and they moved to the third question, “What kind of structure do you want to build? Click and drag a structure below to the



open land in the image to the left.” The structure options were the following: 1) town, 2) wood fort, and 3) small castle (See Figure 17).



*Figure 17. Jamestown Online Adventure Third Question*

Mr. Otto moved his clicker over each option, but the students unanimously called out, “wood fort.” The game constructed the wood fort and they moved to the fourth question, “Which colonists will work?,” with the following options, “Only indentured servant and laymen will work,” and “Everyone, including Gentlemen, must work” (See Figure 18).



*Figure 18. Jamestown Online Adventure Fourth Question*

The students unanimously called out, “Everyone, including Gentlemen, must work.” Mr. Otto selected that option and they moved to the fifth question, “What do you want to



search for? Given the size of your labor force, you can choose two activities below. Click and drag each colonist to an activity at left.” There were two colonists and three activity choices: hunting, fishing, and gold (See Figure 19).



Figure 19. Jamestown Online Adventure Fifth Question

The students called out “hunting” and “gold.” Mr. Otto made those selections and they moved to the sixth question, “Click and drag an item below and plant it in a field.” There were three fields and four planting options: corn, wheat, tobacco, and sassafras (See Figure 20).



Figure 20. Jamestown Online Adventure Sixth Question

The students called out for Mr. Otto to move the tobacco, wheat, and corn. After Mr. Otto submitted these options, a new screen emerged with an evaluation of their decisions. The students were rated on food, health, wealth, and morale (See Figure 21 and Figure 22).

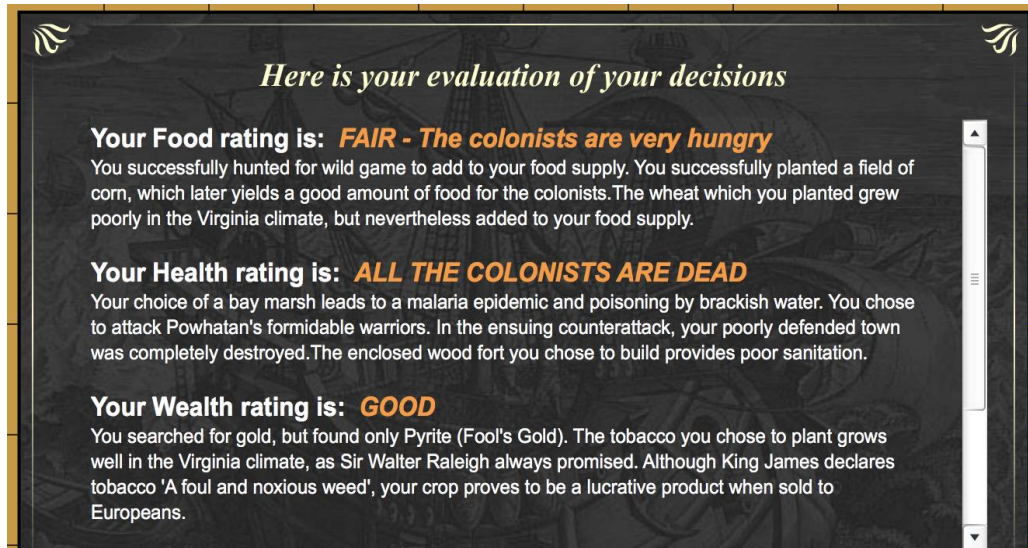


Figure 21. Jamestown Online Adventure Evaluation of Decisions First Part

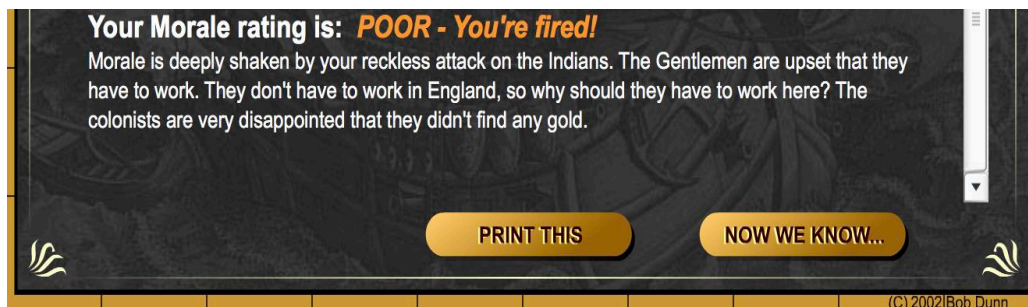


Figure 22. Jamestown Online Adventure Evaluation of Decisions Second Part

Mr. Otto read three out of the four paragraphs to the students (food, health, and wealth). He did not read the morale paragraph because he did not use the scrolling tool on the right. After reading the paragraph on wealth (i.e., paragraph three), Mr. Otto asked, “How many of you have ever been to the Outer Banks? Whether it’s in Virginia Beach or North Carolina.” A student called out, “I went to Carolina Beach.” Mr. Otto commented,

Yep, so it depends on which way you travel, but my family travels on the back roads. Whenever we travel the back roads, my daughters always love seeing the tobacco fields. The way they grow, they mound the dirt and they grow plants this tall and this big. And they are there for miles and miles and miles. So you're going to see that. Next time you go to the beach, keep you eyes peeled for those tobacco plants. Also, one of the largest and wealthiest tobacco companies in the world is a [specific amount of time] away in Richmond. They make all kinds of cigarettes, chewing tobacco and other tobacco products.

Additionally, Mr. Otto did not click on the "Now we know..." button to see how their responses compared and contrasted to the colonists' actual choices. Mr. Otto asked if the students enjoyed the Jamestown Online Adventure game. Maria, Molly, Will, and Fabricio had their thumbs up. Randall did not indicate his enjoyment or lack thereof. Jamie was not in the room during the Jamestown Online Adventure game. The message for the day was "Think. Choose. Act!" They briefly talked about making responsible choices in physical education and recess. At the conclusion of morning meeting each day, the three teachers told the differing grade levels where to go for their first learning rotations.

### **Learning Rotations**

The students experienced four learning rotations every day; two occurred before their snack break and two occurred afterwards. On any given day of the unit on Jamestown, social studies instruction happened during zero to three of these rotations. Social studies instruction never occurred during all four rotations. On the 12<sup>th</sup> day of the unit (Observation, 11/28/2018), Mrs. Lily and Ms. Skeen led two different social studies

rotations. The third, fourth, and fifth grade students cycled through the rotations with their grade level peers, as illustrated in Table 13.

Table 13

*Learning Rotations on 11/28/2018*

Day 12	11-28-2018		
Instructional Time	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Learning Rotation 1 (8:30-9:10)	Math	Guardians of Jamestown, 1619: The First English Thanksgiving [YouTube Video]  Powhatan Contributions to Survival [Reading Passage]	Guardians of Jamestown, 1619: The Arrival of English Women to Virginia [YouTube Video]  The Arrival of Women and Africans to Jamestown [Reading Passage]  The Arrival of Women and Africans to Jamestown [Poster]
Learning Rotation 2 (9:15-9:55)	Guardians of Jamestown, 1619: The First English Thanksgiving [YouTube Video]  Powhatan Contributions to Survival [Reading Passage]	Guardians of Jamestown, 1619: The Arrival of English Women to Virginia [YouTube Video]  The Arrival of Women and Africans to Jamestown [Reading Passage]  The Arrival of Women and Africans to Jamestown [Poster]	Math
Learning Rotation 3	Guardians of	Math	Guardians of

(10:20-11:00)	<p>Jamestown, 1619: The Arrival of English Women to Virginia [YouTube Video]</p> <p>The Arrival of Women and Africans to Jamestown [Reading Passage]</p> <p>The Arrival of Women and Africans to Jamestown [Poster]</p>		<p>Jamestown, 1619: The First English Thanksgiving [YouTube Video]</p> <p>Powhatan Contributions to Survival [Reading Passage]</p>
Learning Rotation 4 (11:05-11:45)	Independent Choices (e.g., word study, reading, ST math)		

With Ms. Skeen, students watched a YouTube video called, “Guardians of Jamestown, 1619: The First English Thanksgiving” and then, they made a flip book on “Powhatan Contributions to Survival of Jamestown” (Orr, 2005; See Appendix J). Molly wrote additional information on her flip book. For example, to go along with the following content information, “Pocahontas, daughter of Chief Powhatan, hoped the English and American Indians could live in harmony,” Molly wrote, “they helep each other grow crops” (See Appendix K). With Mrs. Lily, students watched a YouTube video called, “Guardians of Jamestown, 1619: The Arrival of English Women to Virginia” and then, they read a passage on the arrival of women and Africans to Jamestown (See Appendix L). After reading the passage, Mrs. Lily asked students to independently work on making posters for the classroom. Some students only worked on the poster during the rotation (e.g., Jamie; See Appendix M) while other students spent additional time on the poster during other points of the day (e.g. Molly; See Appendix N). Mrs. Lily displayed

the posters throughout the duration of the unit. After learning rotations, the students walked to lunch.

### **Lunch, Recess, and Specials**

The multi-age students were not separated by grade level during lunch, recess, and specials. Students were given 30 minutes to eat and socialize during lunch. While the students were at lunch, the three co-teachers ate in the multi-age pod, ran errands (e.g., copying), and planned for upcoming lessons. A 30-minute recess on the playground followed lunch. The three co-teachers talked and played with the students during recess. For example, Mr. Otto regularly played ladder ball with students of all ages. Then, the three co-teachers walked the students to specials (i.e., physical education, art, music, library). Physical education occurred every day of the week while art, music, and library each occurred one day of the week. Depending on the day of the week, specials would last anywhere from 30 minutes to 70 minutes (See Appendix B). After specials, students would return to the multi-age classroom for homeroom time or for clean-up/pack-up, closing meeting, and dismissal (depending on the day of the week).

### **Homeroom Time**

During the unit on Jamestown, the three co-teachers used homeroom time for a variety of reasons: 1) independent work time, 2) testing, and 3) review. Homeroom time varied in duration based on the specials schedule for the day. It could last anywhere from zero minutes to 35 minutes. On the 13<sup>th</sup> day of the unit (Observation, 11/29/2018), Mrs. Lily said,

Before you do Minecraft, you have a ‘must do.’ It’s a short article with five questions. You need to read, answer, and prove your answer with highlighting. I

have two. You can pick the one that interests you the most. I have one about John Rolfe. The other one is Pocahontas and John Smith.

Some of the students mentioned that they had already completed one of them during learning rotations. Mrs. Lily talked with Ms. Skeen for a moment. Then, Mrs. Lily told the class, “You can choose either one. Extra credit if you do both. Bonus money!” A student asked, “How much?” Mrs. Lily responded, “I’m feeling generous. If you do all correctly and highlighting and everything, \$500.” Molly, Will, Randall, and Fabrício picked up both articles and received \$500 each. For example, Randall’s completed work is in Appendix O and Appendix P. Jamie only picked up the Pocahontas and John Smith article and did not receive \$500. Maria was absent on this day of the unit; thus, she did not complete either of the articles or receive bonus money.

### **Clean-up/Pack-up, Closing Meeting, and Dismissal**

At the end of the day, the students cleaned up around the room (e.g., putting books back in bins, pushing in their chairs, etc.) and packed their backpacks to head home. After they cleaned and packed, the students gathered in the cove for closing meeting. The three co-teachers used closing meeting in a few specific ways: 1) to review content, 2) to read books (either related or unrelated to content), and 3) to provide classroom reminders (e.g., what to pack for the Jamestown and Williamsburg field trip). On the fourth day of the unit (Observation 11/12/2018), Mrs. Lily led an end of the day review during closing meeting. She asked the following social studies questions: 1) Who married the Chief’s daughter?, 2) What was the first form of government representation?, 3) Who signed the charter that said go explore?, 4) How long does a slave have to work?,

5) What is an indentured servant?, 6) What is a cash crop?, 7) What is the most lucrative cash crop?, 8) How long did it take them to get here by boat?, and 8) What were the conditions on the boat on the way over? Will, one of the focal students, engaged in a feedback loop with Mrs. Lily and other students in regards to the following question, “Who signed the charter that said go explore?”

Student 1 (Called out): George Washington.

Mrs. Lily: [Student 2’s name.]

Student 2 (Hand raised): John Smith.

Mrs. Lily: John Smith was a great leader, but he did not sign the charter that said go explore. [Looked at Student 3.]

Student 3 (Hand raised): King James the First.

Student 4 (Called out): But I thought it was the Virginia Company.

Student 5 (Called out): Yea, I thought it was the Virginia Company.

Mrs. Lily: Let’s verify that. King James signed the charter that said the Virginia Company can go. And why, why was England interested in letting people go?

Will: Gold and riches.

Mrs. Lily: Yes, gold and riches.



For correct answers to the end of the day review questions, the students earned bonus money that they could use to buy prizes in their classroom store throughout the school year. The school day ended with dismissal at 2:35pm. In the next section, I describe how the three co-teachers planned for the unit on Jamestown.

### **“Divide and Conquer”: “Parallel” Planning in an Elementary Multi-Age Classroom**

At World Elementary School (WES), teaching in a multi-age classroom means teaching with either one or two other classroom teachers in the same space. Mr. Otto, Ms. Skeen, and Mrs. Lily described the importance of teamwork and collaboration in their 3-5 multi-age classroom to varying extents. Ms. Skeen noted only strengths about working as a team while Mr. Otto and Mrs. Lily mentioned that working in a team could be challenging, at times, as well. When planning for the unit on Jamestown, teamwork and collaboration was not evident; instead, the three co-teachers planned and taught separately (“parallel” planning). Observations did not indicate that the three co-teachers sat together and systematically decided the aims of the unit, or who would be responsible for what content. Both Mr. Otto and Ms. Skeen coined their approach as “divide and conquer” (Interview, 12/13/18) for the unit on Jamestown. In the following subsections, I will describe how the three co-teachers envisioned and executed planning for the unit in regards to teamwork and collaboration, aims and content objectives, and instructional responsibilities.

### **“I’m one third of a great team”: Teamwork and Collaboration?**

Mr. Otto exclaimed, “I’m one third of a great team [...] and we’re really tight, and we bounce things off each other” (Interview, 10/23/18). He appreciated working with Ms. Skeen and Mrs. Lily due to the “family dynamic” that he felt with them in the multi-age classroom. Mr. Otto recounted, “Before, [when I had] my own homeroom and yes, I had other colleagues but you didn’t get to [...] plan as much.” In this recollection, he referred to other colleagues that were grade-level teammates, but not multi-age co-teachers. With a grade-leveled team, teachers do not usually share a classroom or the same students (like a multi-age team), but they occasionally or even consistently plan and share materials with one another through an organizational group (e.g., professional learning community). Ms. Skeen and Mrs. Lily served as teammates in the same classroom that could support Mr. Otto with planning through collaboration. Similarly, Ms. Skeen spoke to the importance of collaboration, comparing her time as a grade-leveled teacher with being a multi-age co-teacher (Interview, 10/24/18):

Teaching can be very isolating. You get kind of, I don’t wanna say stuck, but you’re in the same space with the same kids every day. You don’t always see things, or you miss things because you’re so focused on specific things. So having that collaboration with another person or two other teachers, I think for me, has been huge.

Ms. Skeen, much like Mr. Otto, felt support from her two co-teachers in the multi-age classroom. She believed that Mr. Otto and Mrs. Lily would be able to notice things she did not notice about students in regards to academics, social groups, and emotions.

Noticing these things about students directly impacts the decisions that teachers make about planning and then, ultimately, about instruction and assessment. As a novice multi-age teacher, Mrs. Lily enjoyed working alongside and learning from her two co-teachers, “They're kind of like the main source to tell me what to do. At the beginning of the year, I kind of like was copilot and watched [...] If it wasn't for them, I would be in the dark” (Interview, 11/16/18). Mr. Otto and Ms. Skeen provided Mrs. Lily with crucial first-hand knowledge about how to teach in a multi-age classroom, but this support did not translate to helping Mrs. Lily with planning. Mrs. Lily voiced challenges regarding planning with co-teachers, who were also more experienced colleagues:

Different people plan in different ways. And for example, me as a new teacher, I kind of like, for Jamestown, go and dive into Virginia Studies. I make sure that I write all the standards that we're supposed to hit. So when I'm planning, I check off the standards to know that, okay, I've directly taught this. Whereas my other teammates have been teaching for 15 and 17 years and they kind of do things a little bit more on the fly and they don't plan like I do. So it can be challenging if I say, you know, well did we hit the standard? They'll be able to tell me based off of what they did but for me, I find it much more challenging.

As illustrated, there was tension between the ways in which the more experienced teachers, Mr. Otto and Ms. Skeen, planned and the novice teacher, Mrs. Lily, planned. Mr. Otto and Ms. Skeen were more “on the fly” while Mrs. Lily preferred “check[ing] off the standards” to ensure that she had taught what she needed to teach for a given unit of study. This disconnect amongst the three co-teachers, who strongly valued teamwork and collaboration, led to “parallel” planning that isolated each co-teacher from one another.

**“Know the facts”: Aims and Content Objectives for the Unit on Jamestown**

During the pre-unit interview with all three co-teachers (10/29/18), they were asked to describe their aims for the unit on Jamestown, which is what they intended to accomplish. There was no evidence that Mr. Otto, Ms. Skeen, and Mrs. Lily sat together and systematically decided the aims of the unit outside of this pre-unit group interview. Mr. Otto and Ms. Skeen guided the conversation while Mrs. Lily rarely commented:

Ms. Skeen: Like comparing, contrasting the past versus the present. Like what was the importance of Jamestown? Talking about settlers, what it looked like, what occurred there.

Mr. Otto: Yeah, the reason they came up from England, the start of the settlement, their relationship with the Native American tribes, how they learned how to grow crops, how a lot of them died in the 1690s and 1720.

Ms. Skeen: Their shelters.

Mr. Otto: Yeah what basic shelters were like, survival needs, and famous people like John Smith-

Mrs. Lily: Pocahontas.

Mr. Otto: Yeah that's it. And give a heads up of what to expect at the settlement when we go there.

Many of these aims directly stem from the Virginia SOLs that the three co-teachers selected for the unit on Jamestown (See Table 3). Table 14 shows the direct correspondence between the standards (and substandards) and some of the co-teachers' aims.

Table 14

*Correspondence Between Aims and Virginia SOLs*

Teacher	Aim	Virginia SOLs
Ms. Skeen	"[...] what it looked like [...]"	VS.2 The student will demonstrate an understanding of the relationship between physical geography and the lives of the native peoples, past and present, of Virginia by  c) locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, Rappahannock River, and Lake Drummond and the Dismal Swamp)
Mr. Otto	"Yeah, the reason they came up from England, the start of the settlement [...]"	VS.3 The student will demonstrate an understanding of the first permanent English settlement in America by  a) explaining the reasons for English colonization
Mr. Otto	"[...] their relationship with the Native American tribes, how they learned how to grow crops [...]"  "[...] and famous people like John Smith-"	VS.3 The student will demonstrate an understanding of the first permanent English settlement in America by  g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in the survival of the settlers.

Mrs. Lily	“Pocahontas.”		
Mr. Otto	“[...] how a lot of them died in the 1690s and 1720.”  “[...] survival needs [...]”	VS.3	The student will demonstrate an understanding of the first permanent English settlement in America by  f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival
Ms. Skeen  Mr. Otto	“Their shelters.”  “Yeah what basic shelters were like [...]”	VS.4	The student will demonstrate an understanding of life in the Virginia colony by  b) describing how the culture of colonial Virginia reflected the origins of American Indians, European (English, Scots-Irish, German) immigrants, and Africans; e) describing everyday life in colonial Virginia.

Some of Ms. Skeen’s aims could not be aligned with a specific standard or substandard.

A few of her aims were more general in nature and could refer to a wide range of topics:

1) “Like what was the importance of Jamestown?,” 2) “Talking about settlers,” and 3)

“What occurred there.” Also, Mr. Otto’s aim about “giving them a heads up of what to

expect at the settlement” was more general in nature and associated with a particular

experience that students would have during the unit (i.e., the field trip to Jamestown)

rather than specific Virginia standards or substandards. Lastly, Ms. Skeen mentioned,

“Like comparing, contrasting the past versus the present.” This aim aligns with a fourth

grade Virginia standard (VS.1) and substandard (e) that the three co-teachers did not

include in the unit on Jamestown (VS.1e): The student will demonstrate skills for

historical thinking, geographical analysis, economic decision making, and responsible

citizenship by comparing and contrasting ideas and cultural perspectives in Virginia

history. VS.1 is a skills-based standard in Virginia rather than a factual knowledge or content understanding standard (e.g., VS.2, VS.3, and VS.4). After the unit concluded, two of the three co-teachers thought they “did well” (Ms. Skeen, Interview, 12/13/18) or “nailed” (Mr. Otto, Interview, 12/13/18) the unit in regards to meeting or exceeding their aims. However, Mrs. Lily, who taught the vast majority of the unit content, remarked (Interview, 12/13/18):

To be honest, this is gonna sound really bad, there was no real back planning. Let's be very honest, not that I saw. It was kind of like, “Here's Jamestown.” I kind of looked at the standards and I kind of mapped it out how I thought it would fit. And I guess I really felt as I was going, this is what I want the kids to know and this is what I want the kids to know.

Without backwards planning, she believed that the multi-age team did not have clear aims at the beginning of the unit on Jamestown; thus, they did not meet or exceed their aims. Furthermore, this reflection highlighted Mrs. Lily’s “parallel” planning experience; on her own, Mrs. Lily examined the selected Virginia standards and substandards, mapped out when she thought she would teach them, and thought about what she wanted students to know (i.e., content objectives) along the way.

When asked about content objectives for the unit on Jamestown (10/29/18), Mr. Otto and Ms. Skeen were the only co-teachers to comment. Mr. Otto stated that the three co-teachers would be “pulling off the SOLs a great deal to decide what [students] have to know.” He did not provide additional detail; however, Ms. Skeen elaborated that they wanted students to

[...] kind of build a relationship with Jamestown. To know the facts, like we're talking about settlers, work of the colonists, and the individual famous Americans that go along with it. To have an understanding and be able to personalize it and share that.

Ms. Skeen's articulated content objectives focus on students "know[ing] the facts" and relating the content to their own lives (e.g., "build[ing] a relationship with Jamestown, personaliz[ing] and shar[ing] it). Neither Mr. Otto nor Ms. Skeen mentioned content objectives related to content understandings or historical thinking skills. At the end of the unit, all three co-teachers thought they met their content objectives. Mrs. Lily was the only one to adamantly state, "Yes," while Mr. Otto stated, "I think we did," and Ms. Skeen stated, "I think we were able to" (12/13/18). Mrs. Lily connected their success to the students' multiple choice unit test scores: "We gave the kids a pretest and post-test, and after looking at the post-test scores and how much of the students did so much better and improved, that I would think yes, we did meet our objectives." Mr. Otto connected their success to teacher instruction: "I think we covered [the content] more and understood it more." While Ms. Skeen also connected their success to teacher instruction, but she focused on content integration, specifically: "We went through [the objectives]. We saw how it went across the curriculum so it may have been something we picked up in reading where we didn't do it in content, per say."

As outlined, the three co-teachers' aims and content objectives were unclear, at times, and primarily connected with factual knowledge found in the Virginia SOLs. Additionally, the three co-teachers were uncertain of whether they met or exceeded their



aims and content objectives as well. The pre-unit group interview serves as the only evidence that the three co-teachers discussed the aims and content objectives before or during the unit. Similarly, there is no evidence to indicate that they systematically discussed each co-teacher's responsibility for instruction in regards to the unit on Jamestown other than during the pre-unit group interview.

### **“I don’t know exactly what they’re teaching”: Responsibility for Instruction**

Past experiences teaching elementary social studies in the 3-5 multi-age classroom influenced how the three co-teachers planned for the unit and made (or did not make) decisions about who was responsible for teaching what content. From the beginning of the school year, many of the students' scores on previous social studies unit tests were lower than Mr. Otto, Ms. Skeen, and Mrs. Lily anticipated. Thus, as Mr. Otto explained, they planned to teach content differently for the unit on Jamestown, focusing “a little more on direct [instruction] than self guided task sheets” (Interview, 10/29/18). In the past, they had spent roughly two days a week on content through the “must do” and there would be a few independent “option” tasks related to the content. With the unit on Jamestown, they decided to allocate three days a week (at a minimum) to content through the “must do” and there would be an increased number of independent “option” tasks related to the content.

Due to the “sheer size” of the unit (i.e., the number of standards and substandards being covered), Mr. Otto believed that the three co-teachers were going to have to “split up” the content. Keeping “split[ting] up” the content and this “divide and conquer” approach in mind, Mrs. Skeen suggested using learning rotations where the students would move from teacher to teacher and each co-teacher would instruct on different

content: “And [we] can break up into, whether [Mr. Otto] does settlers and I do the settlements and [Mrs. Lily] does the colonist type thing and can rotate” (Interview, 10/29/18). She outlined the benefits of rotations as well, “And it’ll be nice to divide and conquer, so it’s not all on one person and the children can hear in three different ways and get the different perspectives.” Mr. Otto appreciated how teamwork and using rotations allowed them to showcase each co-teacher’s individual understanding of the content (Interview, 12/13/18):

In one way, when you teach it yourself, you get to fully immerse yourself in it. You understand it, and it becomes your baby. But then, when you team-teach it, you can see there were certain things that I didn’t get to or didn’t know, because somebody else did it.

Additionally, Mr. Otto and Ms. Skeen thought that they would need to be flexible with their instruction. Mr. Otto wanted the three co-teachers to “just roll with it” while Ms. Skeen mentioned that they should “play it together and then, if things pop up, grab and go like if you see something” that needs to be taught or taught in more depth. However, “just roll[ing] with it” did not align with Mrs. Lily’s planning or teaching style. She expressed frustration surrounding the three co-teachers not “being on the same page” during the unit on Jamestown (Interview, 11/16/18):

I don’t know exactly what they’re teaching and I can’t look at something and say, okay, like, yes, you’ve taught this standard. [...] with veteran teachers, sometimes they don’t think to like, oh, let me write this down or, or make sure that I explain this the way that someone who’s new to multi-age would understand it.

There was no evidence to suggest that the three co-teachers systematically decided who was responsible for teaching what content. Mr. Otto, Ms. Skeen, and Mrs. Lily did not sit together to delegate particular Virginia standards and substandards to specific teachers (as they mentioned they would do; Interview, 10/29/18). Moreover, they did not sit together to check off Virginia standards and substandards at different time points throughout the unit to make sure that they had been taught. As Mrs. Lily stated, each of the co-teachers did not know exactly what their other two co-teachers were teaching. “Split[ting] up” the content, without conversations where the three co-teachers clearly outlined their responsibilities for instruction during the unit, led to “parallel” planning and ultimately, day-to-day instruction where the three co-teachers were mainly teaching alone in separate spaces and lacked insight into what content each co-teacher was teaching. In the next section, I describe how the three co-teachers taught the social studies content related to the unit on Jamestown.

### **“A plethora of avenues to get to the learning”: Teaching a Unit on Jamestown**

In total, there were 19 days of the unit. During 15 out of the 19 days, the students received unit-based instruction (i.e., teacher or substitute teacher facilitated ‘must do’ tasks) or they participated in self-guided classroom experiences (i.e., ‘option’ tasks) related to unit. The four days without unit-based instruction or self-guided classroom experiences included the following: 1) basketball game day (11/20/18), 2) testing day (11/30/18), 3) word study day (12/3/18), and 4) Jamestown field trip day (12/6/18).

The three co-teachers used a number of instructional approaches (formats, teacher actions, and materials), some of which reflected elements of best practice, during their

day-to-day instruction. In response to the unique elementary classroom context (multi-age) and student needs, the three co-teachers adjusted the format (e.g., whole group, small group, individual) in which they taught. Their teacher actions (e.g., question and response, direct instruction, content integration) and use of varied materials (i.e., nonfiction text, graphic organizer, YouTube video) reflected best practice in social studies to varying extents, but only some of these teacher actions and none of the materials reflected best practice in history education. Heavy reliance on materials (e.g., nonfiction text, graphic organizer, YouTube video) as well as the Virginia SOLs influenced the three co-teachers' coverage of primarily factual knowledge that students would need to be successful on the multiple choice unit test. In the following subsections, I will describe the instructional practices that the three co-teachers utilized during the unit and then, I will examine how these instructional practices reflect (or do not reflect) best practice in social studies and more specifically, history education.

### **“One size doesn’t fit all”: Instructional Practices Utilized During the Unit**

When thinking about instruction for the unit on Jamestown, the three co-teachers agreed that they needed to incorporate an increased amount of direct instruction in comparison to previous elementary social studies units that they had taught at the beginning of the school year. Also, for the unit on Jamestown, Ms. Skeen wanted to work in “project-based learning” as well as “problem-based learning” so that students could “figure out what the problems were, how they could fix [them], [and] how it's changed over time” (Interview, 10/29/18). To prepare for the unit, the three co-teachers talked with the other 3-5 multi-age team (i.e., Mr. Barber and Mrs. Avery) about how they were

planning to teach the unit on Jamestown. They pulled some materials that already had (i.e., from years past or other colleagues) and found some online too. Some online websites that the three co-teachers consulted were TeachersPayTeachers.com, Pinterest, and various school division websites in their state.

In total, students had 52 classroom experiences throughout the unit on Jamestown (i.e., 37 were related to the unit test and Minecraft performance assessment while 15 were only related to the Minecraft performance assessment). During each classroom experience, students learned social studies content knowledge, understandings, and skills through particular instructional practices (format, teacher actions, and materials). The three co-teachers' day-to-day instruction included a number of instructional practices to teach the content related to the unit on Jamestown. Appendix Q highlights these instructional practices and shows the day of the unit (e.g., Day 1), date (e.g., 11/7/18), and time of the day that the instructional practices were used (e.g., learning rotations). Additionally, since there were learning rotations, Appendix Q displays which grade-leveled group (i.e., third, fourth, or fifth) was in a particular learning rotation at a specific time of the day. For example, on 11/27/18, third grade students experienced the lesson on Virginia Assembly vs. Virginia House of Burgesses during the first learning rotation. Fifth grade students experienced the same lesson during the second learning rotation, and then, fourth grade students experienced it during the third learning rotation. Bolded instructional practices align with content that was assessed on the unit test while unbolded instructional practices align with content that students could use in their Minecraft performance assessments (i.e., that went beyond the content assessed on the unit test). In the multi-age classroom (with 51 students in total), the three co-teachers

were purposeful about the format of their day-to-day instruction. They thought about individual student needs as well as the unique educational context, multi-age. They grouped the 3-5 students into large grade-leveled groups, small multi-age focus groups, and the whole multi-age group. During “option” time, students could work independently, with a partner, or in small groups. Partner and small group work could be with grade-leveled peers or peers from different grade levels; students could choose their own partners. During day-to-day instruction, the three co-teachers’ teacher actions heavily relied on the materials that they were given, found, or created. These materials aligned with the selected Virginia standards and substandards in the three co-teachers’ unit plans. In Table 15, the teacher actions and materials utilized during the unit on Jamestown are outlined along with the date they were used and the content they aligned with (i.e., unit test or only the Minecraft performance assessment). [Independent] is included in the teacher actions column of Table 15 to indicate that students completed the task without one of the three co-teachers. [Substitute teacher] is included in the teacher actions column of Table 15 to indicate that one of the three co-teachers did not teach the students the content.

Table 15

*Day-To-Day Instruction: Teacher Actions and Materials*

Date	Assessment Alignment	Teacher Actions (e.g., question and response, direct instruction, content integration)	Materials (e.g., nonfiction text, graphic organizer, YouTube video)
11/7/18	Unit Test	Technology [Independent]	Nonfiction Text on the Computer
11/8/18	Unit Test	Technology	YouTube Video

11/8/18	Unit Test	Direct Instruction	KWL Chart
11/8/18	Unit Test	Direct Instruction	Read Aloud
11/8/18	Unit Test	Question and Response	End of the Day Review Questions
11/9/18	Unit Test	Direct Instruction	Morning Meeting Share Question
11/9/18	Unit Test	Technology	Game
11/9/18	Unit Test	Writing	Graphic Organizer
11/9/18	Unit Test	Content Integration	Reading Passage
11/9/18	Unit Test	Question and Response	End of the Day Review Questions
11/12/18	Unit Test	Technology	Game
11/12/18	Unit Test	Question and Response	End of the Day Review Questions
11/13/18	Unit Test	Direct Instruction	Read Aloud
11/13/18	Only Minecraft Performance Assessment	Direct Instruction	PowerPoint
11/13/18	Only Minecraft Performance Assessment	Technology	Virtual Reality Software (Minecraft)
11/13/18	Only Minecraft Performance Assessment	Technology [Independent]	Virtual Reality Software (Minecraft)
11/14/18	Unit Test	Direct Instruction	PowerPoint
11/14/18	Unit Test	Content Integration	Reading Passage
11/14/18	Unit Test	Writing	Graphic Organizer
11/14/18	Unit Test	Question and Response	End of the Day Review Questions
11/16/18	Unit Test	Technology	YouTube Video
11/16/18	Only Minecraft Performance Assessment	Technology [Independent]	Virtual Reality Software (Minecraft)
11/16/18	Unit Test	Question and Response	End of the Day Review Questions
11/19/18	Unit Test	Technology [Independent]	Nonfiction Text on the Computer
11/19/18	Unit Test	Direct Instruction	Read Aloud
11/19/18	Only Minecraft Performance Assessment	Technology	Virtual Reality Software (Minecraft)
11/26/18	Unit Test	Direct Instruction	Jamestown Exit Slip Review/ "Reteach"
11/27/18	Only Minecraft Performance	Writing [Substitute Teacher]	Graphic Organizer

	Assessment		
11/28/18	Only Minecraft Performance Assessment	Direct Instruction	Morning Meeting Share Question
11/28/18	Only Minecraft Performance Assessment	Technology	YouTube Video
11/28/18	Only Minecraft Performance Assessment	Technology	YouTube Video
11/28/18	Only Minecraft Performance Assessment	Writing	Graphic Organizer
11/28/18	Only Minecraft Performance Assessment	Content Integration	Reading Passage
11/28/18	Unit Test	Technology	YouTube Video
11/28/18	Unit Test	Content Integration [Independent]	Reading Passage
11/28/18	Unit Test	Writing	Poster
11/29/18	Only Minecraft Performance Assessment	Writing [Independent]	Morning Work
11/29/18	Only Minecraft Performance Assessment	Direct Instruction	Morning Meeting Share Question
11/29/18	Unit Test	Writing	Writing Prompt
11/29/18	Unit Test	Hands-on	Maker Experience
11/29/18	Unit Test	Writing	Graphic Organizer
11/29/18	Unit Test	Content Integration [Independent]	Reading Passage
11/29/18	Only Minecraft Performance Assessment	Content Integration [Independent]	Reading Passage
12/4/18	Unit Test	Writing [Independent]	Morning Work
12/4/18	Unit Test	Technology	YouTube Video
12/4/18	Unit Test	Content Integration	Reading Passage
12/4/18	Unit Test	Question and Response	End of the Day Review Questions
12/5/18	Unit Test	Writing [Independent]	Morning Work
12/5/18	Unit Test	Writing	Graphic Organizer
12/5/18	Unit Test	Technology	Game
12/7/18	Unit Test	Direct Instruction	PowerPoint
12/7/18	Only Minecraft	Technology	Minecraft



	Performance Assessment	[Independent]	Presentation
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During the unit on Jamestown, the three co-teachers' teacher actions were the following: technology, direct instruction, question/response, hands-on, writing, and content integration with reading. In total, from least to greatest, technology was used 16 times, direct instruction was used 11 times, writing was used 11 times, content integration with reading was used seven times, question/response was used six times, and hands-on was used one time. The three co-teachers used a wide range of materials in conjunction with their teacher actions: end of the review questions, reading passages, games, read alouds, graphic organizers, YouTube videos, Minecraft, morning work, PowerPoints, nonfiction texts on the computer, morning meeting shares, posters, a KWL chart, a writing prompt, a maker experience, a "reteach," and the Minecraft presentations. The most frequently used materials were reading passages at seven times throughout the unit. Next, the three co-teachers used graphic organizers, YouTube videos, and end of the day review questions six times each. They had the students use Minecraft four times. Then, the three co-teachers used PowerPoints, games, read alouds, morning work, and morning meeting shares three times each. Nonfiction texts on the computer were used two times. Lastly, posters, the KWL chart, "reteach," the writing prompt, the maker experience, and the Minecraft presentations were used one time each. Varied formats, teacher actions and materials provided students with "a plethora of avenues to get to the learning" (Mrs. Lily, Interview, 12/13/18).

After the unit on Jamestown, the three co-teachers were asked about the specific instructional practices that they utilized as well as why they decided to use those

instructional practices. In regards to format (i.e., how the students were grouped for instruction), the three co-teachers largely adjusted their practice in response to the unique elementary classroom context (multi-age) and student needs. Considering student needs, Ms. Skeen said, “Looking at our kids, some of our kids do better in a whole group and some of them do better small group” (Interview, 12/13/18). Thinking about the classroom context, Mr. Otto explained, “You have to divide and conquer some days [in rotations]. Other days, you can just pull them all together” (Interview, 12/13/18). Table 16 reports teacher actions that Mr. Otto, Ms. Skeen, and Mrs. Lily mentioned using during the unit on Jamestown.

Table 16

*Instructional Practices: Reported Teacher Actions*

Reported Teacher Actions	Teacher(s)
Minecraft	Mr. Otto, Ms. Skeen, Mrs. Lily
Read Aloud	Mr. Otto, Ms. Skeen, Mrs. Lily
Review Game	Mr. Otto
Direct Instruction	Ms. Skeen, Mrs. Lily
Reteach	Ms. Skeen
Content Integration	Ms. Skeen
Hands-On Learning	Ms. Skeen, Mrs. Lily
YouTube Videos	Mrs. Lily

All three co-teachers recalled using Minecraft and read alouds with the multi-age students. Ms. Skeen and Mrs. Lily also remembered using direct instruction and hands-on learning. Additional teacher actions that were mentioned by at least one co-teacher were review games, “reteach,” content integration, and YouTube videos. In general, Mr. Otto stated that the three co-teachers made the instructional decisions that they did because “one size doesn't fit all. You can't just instruct one way, especially in our space, with that

many kids.” Similarly, Mrs. Lily reflected on the importance of using a variety of instructional practice with students, “We’re using a bunch of different approaches to meet the kids’ needs. [...] That’s the way we do most things.” More specifically, Ms. Skeen commented on their use of hands-on learning (“It’s not just kinda like a paper that’s thrown at them”) and content integration (“Just because it is a content lesson, it can still be studied throughout the day. So it doesn’t just stop. We can use it in math and in literacy or word study. That it’s linked together”) with the multi-age students. Mrs. Lily was the only co-teacher to reference specific materials utilized during the unit on Jamestown, “[...] they are showing their learning through a variety of methods, whether it by Minecraft, posters, or worksheets.” At times, the three co-teachers’ instructional practices, utilized and recalled, reflected elements of best practice in elementary social studies.

### **“They took people’s land and that’s not fair”: Instructional Practices That Reflect Elements of Best Practice in Social Studies**

Best practice, high quality elementary social studies instruction should be meaningful, integrative, value-based, challenging, and active (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; NCSS, 2009, 2017). Both iterations of NCSS’s position statement on the purpose of elementary social studies have outlined the defining features of these characteristics (2009, 2017). Table 17 highlights how the three co-teachers’ instructional practices from the unit on Jamestown align (or not) with how scholars and national organizations have classified best practice, high quality elementary social studies instruction.

Table 17

*Alignment Between Instructional Practices and Best Practice in Social Studies*

Instructional Practices	Meaningful	Integrative	Value-Based	Challenging	Active
<p>Nonfiction Texts on the Computer [Technology: Independent]</p> <ul style="list-style-type: none"> <li>• “Meet the Ships” (11/7/18)</li> <li>• Readworks Jamestown Book (11/16/18)</li> </ul>	<p>Yes</p> <p>(meets students’ diverse needs- reads the text to them if needed; capitalizes on interests- gives them videos/ pictures with the text and asks them to complete tasks with a partner)</p>	<p>Yes</p> <p>(explore social studies concepts across subject areas- social studies and English Language Arts)</p>			
<p>End of the Day Review [Question/Response: Whole Group]</p> <ul style="list-style-type: none"> <li>• 11/8/18</li> <li>• 11/9/18</li> <li>• 11/12/18</li> <li>• 11/14/18</li> <li>• 11/16/18</li> <li>• 12/4/18</li> </ul>	<p>Yes</p> <p>(capitalize on their interests- enjoy the “game-like” environment; encourage connections- co-teachers ask questions that promote connections)</p>				<p>Yes</p> <p>(modify misconceptions- if students got the questions incorrect, they talked about the correct answer in depth; high student engagement)</p>
<p>YouTube Videos [Technology: Grade-Level Large Groups and Whole Group]</p> <ul style="list-style-type: none"> <li>• Jamestown Explained (HipHughes</li> </ul>	<p>Yes</p> <p>(meet students’ diverse needs- captions are turned on for reading in conjunction with listening;</p>				<p>Yes</p> <p>(consider new ideas in relation to their background knowledge- connected topics across the unit;</p>

<p>History) (11/8/18)</p> <ul style="list-style-type: none"> <li>• Jamestown (11/16/18)</li> <li>• Guardians of Jamestown, 1619: The Arrival of English Women to Virginia (11/28/18)</li> <li>• What happened to the lost colony of Roanoke? (11/28/18)</li> <li>• Guardians of Jamestown, 1619: The First English Thanksgiving (11/28/18)</li> <li>• Jamestown (MrBettsClass, X) (12/4/18)</li> </ul>	<p>capitalize on interests- many of the videos incorporated songs or animation that the students were interested in; encourage connections- the more general videos connected multiple topics that they learned throughout the unit)</p>				<p>high student engagement)</p>
<p>Graphic Organizers [Writing: Grade-Leveled Large Groups and Whole Group]</p> <ul style="list-style-type: none"> <li>• Jamestown KWL (11/8/18)</li> <li>• “Asking Questions” (11/9/18)</li> <li>• Everyday Life in Colonial Jamestown (11/14/18)</li> <li>• Virginia Assembly vs.</li> </ul>	<p>Yes</p> <p>(meet students’ diverse needs- organizationally , the graphic organizers helped students to organize their thoughts; capitalize on their interests- “Asking Questions”; encourage connections- students could add additional</p>	<p>Yes</p> <p>(explore social studies concepts across subject areas- social studies and English Language Arts)</p>			<p>Yes</p> <p>(consider new ideas in relation to their background knowledge with the KWL chart; evaluate multiple perspectives with Everyday Life in Colonial Jamestown)</p>

<p>Virginia House of Burgesses (Orr, 2005) (11/27/18)</p> <ul style="list-style-type: none"> <li>• Powhatan Contributions to Survival (11/28/18)</li> <li>• Cause and Effect: Agriculture's Influence on Slavery (Orr, 2005) (11/29/18)</li> <li>• Jamestown-Providing Examples and Facts (12/5/18)</li> </ul>	<p>information to many of these graphic organizers)</p>				
<p>Read Alouds [Direct Instruction: Grade-Leveled Large Groups and Whole Group]</p> <ul style="list-style-type: none"> <li>• <i>Jamestown, Virginia</i> (Fradin) (11/8/18)</li> <li>• <i>Jamestown, Virginia</i> (Fradin) (11/13/18)</li> <li>• <i>Jamestown, Virginia</i> (Fradin) (11/19/18)</li> </ul>	<p>Yes</p> <p>(encourage connections-co-teachers ask questions that promote connections)</p>				<p>Yes</p> <p>(consider new ideas in relation to their background knowledge-teachers did this with follow-up questioning)</p>
<p>Games [Technology and Question/Response: Whole Group]</p>	<p>Yes</p> <p>(capitalize on their interests-students enjoy</p>				<p>Yes</p> <p>(modify misconceptions-discussed the</p>

<ul style="list-style-type: none"> <li>• The Jamestown Online Adventure (Dunn, 2002) (11/9/18)</li> <li>• Jamestown Kahoot (11/12/18)</li> <li>• Jeopardy (12/5/18)</li> </ul>	<p>playing games and competing with one another; encourage connections- co-teachers ask questions that promote connections)</p>				correct answers; high student engagement)
<p>PowerPoints [Direct Instruction: Grade-Leveled Large Groups and Whole Group]</p> <ul style="list-style-type: none"> <li>• Choosing the Location of Jamestown and Three Reasons Jamestown Location was Picked (11/13/18)</li> <li>• Life in Colonial America (11/14/18)</li> <li>• Jamestown Field Trip (12/7/18)</li> </ul>	<p>Yes</p> <p>(meet students' diverse needs- incorporates words and images; encourage connections- teachers used follow-up questioning in conjunction with PowerPoints to have students connect concepts throughout the unit)</p>				<p>Yes</p> <p>(consider new ideas in relation to their background knowledge- teachers did this with follow-up questioning; modify misconceptions- if a student response was not correct, teachers worked with the student until he or she realized the correct answer)</p>
<p>Reading Passages [Content Integration: Grade-Leveled Large Groups and Individual]</p> <ul style="list-style-type: none"> <li>• <i>Jamestown Colony</i> (Yarborough, 2016) (11/9/18)</li> </ul>		<p>Yes</p> <p>(explore social studies concepts across subject areas- social studies and English Language Arts)</p>			

<ul style="list-style-type: none"> <li>• <i>Surviving in Jamestown</i> (11/14/18)</li> <li>• <i>The Arrival of Women and Africans to Jamestown</i> (11/28/18)</li> <li>• <i>Chief Powhatan and the Powhatan Confederacy</i> (11/28/18)</li> <li>• <i>Pocahontas and John Smith</i> (11/29/18)</li> <li>• <i>John Rolfe Comes to Jamestown</i> (11/29/18)</li> <li>• <i>The Jamestown Colony</i> (12/4/18)</li> </ul>					
<p>Maker Experience [Hands-on: Individual]</p> <ul style="list-style-type: none"> <li>• Packing for Jamestown (11/29/18)</li> </ul>	<p>Yes</p> <p>(capitalize on interests- students were using recycled objects to make items mentioned in their writing prompt and many of the students enjoyed building through maker activities)</p>			<p>Yes</p> <p>(engaged in decision-making to choose the item to build as well as the objects they would need to make the item)</p>	<p>Yes</p> <p>(student discovery of how to build their items in the best way possible; high student engagement)</p>
Writing Prompt	Yes	Yes			



<p>[Writing: Individual]</p> <ul style="list-style-type: none"> <li>Packing for Jamestown (11/29/18)</li> </ul>	<p>(meet students' diverse needs- students could show their processing of information through words or images; encourage connections- between what they should pack on the voyage to Jamestown and what they could trade with the Powhatans when they arrive)</p>	<p>(explore social studies concepts across subject areas- social studies and English Language Arts)</p>			
<p>Poster [Writing: Individual]</p> <p>The Arrival of Women and Africans to Jamestown (11/28/18)</p>	<p>Yes</p> <p>(meet students' diverse needs- students could show their processing of information through words or images on their posters)</p>				
<p>Minecraft [Technology: Independent]</p> <ul style="list-style-type: none"> <li>11/13/18</li> <li>11/13/18</li> <li>11/16/18</li> <li>11/19/18</li> </ul> <p>Minecraft Presentations [Technology: Multi-Age Small Group or Grade-Leveled Small</p>	<p>Yes</p> <p>(meet students' diverse needs- students could assume different roles during the presentation; capitalize on their interests- student choice in what they included in their</p>	<p>Yes</p> <p>(explore social studies concepts across disciplinary boundaries)</p>		<p>Yes</p> <p>(students researched colonial Jamestown and engaged in decision-making with their teams to design their Jamestown Minecraft</p>	<p>Yes</p> <p>(evaluate multiple perspectives- e.g., many students included houses of the wealthy as well as enslaved and thought about their experiences in Jamestown; high student</p>

Group] <ul style="list-style-type: none"> <li>12/7/18</li> </ul>	Jamestown Minecraft worlds and they were able to share the parts of their Jamestown Minecraft worlds that interested them the most; encourage connections- students connected their learning throughout the unit to what they included in their Jamestown Minecraft worlds)			worlds)	engagement)
Morning Meeting Share [Direct Instruction: Whole Group] <ul style="list-style-type: none"> <li>What are you looking forward to learning about Jamestown? (11/9/18)</li> <li>What do you think happened to the settlers on Roanoke Island that disappeared before Jamestown began? (11/28/18)</li> </ul>	Yes  (capitalize on their interests- students were able to share what they were looking forward to learning more about with the morning meeting share on 11/9/18)				Yes  (consider new ideas in relation to their background knowledge- students were able to do this when answering the question on 11/28/18)

<ul style="list-style-type: none"> <li>What are the main reasons why the settlers chose Jamestown? (11/29/18)</li> </ul>					
<p>Morning Work [Writing: Independent]</p> <ul style="list-style-type: none"> <li>Jamestown: Reasons to Choose the Site (11/29/18)</li> <li>Jamestown: 5 Facts and 5 Questions (12/4/18)</li> <li>Reviewing Jamestown Facts (12/5/18)</li> </ul>					
<p>Jamestown Exit Slip Review/ "Reteach" [Direct Instruction: Multi-Age Small Group]</p> <ul style="list-style-type: none"> <li>11/26/18</li> </ul>	<p>Yes</p> <p>(meet students' diverse needs- review to support students who had gotten questions incorrect on the exit slip)</p>				<p>Yes</p> <p>(modify misconceptions- teacher made sure that the students knew the correct answers to the questions that they missed on the exit slip)</p>

During the unit on Jamestown, all of the instructional practices other than morning work reflected elements of best practice in social studies to varying extents. Morning work was used three times during the unit (Jamestown: Reasons to Choose the Site on 11/29/18,

Jamestown: 5 Facts and 5 Questions on 12/4/18, and Reviewing Jamestown Facts 12/5/18). The morning work could have been categorized as ‘meaningful’ due to the “Jamestown: 5 Facts and 5 Questions.” However, the three co-teachers did not do anything with the focal students’ questions (or facts); thus, they did not capitalize on the focal students’ interests. In total, there were seven combinations that highlighted how the instructional practices used during the unit on Jamestown reflected elements of best practice in social studies: ‘meaningful,’ ‘integrative,’ ‘meaningful and integrative,’ ‘meaningful and active,’ ‘meaningful, integrative, and active,’ ‘meaningful, active, and challenging,’ and ‘meaningful, active, challenging, and interactive.’ Table 18 shows the instructional practices that were categorized as reflecting one to four elements of best practice in social studies.

Table 18

*Instructional Practices Reflecting Elements of Best Practice in Social Studies*

Elements of Best Practice in Social Studies Combinations	Jamestown Unit: Instructional Practices
‘Meaningful’	<ul style="list-style-type: none"> <li>• Poster [Writing: Individual]</li> </ul>
‘Integrative’	<ul style="list-style-type: none"> <li>• Readings Passages [Content Integration: Grade-Leveled Large Groups and Individual]</li> </ul>
‘Meaningful and Integrative’	<ul style="list-style-type: none"> <li>• Nonfiction Texts on Computer [Technology: Independent]</li> <li>• Writing Prompt [Writing: Individual]</li> </ul>
‘Meaningful and Active’	<ul style="list-style-type: none"> <li>• End of the Day Review [Question/Response: Whole Group]</li> <li>• YouTube Videos [Technology: Grade-Leveled Large Groups and</li> </ul>

	Whole Group] <ul style="list-style-type: none"> <li>• Read Alouds [Direct Instruction: Grade-Leveled Large Groups and Whole Group]</li> <li>• Games [Technology and Question/Response: Whole Group]</li> <li>• PowerPoints [Direct Instruction: Grade-Leveled Large Groups and Whole Group]</li> <li>• Morning Meeting Share [Direct Instruction: Whole Group]</li> <li>• Jamestown Exit Slip Review/ "Reteach" [Direct Instruction: Multi-Age Small Group]</li> </ul>
'Meaningful, Integrative, and Active'	<ul style="list-style-type: none"> <li>• Graphic Organizers [Writing: Grade-Leveled Large Groups and Whole Group]</li> </ul>
'Meaningful, Active, and Challenging'	<ul style="list-style-type: none"> <li>• Maker Experience [Hands-on: Individual]</li> </ul>
'Meaningful, Active, Challenging, and Interactive'	<ul style="list-style-type: none"> <li>• Minecraft [Technology: Independent] / Minecraft Presentations [Technology: Multi-Age Small Group or Grade-Leveled Small Group]</li> </ul>

None of the instructional practices were categorized as 'value-based.' Throughout the unit on Jamestown, the three co-teachers did not address ethical dimensions related to or controversial issues associated with Jamestown (i.e., 'value-based'). During Mrs. Lily's Minecraft introduction lesson, a student even brought up an ethical dimension related to Jamestown, but Mrs. Lily addressed it in one sentence and moved on (Observation, 11/13/18). The student asked, "Isn't it true that when they got here, they took other people's land?" Mrs. Lily responded, "Um, yea. Some would say that as soon as they got there, they took people's land and that's not fair. But we're going to talk more about the

Indians and how they got along in the days to come.” The multi-age class did not discuss this question in more depth when they learned about the interactions between the Jamestown colonists and Powhatans. The three co-teachers’ teacher actions (e.g., question and response, direct instruction, content integration) and use of varied materials (i.e., nonfiction text, graphic organizer, YouTube video) reflected best practice in social studies to varying extents, but only some of these teacher actions and none of the materials reflected best practice in history education.

### **“Do you think they were packing their iPad?”: Best Practice in Social Studies and More Specifically, History Education**

The purpose of history education is to “[prepare] students for participation in a pluralist democracy” (Levstik & Barton, 2005, p. 10). According to Levstik and Barton, history education should provide students with opportunities to collaboratively and independently reach conclusions based on evidence, engage in deliberations over the common good and how to get there, and recognize as well as understand multiple perspectives that may be different than their own. During the unit on Jamestown, students did not have the opportunity to engage in deliberations over the common good and how to get there. However, students did have the opportunity to reach conclusions based on evidence and recognize as well as understand multiple perspectives that may be different than their own.

The students were able to independently and through the support of their teachers, at times, reach conclusions based on evidence in their reading passages. Each of the reading passages was a secondary source with either comprehension questions or a

corresponding writing activity. The reading passages with comprehension questions were the following: *Jamestown Colony* (Yarborough, 2016; 11/9/18), *Chief Powhatan and the Powhatan Confederacy* (Yarborough, 2016; 11/28/18), *Pocahontas and John Smith* (Yarborough, 2016; 11/29/18), *John Rolfe Comes to Jamestown* (Yarborough, 2016; 11/29/18), and *The Jamestown Colony* (12/4/18). During five classroom experiences, for each of the reading passages with comprehension questions, the students had to reach conclusions (i.e., answer the questions) using evidence from the sources. Then, the three co-teachers told students that they needed to highlight their evidence or ‘proof’ to support their answers (i.e., conclusions). Highlighting was a strategy that the three co-teachers taught across subject areas; however, they introduced the strategy in English Language Arts to prepare students for the Virginia Reading SOL at the end of the year. For example, Randall has answered all the comprehension questions and highlighted his evidence in the *Pocahontas and John Smith* (Yarborough, 2016; 11/29/18; See Appendix O) and *John Rolfe Comes to Jamestown* (Yarborough, 2016; 11/29/18; See Appendix P) reading passages. Looking at a specific question associated with the *John Rolfe Comes to Jamestown* reading passage, for the third question (What type of seeds did John Rolfe bring to Jamestown?), Randall highlighted the following evidence: “John Rolfe seemed to have the answer. He had brought with him tobacco seeds” (Yarborough, 2016, para. 3). Randall’s answer to the question was “tobacco seeds.” However, when examining the types of comprehension questions that the students were answering, a number did not align with best practice in history education. Levstik and Barton (2005) argue that history should be about significant themes (e.g., the development of human societies and cultures) and questions (e.g., How have cultures influenced the way people perceive

themselves and others?). The researchers state, “In the past, we have assumed that students needed ‘basic skills’ before they could engage with big issues. The trouble with this is that time lines, names, and memorized ‘facts’ are not history, and they are not compelling” (p. 4). From the five aforementioned reading passages, the majority of the comprehension questions focused on “timelines, names, and memorized ‘facts’” rather than significant themes and questions (See Table 19).

Table 19

*Reading Passage Comprehension Questions*

Reading Passage	Timelines Comprehension Question	Names Comprehension Question  *for the purposes of this study, I am interpreting ‘names’ as related to people, groups, and places	Memorized ‘Facts’ Comprehension Question	Other
<i>Jamestown Colony</i> (Yarborough, 2016; 11/9/18)	2. How long was the journey to Chesapeake Bay?  4. What was the winter of 1609-1610 in Jamestown called?	1. Who gave the Virginia Company permission to start a colony in the New World?	3. Why was the location of Jamestown not a good choice?	
<i>Chief Powhatan and the Powhatan Confederacy</i> (Yarborough, 2016; 11/28/18)		1. Who was Chief Powhatan’s daughter?  4. Name two tribes that were a part of the Powhatan Confederacy.	2. How many tribes did Chief Powhatan rule over?  3. What was the Powhatan Confederacy?  5. How did the	



			tribes pay taxes to Chief Powhatan?	
<i>Pocahontas and John Smith</i> (Yarborough, 2016; 11/29/18)	3. Why did John Smith have to return to England in 1609?	1. Which colony was John Smith a leader of?  4. Who captured John Smith?  5. Who saved John Smith from the Powhatan tribe?	2. How did John Smith motivate the colonists to work?	
<i>John Rolfe Comes to Jamestown</i> (Yarborough, 2016; 11/29/18)		1. Where was John Rolfe shipwrecked?  2. Who did the Jamestown colony need to repay back in England?  5. Who married John Rolfe?	3. What type of seeds did John Rolfe bring to Jamestown?  4. What is a cash crop?	
<i>The Jamestown Colony</i> (12/4/18)		1. What company sponsored the Jamestown Colony?	2. Name TWO of England's 'mercantilistic goals' that were supported by the Virginia Company.  4. <i>Think Question-</i> Why did John Smith create a 'no work, no food' policy?  5. <i>Think Question-</i> Describe why tobacco was so important to the Jamestown Colony.	3. What, in your opinion, was the <i>biggest</i> challenge faced by the colonists? Give TWO facts or details to support your opinion.

In total, there were three 'timeline' comprehension questions, ten 'names' comprehension questions, ten 'memorized facts' comprehension questions, and one 'other'

comprehension question asked across the five reading passages. The ‘other’ comprehension question focused on students using evidence (i.e., facts or details) to support their opinions. None of the comprehension questions dealt with significant themes or questions in history.

The students had a couple opportunities to recognize and understand multiple perspectives that may be different than their own. Levstik and Barton suggest, “Whenever we consider the actions of people in the past, we have to come to grips with ideas, attitudes, and beliefs that are no longer prevalent” (p. 11). To understand history, we cannot ignore or quickly dismiss these differences in relation to our own ideas, attitudes, and beliefs. The two opportunities that students had to recognize and understand multiple perspectives were the Life in Colonial Jamestown lesson with Mrs. Lily and Maker Experience with Ms. Skeen. During the Life in Colonial Jamestown lesson (Observation, 11/14/18), Mrs. Lily pointed out how the everyday experiences and perspectives of the Jamestown colonists and enslaved Africans in the past were different than the students’ everyday experiences and perspectives in the present day. When discussing ways in which the Jamestown colonists and enslaved Africans got food (e.g., from fishing, hunting, raising livestock, growing crops), Mrs. Lily asked, “Were there supermarkets or grocery stores back then?” The group of students responded, “No.” Then, Mrs. Lily remarked, “Right, you had to go around trading your things.” A student called out, “You couldn’t get Big Macs,” and another student said, “Or chicken sandwiches.” Mrs. Lily moved on to the next PowerPoint slide and talked about the different types of houses that the Jamestown colonists and enslaved Africans lived in. When they reached the PowerPoint slide on clothing, Mrs. Lily commented, “Clothing

was made. They didn't have stores where you could go and buy it." At the end of the PowerPoint, the students completed a graphic organizer where they wrote down the food, housing, clothes, and jobs of people living in colonial Jamestown (See Jamie's work in Appendix R). During the Maker Experience (Observation, 11/29/18), Mrs. Skeen mentioned several ways that the colonists' experiences and perspectives differed from their own before the students completed their Packing for Jamestown writing prompt and built their items with recycled objects. Mrs. Skeen began the lesson asking students the names of the three ships that the colonists sailed on and then, she started talking about how the colonists might have packed for their voyage:

The colonists had to pack for these three ships. What type of things do you think they were packing? Do you think they were packing their iPad? They were making sure that they had 45 different types of shoes. Do you think they had all their ear plugs, their cell phones?

Many students were calling out "Yes" and "No." Some of the students were laughing. Next, Ms. Skeen asked, "So we're looking back to 1607, what things do you think the colonists coming over packed and put in their bags to go?" A student mentioned that they might need extra clothes. After this student response, another student said, "TVs. They packed their TVs." The student laughed and several other students laughed as well. Ms. Skeen did not scold the student for his response, but responded, "I mean seriously, like when I pack, I think of stuff like that. Do you think they had that opportunity?" Students said "No." Students provided additional responses regarding what types of items that the colonists might have packed: knives, water, food, things to keep them busy (e.g., toys or

games), and a blanket. At the conclusion of these responses and before Ms. Skeen gave the students directions regarding the writing prompt, she commented:

It was not a short trip. Nowadays, we can get on a plane and be somewhere in so much time. They didn't actually know how long it was going to take. So when they picked food and packed it, they had to get stuff that would last for a long time.

Ms. Skeen had several exchanges with students about the differences between the colonists and themselves during the Maker Experience.

While students did not have the opportunity to engage in deliberations over the common good and how to get there, they did have a few opportunities to reach conclusions based on evidence and recognize as well as understand multiple perspectives that may be different than their own. There were only a couple teacher actions (i.e., content integration and direction instruction) that reflected best practice in history education. Additionally, the materials (i.e., reading passages, PowerPoint, and writing prompt) that were used in conjunction with those teacher actions did not align with elements of best practice in history education. The comprehension questions in the reading passages did not deal with significant themes or questions in history. Mrs. Lily's PowerPoint did not promote students' thinking about multiple perspectives; she did through her teaching with questions and comments that went beyond the PowerPoint content. Lastly, the writing prompt focused only on what the colonists packed to bring to Jamestown; Ms. Skeen's teaching, through questions and including information relevant to her life and her students' lives, promoted students' thinking about perspectives that

were different than their own. In the next section, I describe how the three co-teachers used two different assessments (multiple choice unit test and Minecraft performance assessment) during the unit on Jamestown.

### **“Best representation of Jamestown that they could make”: Assessing a Unit on Jamestown**

The unit on Jamestown had two assessments: 1) multiple choice unit test and 2) Minecraft performance assessment. Mr. Otto, who taught the least during the unit, developed the unit test in Illuminate, CCPS’s computer-based item bank. Ms. Skeen borrowed the Minecraft project from other multi-age teachers and added a performance assessment rubric. Mrs. Lily, who taught the vast majority of the content related to the unit test, did not contribute to the creation of the unit test. Additionally, Mrs. Lily did not contribute to the adjustment of the Minecraft performance assessment, but she did teach the Minecraft introduction lesson and provided students with initial time to design their Jamestown worlds. In the following subsections, I will describe the creation or adjustment of the assessments in more depth and outline the instructional practices associated with each of the assessments.

### **“We don’t always tell each other what we’re going to be teaching”: Unit Test**

The pre-test and post-test were created in Illuminate, CCPS’s computer-based item bank, which includes released questions from previous Virginia SOL tests as well as CCPS teacher-created questions that mimic the format and structure of the Virginia SOL tests. In Illuminate, Mr. Otto searched the item bank for questions that aligned with the

Virginia standards and substandards associated with the unit on Jamestown. For example, the first question he chose aligned with VS.3f (See Figure 23).

1

**Cause**

?

**Effect**

Jamestown settlers died of starvation

**Which cause replaces the question mark?**

A. Lack of survival skills

B. Conflict with the Spanish

C. Lack of farm lands

Master ID:	544131	Revision:	1
Correct:	A		
Standards:	SOC.4-5.VS.3.f		

*Figure 23. Alignment Between VS.3f and the First Unit Test Question*

For the purpose of examining how the three co-teachers' assessed the unit on Jamestown, this subsection will focus on the post-test rather than the pre-test. The three co-teachers read the post-test when asked to talk about the unit test during the post-unit interview. The nine post-unit test questions explored four out of a total 13 substandards that were outlined on the co-teachers' unit plans. Thus, the post-unit test questions only assessed around 31% of the content covered during the unit on Jamestown. One of the substandards (VS.4a) was assessed with one test question while the other three substandards (VS.3c, VS.3e, and VS.3f) were assessed with multiple test questions (See Table 20).

Table 20

*Alignment Between the Virginia Substandards and Post-Unit Test Questions*

Virginia Substandard	Post-Unit Test Question Number	Unit Test Question
VS.4a	2	<p><b>2</b> What was Virginia's first cash crop?</p> <p>A. Peanuts</p> <p>B. Apples</p> <p>C. Tobacco</p>
VS.3c	4	<p><b>4</b> The Virginia Company was granted the right to establish colonies by —</p> <p>A. The queen of Spain</p> <p>B. John Smith</p> <p>C. the king of England</p>
	6	<p><b>6</b> The charters granted by King James to the Virginia Company of London allowed all of the following EXCEPT:</p> <p>A. rights for the Powhatans</p> <p>B. rights for the colonists</p> <p>C. the right to settle in North America</p> <p>D. the right to raise funds to start a new colony</p>

VS.3e	3	<p><b>3</b> How did the arrival of women at Jamestown in 1620 affect the colony?</p> <p>A. It was possible to expand the tobacco economy.</p> <p>B. It was possible to meet more American Indians.</p> <p>C. It was possible to establish a more permanent colony.</p>
	8	<p><b>8</b> How did the arrival of women at Jamestown in 1620 affect the colony?</p> <p>A. It was possible to expand the tobacco economy.</p> <p>B. It was possible to meet more American Indians.</p> <p>C. It was possible to explore the western regions of Virginia.</p> <p>D. It was possible to establish a more permanent colony.</p>
	9	<p><b>9</b> Jamestown became a wealthier and more permanent settlement because of the arrival of which two groups?</p> <p>A. Africans and women</p> <p>B. Africans and French settlers</p> <p>C. American Indians (First Americans) and Spanish colonists</p> <p>D. American Indians (First Americans) and English prisoners</p>
VS.3f	1	<p><b>1</b></p> <div> <p style="text-align: center;">Cause</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 10px; margin-right: 10px;">?</div> <div style="font-size: 2em; margin: 0 10px;">→</div> <div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;">             Jamestown settlers died of starvation           </div> </div> <p style="text-align: center;">Effect</p> </div> <p><b>Which cause replaces the question mark?</b></p> <p>A. Lack of survival skills</p> <p>B. Conflict with the Spanish</p> <p>C. Lack of farm lands</p>



	5	<p><b>5 The main reason it was hard for the Jamestown colony to survive was because the settlers —</b></p> <ul style="list-style-type: none"> <li>A. had few of the needed skills</li> <li>B. arrived in the middle of the winter</li> <li>C. lost supply ships to French pirates</li> <li>D. wanted to return to England</li> </ul>
	7	<p><b>7 All of the following were hardships faced by the Jamestown settlers <u>EXCEPT</u>:</b></p> <ul style="list-style-type: none"> <li>A. Many starved or died of disease.</li> <li>B. The Siouan declared war on the settlement.</li> <li>C. They lacked safe drinking water.</li> <li>D. They lacked necessary survival skills.</li> </ul>

The second question assessed VS.4a. Then, the fourth and sixth questions assessed VS.3c. Next, the third, eighth, and ninth questions assessed VS.3e. The third and eighth questions were the same question; however, the third question had fewer answer choices. Lastly, the first, fifth, and seventh questions assessed VS.3f. During the three co-teachers' day-to-day instruction, these Virginia substandards were taught with a number of instructional practices.

Mr. Otto, Ms. Skeen, and Mrs. Lily each taught content related to the unit test questions. In total, there were 37 classroom experiences that dealt with content related to the unit test. Table 21 shows the classroom experience, date the content was taught, and co-teacher associated with the classroom experience.

Table 21

*Unit Test: Classroom Experiences, Date Taught, and Co-Teacher Associated with the Experience*

Classroom Experiences (Related to the Unit Test)	Date	Co-Teacher
“Meet the Ships” [Book on Computer]	11/7/18	Independent
Jamestown Explained (HipHughes History) [YouTube Video]	11/8/18	Ms. Skeen
Jamestown KWL [Graphic Organizer]	11/8/18	Ms. Skeen
<i>Jamestown, Virginia</i> (Fradin) [Read Aloud]	11/8/18	Mr. Otto
End of the Day Review	11/8/18	Mr. Otto
What are you looking forward to learning about Jamestown? [Morning Meeting Share]	11/9/18	Mr. Otto
The Jamestown Online Adventure (Dunn, 2002) [Game]	11/9/18	Mr. Otto
“Asking Questions” [Graphic Organizer]	11/9/18	Ms. Skeen
<i>Jamestown Colony</i> (Yarborough, 2016) [Reading Passage]	11/9/18	Ms. Skeen
End of the Day Review	11/9/18	Mrs. Lily
Jamestown Kahoot [Game]	11/12/18	Ms. Skeen
End of the Day Review	11/12/18	Mrs. Lily
<i>Jamestown, Virginia</i> (Fradin) [Read Aloud]	11/13/18	Mr. Otto
Life in Colonial America [PowerPoint]	11/14/18	Mrs. Lily
<i>Surviving in Jamestown</i> [Reading Passage]	11/14/18	Mrs. Lily
Everyday Life in Colonial Jamestown [Graphic Organizer]	11/14/18	Mrs. Lily
End of the Day Review	11/14/18	Mrs. Lily
Jamestown [YouTube Video]	11/16/18	Mrs. Lily
End of the Day Review	11/16/18	Mrs. Lily
Readworks Book on Jamestown [Book on Computer]	11/19/18	Independent
<i>Jamestown, Virginia</i> (Fradin) [Read Aloud]	11/19/18	Mr. Otto
Jamestown Exit Slip Review/ “Reteach”	11/26/18	Mrs. Lily
Guardians of Jamestown, 1619: The Arrival of English Women to Virginia [YouTube Video]	11/28/18	Mrs. Lily
The Arrival of Women and Africans to Jamestown [Reading Passage]	11/28/18	Mrs. Lily
The Arrival of Women and Africans to Jamestown [Poster]	11/28/18	Mrs. Lily
Packing for Jamestown [Writing Prompt]	11/29/18	Ms. Skeen
Packing for Jamestown [Maker Experience]	11/29/18	Ms. Skeen

Cause and Effect: Agriculture's Influence on Slavery (Orr, 2005) [Graphic Organizer]	11/29/18	Mrs. Lily
<i>John Rolfe Comes to Jamestown</i> [Reading Passage]	11/29/18	Independent
Jamestown: 5 Facts and 5 Questions [Morning Work/ Content Notebook]	12/4/18	Independent
Jamestown (MrBettsClass) [YouTube Video]	12/4/18	Mrs. Lily
<i>The Jamestown Colony</i> [Reading Passage]	12/4/18	Ms. Skeen
End of the Day Review	12/4/18	Mrs. Lily
Reviewing Jamestown Facts in Content Notebook [Morning Work]	12/5/18	Independent
Jamestown- Providing Examples and Facts [Graphic Organizer]	12/5/18	Ms. Skeen
Jeopardy [Game]	12/5/18	Mrs. Lily
Jamestown Field Trip [PowerPoint]	12/7/18	Mr. Otto

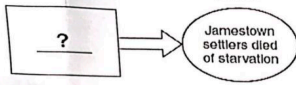
Mrs. Lily taught the vast majority of the content related to the unit test; she taught 16 of these classroom experiences, which accounts for 43% of the total classroom experiences related to the unit test. She used an end of the day review five times, YouTube videos three times, reading passages two times, graphic organizers two times, a PowerPoint one time, "reteach" one time, a poster one time, and Jeopardy one time. Ms. Skeen taught nine of these classroom experiences, which accounts for 24% of the total classroom experiences related to the unit test. She used graphic organizers three times, reading passages two times, a YouTube video one time, a writing prompt one time, a maker experience one time, and a game one time. Mr. Otto taught seven of these classroom experiences, which accounts for 19% of the total classroom experiences related to the unit test. He used read alouds three times, an end of the day review one time, a morning meeting share one time, a PowerPoint one time, and the Jamestown Online Adventure Game one time. Lastly, students independently completed five classroom experiences, which accounts for 14% of the total classroom experiences related to the unit test. They had the opportunity to read books on the computer two times, complete morning work

two times, and answer comprehension questions after a reading passage one time. The instructional practices that the three co-teachers used to teach the unit test content were coded into six main categories: technology, question/response, direct instruction, writing, content integration with reading, and hands-on. Ms. Skeen used instructional practices from all of these categories; however, she primarily utilized writing. She used writing for four out of the nine classroom experiences that she taught (two graphic organizers, KWL, and writing prompt). Mrs. Lily used instructional practices from all of the categories other than hands-on. Her most frequently used instructional practice was question/response. She utilized question/response six out of the 16 classroom experiences that she taught (five end of the day reviews and Jeopardy). Mr. Otto used technology, question/response, and direct instruction. He used direct instruction for four out of the seven classroom experiences that he taught (three read alouds and a PowerPoint)

After the conclusion of the unit, when asked to talk aloud about how unit test question content was taught, the three co-teachers remembered the content being taught in different ways with very little overlap (See Table 22).

Table 22

*Three Co-Teachers' Remembered Instructional Practices By Post-Unit Test Question*

Post-Unit Test Questions	Mr. Otto	Ms. Skeen	Mrs. Lily
<p>1 Cause Effect</p>  <p>Which cause replaces the question mark?</p> <p>A. Lack of survival skills B. Conflict with the Spanish C. Lack of farm lands</p>	<p>“Starving Time Lesson” (Mrs. Lily)</p>	<p>Reading Passage</p> <p>Read Aloud</p> <p>YouTube Video</p>	<p>PowerPoint (Mrs. Lily)</p>

		Role Playing	
		Direct Instruction	
<p>2 What was Virginia's first cash crop?</p> <p>A. Peanuts</p> <p>B. Apples</p> <p>C. Tobacco</p>	Not sure	“Having pictures and having different things like that”	YouTube Video
<p>3 How did the arrival of women at Jamestown in 1620 affect the colony?</p> <p>A. It was possible to expand the tobacco economy.</p> <p>B. It was possible to meet more American Indians.</p> <p>C. It was possible to establish a more permanent colony.</p>	Read Aloud (Mr. Otto)	<p>Chant/Song</p> <p><b>Poster (Mrs. Lily)</b></p> <p>Reading Passage</p>	<p>PowerPoint</p> <p>YouTube Video</p> <p><b>Poster</b></p>
<p>4 The Virginia Company was granted the right to establish colonies by —</p> <p>A. The queen of Spain</p> <p>B. John Smith</p> <p>C. the king of England</p>	(Mrs. Skeen)	<p>Reading Passage</p> <p><b>End of the Day Review</b></p>	<p>YouTube Video</p> <p>Read Aloud</p> <p><b>End of the Day Review</b></p>
<p>5 The main reason it was hard for the Jamestown colony to survive was because the settlers —</p> <p>A. had few of the needed skills</p> <p>B. arrived in the middle of the winter</p> <p>C. lost supply ships to French pirates</p> <p>D. wanted to return to England</p>	<p>“Starving Time Lesson” (Mrs. Lily)</p>	<p><b>Read Aloud (Mr. Otto)</b></p> <p>BrainPOP</p>	<b>Read Aloud</b>

<p><b>6</b> The charters granted by King James to the Virginia Company of London allowed all of the following EXCEPT:</p> <p>A. rights for the Powhatans</p> <p>B. rights for the colonists</p> <p>C. the right to settle in North America</p> <p>D. the right to raise funds to start a new colony</p>	(Ms. Skeen)	<p>Direct Instruction</p> <p>Reading Passage</p>	Read Aloud
<p><b>7</b> All of the following were hardships faced by the Jamestown settlers EXCEPT:</p> <p>A. Many starved or died of disease.</p> <p>B. The Siouan declared war on the settlement.</p> <p>C. They lacked safe drinking water.</p> <p>D. They lacked necessary survival skills.</p>	(Mrs. Lily)	<p>Venn Diagram (Ms. Skeen)</p> <p><b>PowerPoint (Mr. Otto)</b></p> <p><b>Read Aloud (Mr. Otto)</b></p> <p>Reading Passage (Mrs. Lily)</p>	<p><b>PowerPoint</b></p> <p>YouTube Video</p> <p><b>Read Aloud</b></p>
<p><b>8</b> How did the arrival of women at Jamestown in 1620 affect the colony?</p> <p>A. It was possible to expand the tobacco economy.</p> <p>B. It was possible to meet more American Indians.</p> <p>C. It was possible to explore the western regions of Virginia.</p> <p>D. It was possible to establish a more permanent colony.</p>	(Mr. Otto)	<b>Poster (Mrs. Lily)</b>	<p>PowerPoint</p> <p>YouTube Video</p> <p><b>Poster</b></p>
<p><b>9</b> Jamestown became a wealthier and more permanent settlement because of the arrival of which two groups?</p> <p>A. Africans and women</p> <p>B. Africans and French settlers</p> <p>C. American Indians (First Americans) and Spanish colonists</p> <p>D. American Indians (First Americans) and English prisoners</p>	(Mrs. Skeen)	<p>End of the Day Review</p> <p>Morning Meeting Share</p> <p><b>YouTube Video</b></p> <p>Reading Passage</p>	<p>PowerPoint</p> <p><b>YouTube Video</b></p> <p>Poster</p>

The bolded responses highlight overlap in the three co-teachers' responses. If a co-teacher mentioned reading as opposed to a read aloud, his or her response was noted as a "reading passage." If an instructional practice was unclear, a quote has been used (e.g., "Having pictures and having different things like that"). Additionally, if a co-teacher connected a particular instructional practice with a specific co-teacher, the co-teacher's name was noted after the instructional practice in parentheses. For several of Mr. Otto's responses, he was only able to provide a co-teacher's name and not an associated instructional practice. Lastly, "not sure" was utilized on one occasion when Mr. Otto could not connect the unit test question with an instructional practice or a specific co-teacher.

The instructional practices that the three co-teachers remembered in connection with the unit test question content were coded into six main categories: technology, question/response, direct instruction, writing, content integration with reading, and student-created. Technology included YouTube videos and Brain POP. Question/response included the end of the day review and morning meeting share. Direct instruction included read alouds, PowerPoints, and when the co-teachers explicitly named direct instruction. Writing included the posters and Venn diagram. Content integration with reading included the reading passages with comprehension questions. Lastly, student-created included role-playing and the chant/song. The following responses, with instructional practices mentioned, did not fall under one of the aforementioned categories: "Having pictures and having different things like that" and the starving time lesson. Direct instruction was reported 16 times, technology was reported 11 times, writing was reported six times, content integration with reading was reported six times,

question/response was reported four times, and student-centered was reported two times. Five responses included just a co-teacher's name and eleven responses included a co-teacher's name and instructional practice. In regards to instructional practices remembered, all three co-teachers' responses never fully overlapped. Mr. Otto's responses did not ever overlap with Ms. Skeen's or Mrs. Lily's responses. Mr. Otto shared the following in regards to knowing how content was taught during the unit on Jamestown (Interview, 12/13/18):

So here's the tricky part, right? So when we assign different teachers to teach different things, we don't always tell each other what we're going to be teaching. So I just trust what she was rolling out was what she was doing.

Mr. Otto's trust in his two co-teachers led to him being largely unaware of how the content for the unit on Jamestown was being taught. Ms. Skeen and Mrs. Lily had partially overlapping responses with six out of the nine unit test questions. Thus, they had a greater understanding of how the content was being taught than Mr. Otto. Additionally, this is illustrated in Table 23, which shows the Virginia substandards, post-unit test questions, how the content was taught and who taught the content, and how the three co-teachers remember teaching the content.

Table 23

*Alignment Between How the Content Was Taught and How the Co-Teachers Remember Teaching the Content*



Virginia Substandard	Post-Unit Test Questions	How Content Was Taught and Who Taught the Content	How Co-Teachers Remember Teaching Content	
VS.4a	Question 2	<ul style="list-style-type: none"> <li>• Jamestown Explained (HipHughes History) [YouTube Video] (Independent)</li> <li>• Jamestown KWL [Graphic Organizer] (Ms. Skeen)</li> <li>• The Jamestown Online Adventure (Dunn, 2002) [Game] (Mr. Otto)</li> <li>• End of the Day Review (Mrs. Lily)</li> <li>• Jamestown Kahoot [Game] (Ms. Skeen)</li> <li>• Jamestown [YouTube Video] (Mrs. Lily)</li> <li>• Jamestown Exit Slip Review/ "Reteach" (Mrs. Lily)</li> <li>• Cause and Effect: Agriculture's Influence on Slavery (Orr, 2005) [Graphic Organizer] (Mrs. Lily)</li> <li>• <i>John Rolfe Comes to Jamestown</i> [Reading Passage] (Independent)</li> <li>• Jamestown: 5 Facts and 5 Questions [Morning Work/ Content Notebook] (Independent)</li> <li>• Jamestown (MrBettsClass) [YouTube Video] (Mrs. Lily)</li> <li>• <i>The Jamestown Colony</i> [Reading Passage] (Ms. Skeen)</li> <li>• Reviewing Jamestown Facts in Content Notebook [Morning Work] (Independent)</li> <li>• Jamestown- Providing Examples and Facts [Graphic Organizer] (Ms. Skeen)</li> <li>• Jeopardy [Game] (Mrs. Lily)</li> <li>• Jamestown Field Trip [PowerPoint] (Mr. Otto)</li> </ul>	Mr. Otto (Q2)	Not sure
			Ms. Skeen (Q2)	"Having pictures and having different things like that"
			Mrs. Lily (Q2)	YouTube Video
VS.3c	Question 4	<ul style="list-style-type: none"> <li>• "Meet the Ships" [Book on Computer] (Independent)</li> <li>• Jamestown Explained (HipHughes History) [YouTube Video] (Ms. Skeen)</li> <li>• End of the Day Review (Mr. Otto)</li> </ul>	Mr. Otto (Q4)	(Mrs. Skeen)
			Ms. Skeen (Q4)	Reading Passage; End of the Day Review

		<ul style="list-style-type: none"><li>• “Asking Questions” [Graphic Organizer] (Ms. Skeen)</li><li>• <i>Jamestown Colony</i> (Yarborough, 2016) [Reading Passage] (Ms. Skeen)</li></ul>	Mrs. Lily (Q4)	YouTube Video; Read Aloud; End of the Day Review
	Question 6	<ul style="list-style-type: none"><li>• End of the Day Review (Mrs. Lily)</li><li>• Jamestown Kahoot [Game] (Ms. Skeen)</li></ul>	Mr. Otto (Q6)	(Ms. Skeen)
		<ul style="list-style-type: none"><li>• Jamestown [YouTube Video] (Mrs. Lily)</li><li>• Packing for Jamestown [Writing Prompt] (Ms. Skeen)</li><li>• Packing for Jamestown [Maker Experience] (Ms. Skeen)</li></ul>	Ms. Skeen (Q6)	Direct Instruction; Reading Passage
		<ul style="list-style-type: none"><li>• Jamestown: 5 Facts and 5 Questions [Morning Work/ Content Notebook] (Independent)</li><li>• Jamestown (MrBettsClass) [YouTube Video] (Mrs. Lily)</li><li>• <i>The Jamestown Colony</i> [Reading Passage] (Ms. Skeen)</li><li>• Reviewing Jamestown Facts in Content Notebook [Morning Work] (Independent)</li><li>• Jeopardy [Game] (Mrs. Lily)</li><li>• Jamestown Field Trip [PowerPoint] (Mr. Otto)</li></ul>	Mrs. Lily (Q6)	Read Aloud
VS.3e	Question 3	<ul style="list-style-type: none"><li>• Jamestown Explained (HipHughes History) [YouTube Video] (Ms. Skeen)</li></ul>	Mr. Otto (Q3)	Read Aloud (Mr. Otto)
		<ul style="list-style-type: none"><li>• End of the Day Review (Mrs. Lily)</li><li>• Jamestown [YouTube Video] (Mrs. Lily)</li></ul>	Ms. Skeen (Q3)	Chant/Song; Poster (Mrs. Lily); Reading Passage
		<ul style="list-style-type: none"><li>• Guardians of Jamestown, 1619: The Arrival of English Women to Virginia [YouTube Video] (Mrs. Lily)</li></ul>	Mrs. Lily (Q3)	PowerPoint; YouTube Video; Poster
	Question 8	<ul style="list-style-type: none"><li>• The Arrival of Women and Africans to Jamestown [Reading Passage] (Mrs. Lily)</li></ul>	Mr. Otto (Q8)	(Mr. Otto)
		<ul style="list-style-type: none"><li>• The Arrival of Women and Africans to Jamestown [Poster] (Mrs. Lily)</li><li>• Cause and Effect: Agriculture’s</li></ul>	Ms. Skeen (Q8)	Poster (Mrs. Lily)

		Influence on Slavery (Orr, 2005) [Graphic Organizer] (Mrs. Lily)	Mrs. Lily (Q8)	PowerPoint; YouTube Video; Poster
	Question 9	<ul style="list-style-type: none"> <li>Jamestown: 5 Facts and 5 Questions [Morning Work/ Content Notebook] (Independent)</li> <li>Reviewing Jamestown Facts in Content Notebook [Morning Work] (Independent)</li> <li>Jeopardy [Game] (Mrs. Lily)</li> <li>Jamestown Field Trip [PowerPoint] (Mr. Otto)</li> </ul>	Mr. Otto (Q9)	(Mrs. Skeen)
			Ms. Skeen (Q9)	Poster (Mrs. Lily)
			Mrs. Lily (Q9)	PowerPoint; YouTube Video; Poster
VS.3f	Question 5	<ul style="list-style-type: none"> <li>“Meet the Ships” [Book on Computer] (Independent)</li> <li>Jamestown Explained (HipHughes History) [YouTube Video] (Ms. Skeen)</li> <li>Jamestown KWL [Graphic Organizer] (Ms. Skeen)</li> <li><i>Jamestown, Virginia</i> (Fradin) [Read Aloud] (Mr. Otto)</li> <li>End of the Day Review (Mr. Otto)</li> <li>What are you looking forward to learning about Jamestown? [Morning Meeting Share] (Mr. Otto)</li> </ul>	Mr. Otto (Q5)	“Starving Time Lesson” (Mrs. Lily)
			Ms. Skeen (Q5)	Reading Passage; Read Aloud; YouTube Video; Role Playing; Direct Instruction
		<ul style="list-style-type: none"> <li>The Jamestown Online Adventure (Dunn, 2002) [Game] (Mr. Otto)</li> </ul>	Mrs. Lily (Q5)	PowerPoint (Mrs. Lily)
		<ul style="list-style-type: none"> <li>“Asking Questions” [Graphic Organizer] (Ms. Skeen)</li> </ul>	Mr. Otto (Q1)	“Starving Time Lesson” (Mrs. Lily)
	Question 1	<ul style="list-style-type: none"> <li><i>Jamestown Colony</i> (Yarborough, 2016) [Reading Passage] (Ms. Skeen)</li> <li>End of the Day Review (Mrs. Lily)</li> <li>Jamestown Kahoot [Game] (Ms. Skeen)</li> </ul>	Ms. Skeen (Q1)	Read Aloud (Mr. Otto); BrainPOP
		<ul style="list-style-type: none"> <li>Life in Colonial America [PowerPoint] (Mrs. Lily)</li> </ul>	Mrs. Lily (Q1)	Read Aloud
	Question 7	<ul style="list-style-type: none"> <li><i>Surviving in Jamestown</i> [Reading Passage] (Mrs. Lily)</li> </ul>	Mr. Otto (Q7)	(Mrs. Lily)

		<ul style="list-style-type: none"> <li>• Everyday Life in Colonial Jamestown [Graphic Organizer] (Mrs. Lily)</li> <li>• Jamestown [YouTube Video] (Mrs. Lily)</li> <li>• Readworks Book on Jamestown [Book on Computer] (Independent)</li> <li>• Jamestown Exit Slip Review/ "Reteach" (Mrs. Lily)</li> <li>• Jamestown: 5 Facts and 5 Questions [Morning Work/ Content Notebook] (Independent)</li> <li>• Jamestown (MrBettsClass) [YouTube Video] (Mrs. Lily)</li> <li>• <i>The Jamestown Colony</i> [Reading Passage] (Ms. Skeen)</li> <li>• Reviewing Jamestown Facts in Content Notebook [Morning Work] (Independent)</li> <li>• Jamestown- Providing Examples and Facts [Graphic Organizer] (Ms. Skeen)</li> <li>• Jeopardy [Game] (Mrs. Lily)</li> <li>• Jamestown Field Trip [PowerPoint] (Mr. Otto)</li> </ul>	Ms. Skeen (Q7)	Venn Diagram (Ms. Skeen); PowerPoint (Mr. Otto); Read Aloud (Mr. Otto); Reading Passage (Mrs. Lily)
			Mrs. Lily (Q7)	PowerPoint; YouTube Video; Read Aloud

For the majority of the unit test questions, the three co-teachers' interview responses (i.e., how they remember teaching the content) were not detailed enough to show exact alignment. For example, with the second question that assesses VS.4a (The student will demonstrate an understanding of life in the Virginia colony by explaining the importance of agriculture and its influence on the institution of slavery), Mrs. Lily remembered the content being taught through the use of a YouTube video. The content was actually taught through several instructional practices, including three different YouTube videos: 1) Jamestown Explained (HipHughes History), 2) Jamestown, and 3) Jamestown (MrBettsClass). However, the specific YouTube video that Mrs. Lily is referring to in her interview response is not known. For the third, eighth, and ninth questions, which assess VS.3e (The student will demonstrate an understanding of the first permanent English settlement in America by identifying the impact of the arrival of Africans and English women to the Jamestown settlement), there was alignment between the how the content was taught and how Ms. Skeen as well as Mrs. Lily remembered the content being taught. For each of these test questions, Ms. Skeen and Mrs. Lily remembered the posters that the students created (See Appendix M and Appendix N) during Mrs. Lily's lesson on the arrival of Africans and English women to Jamestown. Also, during this lesson, Mrs. Lily remembered using a particular YouTube video (Guardians of Jamestown, 1619: The Arrival of English Women to Virginia). However, she remembered using a PowerPoint during this lesson to teach the content as well. She did not use a PowerPoint, but she did use a reading passage (The Arrival of Women and Africans to Jamestown) after the students watched the YouTube video and before they created the posters. How the three co-teachers remembered the unit test question content being taught and how the unit test

question content was taught rarely aligned. The three co-teachers utilized a wide range of instructional practices to teach the unit test question content and they remembered using a number of instructional practices as well.

**“All of them did have aspects of Jamestown”: Minecraft Performance Assessment**

Mr. Otto, Ms. Skeen, and Mrs. Lily had not taught in a 3-5 multi-age classroom or used the Minecraft performance assessment before the 2018-19 school year. The three co-teachers had learned about the Minecraft project from the other 3-5 multi-age team (i.e., Ms. Barber and Mrs. Avery) and their multi-age students. During the 2017-18 school year, two co-teachers (i.e., one of these teachers moved to another state while the other teacher moved to another elementary school in CCPS) that taught this group of 3-5 students used the Minecraft project; therefore, Jamie, Fabrício, and Will had constructed Jamestown in Minecraft during the previous school year. For example, Will planned his Jamestown in Minecraft based on what he saw students doing last year (Interview, 12/14/18):

Everyone was building the House of Burgesses last year. All the fifth graders were doing it last year, so they're in sixth grade now. I just saw, everyone was doing the House of Burgesses for their Jamestown project and I'm like, "Okay, we'll do the House of Burgesses. Nope, it's in Williamsburg." [...] And so the fifth graders last year and the sixth graders now, they would always build their triangular fort and then they'd build the House of Burgesses and then they'd build a few houses in their fort. That's what it was like.

In years past, the Minecraft project had not been graded. Additionally, other projects that Mr. Otto, Ms. Skeen, and Mrs. Lily used were not graded, but they wanted the Minecraft project to have a grade; they needed additional content scores for the students' report cards. To include a grade with the Minecraft project, Ms. Skeen designed a performance assessment rubric and she remarked (Interview, 12/13/18):

We would do the projects but we wouldn't necessarily grade them. That was more of like an overall type of thing. But for us to give them the logistics- this is what we're looking for, certain components, this type of stuff. But we didn't tell them you had to have the ships, you had to have the triangle [fort]. That type of stuff.

On the rubric for the Minecraft performance assessment, students were scored on four components: 1) including Jamestown items learned from class, 2) their project presentation to the class, 3) their creativity, and 4) their participation. However, the co-teachers did not provide the multi-age students with the rubric ahead of time. Mr. Otto regretted this decision, "We should have rolled out the rubric beforehand, as any good teacher would" (Interview, 12/13/18), but the three co-teachers wanted to give the students creative freedom without the rubric. However, during Mrs. Lily's Minecraft introduction lesson, she provided the students with some guidance on what to include in their Jamestown Minecraft worlds.

Mrs. Lily's Minecraft introduction lesson had three main parts: reminding the students of their prior content knowledge and stating the purpose for the lesson, direct instruction, and initial time designing their Jamestown Minecraft worlds (Observation,

11/13/18). Students' proficiency with Minecraft was assumed. To remind the students of their prior knowledge, she briefly outlined what they had studied up to this point in the unit:

Mrs. Lily: "King James gave the Virginia Company permission to come find the New World for...[rubs her fingers together to symbolize riches]"

Student 1: "Riches"

Mrs. Lily: "Riches, to find gold, to find silver."

Student 2: "Money."

Mrs. Lily: "Money. They wanted to be a more powerful country so they came to Jamestown. And we know it took how long to get here?"

Many Students: "Four months."

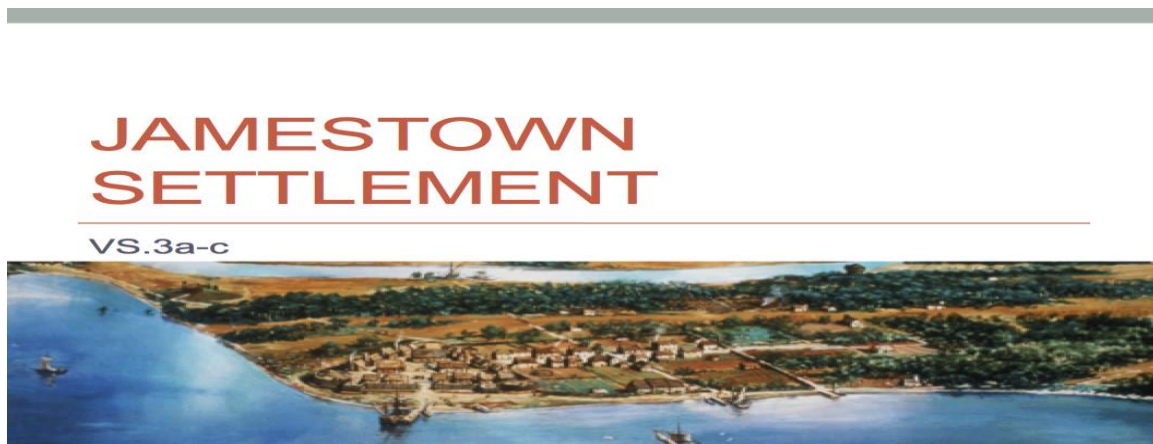
Mrs. Lily: "And when they got here, they picked this certain location. **Today we are going to learn- why did they pick this specific location? That's what we are doing today. Why did they pick this specific location? Also, today, you're going to have time to research what Jamestown looked like because your second option today- you get to make a Minecraft Jamestown.**"

Student 3: "Yes!"



Mrs. Lily: “So I thought before you do that, you should learn about where they picked it and why and then, you should be able to research it. That’s what we are doing today.”

Mrs. Lily reminded students about King James, the Virginia Company, and one of the reasons why the colonists came to the New World (i.e., riches). Her purpose for the lesson is bolded above and then, after a student interjection, she elaborated on that purpose with the underlined response. Mrs. Lily began the direct instruction portion of the lesson with a PowerPoint (from TeachersPayTeachers.com) that covered VS.3a, VS.3b, and VS.3c (First slide; See Figure 24).



*Figure 24.* Minecraft Introduction Lesson: PowerPoint First Slide

Before presenting the content, Mrs. Lily reminded students, “The faster we get through this PowerPoint, the more time you have to research on your own.” Throughout the PowerPoint, Mrs. Lily presented the content without heavily relying on the words in the slides. For example, Figure 25 shows the second slide of the PowerPoint.

## 1606

- In 1606 England wanted to compete with other European countries in its search for more wealth and power. One way to accomplish this goal was to start a new colony in America.
- The stockholders of the **Virginia Company of London** wanted to finance a settlement in America for England. This was primarily an *economic venture* because the Virginia Company and King James I hoped to find silver and gold in the new lands.

King James →



Figure 25. Minecraft Introduction Lesson: PowerPoint Second Slide

Mrs. Lily did not read, verbatim, the words on the slide; instead, she said:

We know that the Virginia Company were the people who financed it. If you don't have money, sometimes you go to the bank and get what's called a loan. That way, you can do things like buy a house. The charter was from the Virginia Company and they financed it. They put up all the money for the ships and the food and the people to come. Why? Because they were hoping those people would find gold and they'd get their money back plus a lot more.

Mrs. Lily also engaged in feedback loops with the students and answered various student questions. On the ninth slide (See Figure 26), Mrs. Lily talked about why the colonists went inland and she asked students a series of questions:

## A New Home

The colonists had been instructed by England to go inland and find an appropriate place for their colony. In 1607, the settlers founded Jamestown which was located on a narrow peninsula bordered on three sides by the James River.



*Figure 26. Minecraft Introduction Lesson: PowerPoint Ninth Slide*

Mrs. Lily: “Okay, so when they got here they were told that they had to go inland. They couldn’t just get to land and stop at the first piece of land they saw and make that their home. Why?”

Student 4: “It might not have all the natural resources they need...[inaudible].”

Mrs. Lily: “That’s one reason. They needed water. They needed natural resources. But why not just stop right there? Will?”

Will: “Because maybe that’s not the best place to build a colony. Maybe you build a place on like uhhh, I don’t know, like on a really small island. Like you could have a giant island with a gold mine or...

Mrs. Lily: “Right, just because you sail for four months doesn’t mean that you should stop at the first place you see. There are probably other pieces of land out there. Good. There’s another reason why they didn’t just stop right at the shore where they saw land. Yea?”

Student 5: “And other people could see them.”

Mrs. Lily: “Exactly! It’s not a good place to protect yourself from attacks. If you are right there on the shore, anyone who comes up to shore could potentially attack you. That’s why the Virginia Company said go inland. Don’t just get to land and stop. Find a river and travel up that river inland and find a better piece of land.”

In comparison, with the tenth slide (See Figure 27), Mrs. Lily let the students guide the questioning.

- 
- The three ships, the *Susan Constant*, *Godspeed*, and *Discovery*, left on December 16, 1606, stopped at the Canary Islands for water, reached the West Indies then sailed north from the Caribbean **and then** spent over **2** weeks exploring places along the James River before settling at Jamestown on May 14, 1607.



Figure 27. Minecraft Introduction Lesson: PowerPoint Tenth Slide

For example, Will asked, “Why did they travel so far South?” Other students asked the following of the above PowerPoint slide: “Why didn’t they just cut across [i.e., a straight path across the Atlantic Ocean]?” and “Isn’t it true that when they got here, they took other people’s land?” Mrs. Lily also skipped three slides out of the total 16 slides in the PowerPoint. The three slides she skipped had guiding questions and answers (e.g., the fourth slide; See Figure 28).

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## Questions

- **What was England searching for?**
  - A way to increase their wealth and power
- **What was one way to accomplish this goal?**
  - By starting a new colony in America
- **Who financed a settlement in America for England?**
  - The Virginia Company of London
- **Why did the Virginia Company and King James I want to finance a settlement in America?**
  - It was an economic venture because the Virginia Company and King James I hoped to find silver and gold in the new lands.

Figure 28. Minecraft Introduction Lesson: PowerPoint Fourth Slide

On the twelfth slide (See Figure 29), Mrs. Lily stopped her direct instruction and passed out maps to the students (See Appendix S).

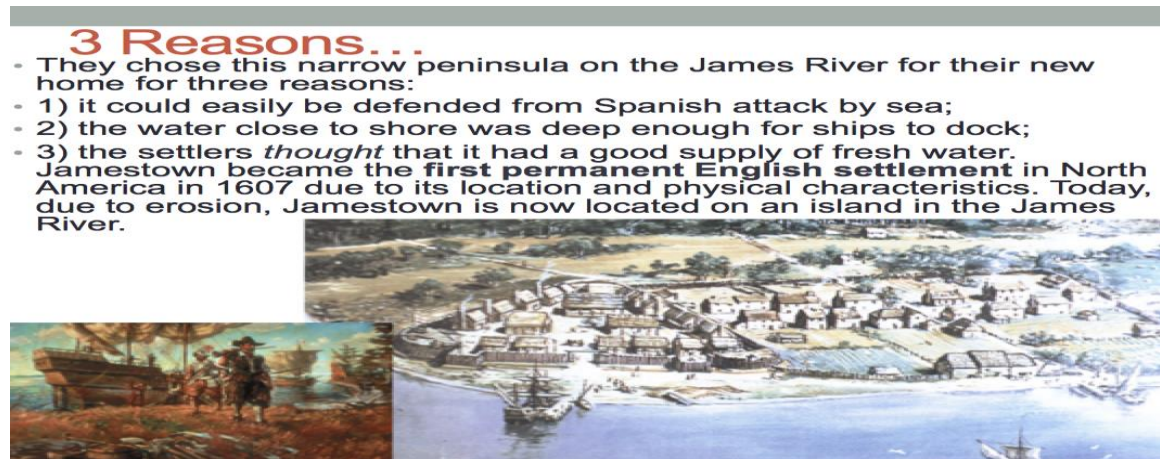


Figure 29. Minecraft Introduction Lesson: PowerPoint Twelfth Slide

As Mrs. Lily passed out the maps, she explained, “The map I’m giving you has the Chesapeake Bay. That’s where they came when they got here. They landed in the Chesapeake Bay. They started to travel up a river. That river is now known as the James River.” She mentioned that the reason she was giving them the map was so that they would be able to “see where Jamestown is in relation to the Chesapeake Bay.” Then, she told the students to circle Jamestown, shade in the water, and glue the map in their content notebooks. After this, they talked about the reasons why the colonists chose the location that they did to establish the Jamestown colony (See Figure 29). While the reasons were on the twelfth slide, Mrs. Lily wrote them in an abbreviated format on the whiteboard (See Appendix T) and then, the students wrote the reasons in their content notebooks. Mrs. Lily briefly showed students the remaining PowerPoint slides before giving them instructions on how to research Jamestown. She told them to Google “images of colonial Jamestown” so that they could see the “types of houses they built, the

forts, [and] the design.” Additionally, she encouraged them to use their content notebooks to sketch out their plans, including features they learned about in the lesson. Students had roughly 10 minutes to research and start designing their Jamestown Minecraft worlds. Throughout the duration of the unit, there were three other opportunities where the students were explicitly instructed to work on their Minecraft projects (Observation, 11/13/18, 11/16/18, 11/19/18).

Since the Minecraft performance assessment provided students with an opportunity to incorporate content from the entire unit, they could draw upon all of their classroom experiences. In the previous subsection, the classroom experiences that prepared students for the unit test were outlined. Mr. Otto, Ms. Skeen, and Mrs. Lily each taught content that went beyond the unit test questions; these classroom experiences aligned with the Virginia substandards that were not assessed on the unit test (VS.2c, VS.3a, VS.3b, VS.3d, VS.3g, VS.4b, VS.4c, VS.4d, and VS.4e). In total, there were 15 classroom experiences that dealt with content that was not assessed on the unit test. Table 24 shows the classroom experience, date the content was taught, and co-teacher associated with the classroom experience.

Table 24

*Minecraft Performance Assessment: Classroom Experiences, Date Taught, and Co-Teacher Associated with the Experience*

Classroom Experiences (Only Related to the Minecraft Performance Assessment)	Date	Co-Teacher
Choosing the Location of Jamestown and Writing “3 Reasons Jamestown Location was Picked”	11/13/18	Mrs. Lily

[PowerPoint and Content Notebook]		
Intro to Minecraft and Designing Minecraft Jamestown [Virtual Reality Software and Content Notebook]	11/13/18	Mrs. Lily
Minecraft [Virtual Reality Software]	11/13/18	Independent
Minecraft [Virtual Reality Software]	11/16/18	Independent
Minecraft [Virtual Reality Software]	11/19/18	Independent
Virginia Assembly vs. Virginia House of Burgesses (Orr, 2005) [Graphic Organizer]	11/27/18	Substitute Teacher
What do you think happened to the settlers on Roanoke Island that disappeared before Jamestown began? [Morning Meeting Share]	11/28/18	Mr. Otto
What happened to the lost colony of Roanoke? [YouTube Video]	11/28/18	Mr. Otto
Guardians of Jamestown, 1619: The First English Thanksgiving [YouTube Video]	11/28/18	Ms. Skeen
Powhatan Contributions to Survival [Graphic Organizer]	11/28/18	Ms. Skeen
<i>Chief Powhatan and the Powhatan Confederacy</i> [Reading Passage]	11/28/18	Independent
Jamestown: Reasons to Choose the Site [Morning Work]	11/29/18	Independent
What are the main reasons why the settlers chose Jamestown? [Morning Meeting Share]	11/29/18	Mrs. Lily
<i>Pocahontas and John Smith</i> [Reading Passage]	11/29/18	Independent
Minecraft Presentations	12/7/18	Independent

The focal students independently completed seven of these classroom experiences, which accounts for 47% of the total classroom experiences that dealt with content that was not assessed on the unit test. They had the opportunity to work on their Jamestown Minecraft worlds three times, read two reading passages (*Chief Powhatan and the Powhatan Confederacy* and *Pocahontas and John Smith*), completed a morning work, and presented their Jamestown Minecraft worlds. Ms. Lily taught three of these classroom experiences, which accounts for 20% of the total classroom experiences that dealt with content that was not assessed on the unit test. She used a PowerPoint, Minecraft, and Morning Meeting share. Then, Ms. Skeen taught two of these classroom experiences, which accounts for 13% of the total classroom experiences that dealt with content that was not



assessed on the unit test. She used a YouTube video and graphic organizer. Next, Mr. Otto taught two of these classroom experiences, which accounts for 13% of the total classroom experiences that dealt with content that was not assessed on the unit test. He used a Morning Meeting share and YouTube video. Lastly, a substitute teacher taught one of these classroom experiences, which accounts for 7% of the total classroom experiences that dealt with content that was not assessed on the unit test. The substitute teacher taught a Virginia Assembly vs. Virginia House of Burgesses lesson, where students completed a graphic organizer (i.e., Venn diagram; See Appendix U) comparing and contrasting the two early forms of government.

Drawing upon everything that they learned during the unit, the three co-teachers were pleased with the multi-age students' participation and incorporation of details. Mrs. Lily described student participation on a spectrum (Interview, 12/13/18):

I think that some of them took it as an opportunity to play on Minecraft. I think some of them took it as an opportunity to see the best representation of Jamestown that they could make. And then you had a bunch of kids in the middle.

Mrs. Lily focused on the students' development and building of their Jamestown Minecraft worlds whereas Ms. Skeen thought about student participation in regards to their presentations, "I was impressed watching them share those. I know I was looking at [Mrs. Lily] and [Mr. Otto] like, 'What, they built that?' [...] I'm glad that they were proud to share it with their classmates, which was nice" (Interview, 12/13/18). Similarly, Mr. Otto stated that the three co-teachers were "blown away" with the students' work. Ms. Skeen discussed particular features that the students added as well as the benefit of



putting the finishing details on their Jamestown Minecraft worlds when they returned from the field trip:

We had some groups that put in like two or three components, and then we had others that put in like ten. So there was a wide range there, but their excitement in sharing it. Like, this is where we made the crops, this is the Governor's house. This is where they do this, and they really ... I think having gone, like they started the project, but going to Jamestown and then coming back to finish it, they were able to put in those last details that maybe they didn't know about or that they had forgotten about to put in there.

Mr. Otto also mentioned the particular features that the students added to their Jamestown Minecraft worlds to make them more detailed:

The amount of detail that they put into, whether it was a cash crop or whether it was a little jail cell with a million people stuffed in them, or even the fact that there were ships and they got the aerial shot of the triangular fort. That was really cool.

Mrs. Lily outlined particular features the students included, how the field trip supported their work, and some of the materials they used when researching Jamestown during the initial design stage of the performance assessment:

We did allow the kids to use resources like our textbooks, online images, and anything that they needed to create Jamestown. I do think that a lot more started to happen once we got back from Jamestown and we gave them one more day to

work on it. Because then it was like, this is what I remember seeing, this is what it looked like. So those students who had the triangle formation, had the ships, and had tobacco fields- I feel like they gained the most out of the project. The other students, I think like I said got a little bit lost in it. Or they got lost, but then they only had one day to come back and try and turn it around. But all of them did have aspects of Jamestown in it.

From the beginning of the unit, the three co-teachers viewed the Minecraft project as an open-ended performance task. Ms. Skeen designed the rubric in order to provide students with a grade for their report cards rather than specifically guiding them while they researched and designed their Jamestown Minecraft worlds. The three co-teachers wanted to see the Jamestown worlds that the multi-age students would be able to create in Minecraft and at the end of the unit, they were pleased with student participation and the incorporation of details. In the following section, I describe the students' classroom experiences and learning during the unit on Jamestown.

### **“They told us”: Student Classroom Experiences and Learning**

When asked to talk aloud about why they chose specific answers on the unit test, students answered in different ways despite experiencing the same instruction through rotations (Fitzpatrick, van Hover, Cornett, & Hicks, 2019). Additionally, particular instructional approaches resonated with certain students more so than other instructional approaches. On the unit test, students ‘already knew,’ ‘learned and remembered,’ or ‘already knew, forgot, and remembered’ more than they ‘already knew and forgot,’ ‘learned and forgot,’ or ‘did not learn.’ The Minecraft performance assessment provided

greater opportunity for students to apply their knowledge of what was taught during the unit than the unit test, which only tested four Virginia substandards on Jamestown. Molly, Maria, Will, Randall, Jamie, and Fabrício demonstrated knowledge; however, they primarily focused on facts, rather than conceptual understandings or historical thinking skills. In the following subsections, I will describe the focal students' classroom experiences during the unit on Jamestown as well as their learning on the unit test and Minecraft performance assessment.

### **“They use the board and they write questions”: Remembered Classroom Experiences**

During the unit on Jamestown, the focal students experienced the same instruction, even when pulled into separate grade-level groups, through rotations. When they were together in a whole group for morning meeting, homeroom time, or closing meeting, they received the same instruction as well. Despite experiencing the same instruction, when asked to talk aloud about why they chose specific answers on the unit test, the focal students answered in different ways (Fitzpatrick, van Hover, Cornett, & Hicks, 2019). As seen in Table 25, the focal students attributed their learning of content to a variety of instructional practices. Student responses that connected their learning to experiences outside of the classroom (e.g., older students or siblings, YouTube videos at home) are bolded. Some student responses are in quotes because the responses did not explicitly align with an observed instructional practice (e.g., “They told us”) or the student was not sure how she learned the content. Due to interviewer error in follow-up questioning, there is one instance where “not applicable” (N/A) is used.

Table 25

*Focal Students' Remembered Instructional Practices By Post-Unit Test Question*

Question Number	Molly	Maria	Will	Randall	Jamie	Fabício
1	Reading Passage	Reading Passage; Minecraft	Reading Passage	KWL	Read Aloud; Independent Book (on computer)	Reteach
2	Graphic Organizer	Graphic Organizer	Read Aloud	Graphic Organizer; End of Day Review	End of Day Review	YouTube Video
3	Writing Prompt; Maker Experience	"I'm not sure."	Reading Passage; Poster	Reading Passage; Poster	Reading Passage; Poster; End of Day Review	Reading Passage; Poster; YouTube Video
4	Graphic Organizer	Reading Passage	N/A [Interviewer Error]	Read Aloud	<b>Older Students;</b> End of the Day Review	Reteach
5	Reading Passage	Reading Passage	Graphic Organizer	Read Aloud	Reading Passage	Graphic Organizer
6	Graphic Organizer	Reading Passage	Graphic Organizer	Read Aloud	Reading Passage; Graphic Organizer	<b>YouTube Video</b>
7	Reading Passage	<b>Older Sibling;</b> Reading Passage	Reading Passage; Independent Book; Jeopardy	Reading Passage	Brain POP	YouTube Video
8	Reading Passage	"They told us."	Reading Passage; Poster	Reading Passage	Reading Passage	YouTube Video
9	Reading Passage; Poster	Reading Passage	Reading Passage; YouTube Video	Reading Passage; Poster	"They use the board and they write questions. Sometimes we call out and sometimes we	YouTube Video; Reading Passage

					get picked on.”	
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The instructional practices that influenced the focal students’ classroom experiences and learning during the unit on Jamestown were coded into six main categories: hands-on, technology, question/response, direct instruction, writing, and content integration with reading. Hands-on included the maker experience. Technology included YouTube videos, Brain POP, Minecraft, and the independent book on the computer. Question/response included end of the day review, Jeopardy, and “They use the board and they write questions. Sometimes we call out and sometimes we get picked on.” Direct instruction included read alouds, the KWL, Reteach, and “They told us.” Writing included the poster, graphic organizers, and the writing prompt. Lastly, content integration with reading included reading passages with comprehension questions and independent books. In total, the focal students mentioned hands-on one time, question/response six times, technology nine times, direct instruction nine times, writing 17 times, and content integration with reading 27 times. Thus, content integration with reading was the instructional practice that the focal students remembered the most and hands-on was the instructional practice that the focal students remembered the least in relation to the unit test questions. Particular instructional approaches resonated with certain students more so than other instructional approaches as well. For example, Fabrício remembered learning content through technology in class, specifically YouTube videos, for five out of the nine questions on the post-unit test, while other focal students only remembered learning content through technology for zero (Molly and Randall), one (Maria and Will), or two (Jamie) of the questions on the unit test. Jamie remembered learning content through

question and response for four out of the nine questions on the unit test, while other focal students only remembered learning content through question and response for zero (Molly, Maria, and Fabrício) or one (Will and Randall) of the questions on the unit test. Molly primarily remembered learning content through content integration with reading and writing classroom experiences; the hands-on, maker experience was the only non-reading and writing classroom experience that she remembered. Similarly, but not to the same extent as Molly, Will mainly remembered learning content through content integration with reading and writing classroom experiences (i.e., seven out of the nine test questions); however, he also remembered learning content through technology, question/response, and direct instruction. Maria largely remembered learning content through content integration with reading (i.e., six out of the nine unit test questions), but she also remembered learning content with technology, writing, and direct instruction. Lastly, Randall remembered learning content through content integration with reading, writing, and direct instruction; his responses were distributed almost equally amongst these three classroom experiences. He also remembered question/response in connection with one unit test question. The focal students remembered a number of classroom experiences that occurred during the unit on Jamestown. Even though the focal students experienced the same instruction, they attributed their learning of tested content to different classroom experiences. Next, I will outline students' classroom experiences and learning with the Minecraft performance assessment.

#### **“I learned it in class”: Unit Test**

With the multiple choice unit test, the focal students completed the assessment on three different occasions. On two occasions, they completed the test on the computer; one

of those occasions was on the 2<sup>nd</sup> day of the unit during their morning work time (i.e., pre-unit; Observation, 11/8/18) and the other occasion was on the 19<sup>th</sup> day of the unit during their first learning rotation (i.e., post-unit; Observation, 12/7/18). On the third occasion, the students completed the test orally with the researcher during the post-unit interview. The researcher read each of the questions aloud and then, the focal student provided his or her answer to each of the questions. The researcher asked follow-up questions, adapted from Nuthall's (2001) post-testing questions (See Appendix I), which allowed focal students to elaborate on how they remembered learning content in class. Elaboration was needed because students tended to give more general responses at first such as "I learned it in class" (Maria, Interview, 12/14/18). After completing the post-unit interviews, the focal students' pre-unit, post-unit, and interview responses were classified into one of four categories, drawing upon Nuthall's work (1999):

NL (not learned)- the answer was not known on the pre-unit test, post-unit test, or during the interview.

LF (learned and forgotten)- the answer was not known on the pre-unit test, was known on the post-unit test, but it was not known again during the interview.

LR (learned and remembered)- the answer was not known on the pre-unit test, but it was known on both the post-unit test and during the interview.

AK (already known)- the answer was known on the pre-unit test, post-unit test, and during the interview.

Then, an additional category was included based on the researcher's prior work (Fitzpatrick, van Hover, Cornett, & Hicks, 2018) and the study's data:

AKF (already known and forgotten)- the answer was known on the pre-unit test,  
but it was not known on the post-unit test or during the interview.

Lastly, the researcher added another category based on the study's data:

AKFR (already known, forgotten, and remembered)- the answer was known on  
the pre-unit test, but not known on the post-unit test and then, it was  
known during the interview.

Table 26 shows the focal students' answers for each of the multiple choice unit test  
questions during all three occasions that they were assessed. Additionally, Table 26 has  
the individual total scores for each of the focal students on all three occasions that they  
were assessed.

Table 26

*Focal Student Unit Test Scores: Pre-Test, Post-Test, and Interview*

Question Number	<b>Bold = Correct Answer</b>  <u>Underlined</u> ≡ <u>Incorrect Answer</u>	Molly	Maria	Will	Randall	Jamie	Fabricao
1	Pre-Test Post-Test Interview	<u>B</u> A A	A A A	A A A	<u>C</u> <u>C</u> <u>C</u>	A <u>C</u> <u>C</u>	A <u>B</u> <u>B</u>
		LR	AK	AK	NL	AKF	AKF
2	Pre-Test Post-Test Interview	<u>B</u> C C	C C C	C C C	<u>B</u> C C	C C C	<u>A</u> C C
		LR	AK	AK	LR	AK	LR
3	Pre-Test Post-Test Interview	C C C	<u>A</u> <u>B</u> <u>A</u>	C C C	<u>B</u> C C	C C C	C C C
		AK	NL	AK	LR	AK	AK



4	Pre-Test	<u>C</u>	<u>C</u>	<u>C</u>	<u>B</u>	<u>C</u>	<u>B</u>
	Post-Test	<u>C</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>B</u>
	Interview	<u>C</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>B</u>
		AK	AKF	AK	LR	AK	NL
5	Pre-Test	<u>B</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
	Post-Test	<u>C</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>D</u>
	Interview	<u>B</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
		NL	AK	AK	AK	AK	AKFR
6	Pre-Test	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>A</u>	<u>D</u>
	Post-Test	<u>A</u>	<u>D</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
	Interview	<u>A</u>	<u>D</u>	<u>A</u>	<u>D</u>	<u>A</u>	<u>A</u>
		AK	AKF	AK	LF	AK	LR
7	Pre-Test	<u>D</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>B</u>	<u>A</u>
	Post-Test	<u>B</u>	<u>D</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>A</u>
	Interview	<u>B</u>	<u>D</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>A</u>
		LR	NL	LR	LR	AK	NL
8	Pre-Test	<u>C</u>	<u>A</u>	<u>D</u>	<u>B</u>	<u>D</u>	<u>B</u>
	Post-Test	<u>D</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>
	Interview	<u>D</u>	<u>A</u>	<u>D</u>	<u>C</u>	<u>D</u>	<u>D</u>
		LR	NL	AK	LF	AK	LR
9	Pre-Test	<u>B</u>	<u>D</u>	<u>A</u>	<u>D</u>	<u>C</u>	<u>A</u>
	Post-Test	<u>A</u>	<u>D</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
	Interview	<u>A</u>	<u>C</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
		LR	NL	AK	LR	LR	AK
Total Score							
Pre-Test		3/9	5/9	8/9	1/9	8/9	4/9
Post-Test		8/9	3/9	9/9	8/9	8/9	5/9
Interview		8/9	3/9	9/9	6/9	8/9	6/9

There is a total of 54 categorized response sequences. ‘Already known’ occurred 24 times, ‘learned and remembered’ occurred 15 times, ‘already known, forgotten, and remembered’ occurred one time, ‘already known and forgotten’ occurred four times, ‘learned and forgotten’ occurred two times, and ‘not learned’ occurred eight times. Thus, on the multiple choice unit test, students ‘already knew,’ ‘learned and remembered,’ or ‘already knew, forgot, and remembered’ more than they ‘already knew and forgot,’ ‘learned and forgot,’ or ‘did not learn.’ Three out of the six focal students showed growth from pre-unit to post-unit to interview (Molly, Will, and Fabrício). Jamie’s total score

remained the same from pre-unit to post-unit to interview. Maria's score declined from pre-unit to post-unit and interview. The three co-teachers thought that this decline was due to Maria breaking her arm at the beginning of the unit. She was absent three out of the 19 days of the unit on Jamestown. Randall showed that he learned a great deal from pre-unit (i.e., 1/9) to post-unit (8/9); however, his total score dropped during the interview (6/9). During the interview, he second-guessed his responses frequently.

By grade level, the focal students performed on the unit test in different ways.

Table 27 highlights their scores, by grade level, on the unit test.

Table 27

*Focal Student Unit Test Scores By Grade Level: Pre-Test, Post-Test, and Interview*

<b>Bold = Correct Answer</b> <u>Underlined</u> = <u>Incorrect Answer</u>	Grade	Third	Total Third (Out of 6 attempts per question-3 per student)	Fourth	Total Fourth (Out of 6 attempts per question-3 per student)	Fifth	Total Fifth (Out of 6 attempts per question-3 per student)
Question Number (Post-Test)	Students	Molly Maria		Will Randall		Jamie Fabrício	
1	Pre-Test Post-Test Interview	<u>B</u> <b>A</b> <b>A</b>	5/6	<b>A</b> <b>A</b> <b>A</b>	3/6	<b>A</b> <u>C</u> <u>C</u>	2/6
	Pre-Test Post-Test Interview	<b>A</b> <b>A</b> <b>A</b>		<u>C</u> <u>C</u> <u>C</u>		<b>A</b> <u>B</u> <u>B</u>	
2	Pre-Test Post-Test Interview	<u>B</u> <b>C</b> <b>C</b>		<b>C</b> <b>C</b> <b>C</b>		<b>C</b> <b>C</b> <b>C</b>	

	Pre-Test Post-Test Interview	<b>C</b> <b>C</b> <b>C</b>	5/6	<b><u>B</u></b> <b>C</b> <b>C</b>	5/6	<b><u>A</u></b> <b>C</b> <b>C</b>	5/6
3	Pre-Test Post-Test Interview	<b>C</b> <b>C</b> <b>C</b>	3/6	<b>C</b> <b>C</b> <b>C</b>	5/6	<b>C</b> <b>C</b> <b>C</b>	6/6
	Pre-Test Post-Test Interview	<b><u>A</u></b> <b><u>B</u></b> <b><u>A</u></b>		<b><u>B</u></b> <b>C</b> <b>C</b>		<b>C</b> <b>C</b> <b>C</b>	
4	Pre-Test Post-Test Interview	<b>C</b> <b>C</b> <b>C</b>	4/6	<b>C</b> <b>C</b> <b>C</b>	5/6	<b>C</b> <b>C</b> <b>C</b>	3/6
	Pre-Test Post-Test Interview	<b>C</b> <b><u>B</u></b> <b><u>B</u></b>		<b><u>B</u></b> <b>C</b> <b>C</b>		<b><u>B</u></b> <b><u>B</u></b> <b><u>B</u></b>	
5	Pre-Test Post-Test Interview	<b><u>B</u></b> <b><u>C</u></b> <b><u>B</u></b>	3/6	<b>A</b> <b>A</b> <b>A</b>	6/6	<b>A</b> <b>A</b> <b>A</b>	5/6
	Pre-Test Post-Test Interview	<b>A</b> <b>A</b> <b>A</b>		<b>A</b> <b>A</b> <b>A</b>		<b>A</b> <b><u>D</u></b> <b>A</b>	
6	Pre-Test Post-Test Interview	<b>A</b> <b>A</b> <b>A</b>	4/6	<b>A</b> <b>A</b> <b>A</b>	4/6	<b>A</b> <b>A</b> <b>A</b>	5/6
	Pre-Test Post-Test Interview	<b>A</b> <b><u>D</u></b> <b><u>D</u></b>		<b><u>B</u></b> <b>A</b> <b><u>D</u></b>		<b><u>D</u></b> <b>A</b> <b>A</b>	
7	Pre-Test Post-Test Interview	<b><u>D</u></b> <b>B</b> <b>B</b>	2/6	<b><u>C</u></b> <b>B</b> <b>B</b>	4/6	<b>B</b> <b>B</b> <b>B</b>	3/6
	Pre-Test Post-Test Interview	<b><u>C</u></b> <b><u>D</u></b> <b><u>D</u></b>		<b><u>C</u></b> <b>B</b> <b>B</b>		<b><u>A</u></b> <b><u>A</u></b> <b><u>A</u></b>	
8	Pre-Test Post-Test Interview	<b><u>C</u></b> <b>D</b> <b>D</b>	2/6	<b>D</b> <b>D</b> <b>D</b>	4/6	<b>D</b> <b>D</b> <b>D</b>	5/6

	Pre-Test Post-Test Interview	<u>A</u> <u>C</u> <u>A</u>		<u>B</u> <u>D</u> <u>C</u>		<u>B</u> <u>D</u> <u>D</u>	
9	Pre-Test Post-Test Interview	<u>B</u> <u>A</u> <u>A</u>	2/6	<u>A</u> <u>A</u> <u>A</u>	5/6	<u>C</u> <u>A</u> <u>A</u>	5/6
	Pre-Test Post-Test Interview	<u>D</u> <u>D</u> <u>C</u>		<u>D</u> <u>A</u> <u>A</u>		<u>A</u> <u>A</u> <u>A</u>	
	Total (By Grade)		30/54 56%		41/54 76%		39/54 72%

Collectively, the 3<sup>rd</sup> grade focal students got the test questions correct 56% of the time on the pre-unit test, post-unit test, and during the interview. Then, the 4<sup>th</sup> grade focal students got the test questions correct 76% of the time on the pre-unit test, post-unit test, and during the interview. Lastly, the 5<sup>th</sup> grade focal students got the test questions correct 72% of the time on the pre-unit test, post-unit test, and during the interview. Since the unit on Jamestown covered 4<sup>th</sup> grade Virginia standards and substandards, the 3<sup>rd</sup> grade focal students, Molly and Maria, have not been exposed to this content before this school year. They were not in the 3-5 multi-age classroom last year. One of the 4<sup>th</sup> grade focal students, Randall, had not been exposed to this content because he was not in the 3-5 multi-age classroom last year. He was in a grade-leveled classroom (i.e., 3<sup>rd</sup>) at another school the previous year. Will, the other 4<sup>th</sup> grade focal student, had been exposed to this content for two years in the 3-5 multi-age classroom. Both Jamie and Fabrício, the 5<sup>th</sup> grade focal students, had been exposed to this content for three years in the 3-5 multi-age classroom. As measured with the unit test, half of the focal students experienced growth in their learning and the individual grade levels performed differently. Next, I will outline

students' classroom experiences and learning with the Minecraft performance assessment.

### **“We actually learned that the houses [...]”: Minecraft Performance Assessment**

As outlined above, the multiple choice unit test questions did not cover all of the substandards outlined in the co-teachers' plans for the unit on Jamestown. Out of a total of 13 substandards for unit, the multiple choice unit test only covered four substandards (VS.3c, VS.3e, VS.3f, VS.4a). The Minecraft performance assessment provided greater opportunity for students to apply their knowledge of what was taught during the unit than the multiple choice unit test. The focal students demonstrated knowledge; however, they primarily focused on facts, rather than conceptual understandings or historical thinking skills. First, I will outline the focal students' teams, general thoughts about the Minecraft project, and scores on the associated rubric. Their teams, general thoughts, and scores will provide context for their classroom experiences and learning. Then, drawing upon observational and interview data, I will describe the focal students' classroom experiences with and learning from their Minecraft projects.

For the Minecraft project, the focal students self-selected their small group teams. Other than Molly and Maria, all of the focal students worked in small groups without other focal students in them. Table 28 highlights the Minecraft project groups.

Table 28

*Minecraft Performance Assessment: Focal Student Teams*

Presentation Order on 12/7/18	Number of Students in Team	Focal Student(s) and Grade Level	Grade Level (Other Student Team Members)
4 <sup>th</sup>	3	Molly (3 <sup>rd</sup> ) and Maria (3 <sup>rd</sup> )	4 <sup>th</sup>
8 <sup>th</sup>	2	Randall (4 <sup>th</sup> )	4 <sup>th</sup>
11 <sup>th</sup>	3	Will (4 <sup>th</sup> )	4 <sup>th</sup> ; 4 <sup>th</sup>
13 <sup>th</sup>	2	Jamie (5 <sup>th</sup> )	5 <sup>th</sup>
19 <sup>th</sup> (Final Group)	4	Fabricao (5 <sup>th</sup> )	5 <sup>th</sup> , 5 <sup>th</sup> , 5 <sup>th</sup>

Out of the five teams, one team was multi-age (i.e., Molly, Maria, and the fourth grade student) while four teams only had student members from the same grade level. During the post-unit interview, students provided their general thoughts on their experience with the Minecraft project. Will enjoyed working with his teammates and feeling accomplished after the Minecraft project presentation (Interview, 12/14/18):

When you finish something, you get this sense of accomplishment. And when you finish a project, it just feels really good, like you've accomplished something. So we wanted to make ours full, and have everything you can about Jamestown in it. [...] We can combine all our ideas and make something really cool like Jamestown.

Jamie talked about working with his teammates as well, “We [took] it seriously and multitask[ed], and just talk[ed], and [did] our Jamestown project. [...] [Working in a group] gives some company. It's boring if you're just by yourself doing this thing, sitting at a desk” (Interview, 12/19/18). Table 29 shows the focal students’ scores on each component of the rubric (i.e., including Jamestown items learned from class, presentation to the class, creativity, and participation) as well as their total points earned and final grade on the Minecraft performance assessment.

Table 29

*Focal Student Minecraft Performance Assessment Rubric Scores*

Jamestown Minecraft Rubric Components	Molly	Maria	Will	Randall	Jamie	Fabricao
Includes Jamestown Items Learned From Class (10 points)	8	8	10	10	10	10
Presentation to Class (10 points)	10	10	10	0	10	5
Creativity (10 points)	10	10	10	10	10	10
Participation (10 points)	10	10	10	10	10	7
Total (40 points)	38	38	40	30	10	32
Grade	95% (A)	95% (A)	100% (A)	75% (C)	100% (A)	80% (B)

The multi-age students did not see the rubric until the last day of the unit. They talked about each component of the rubric during morning meeting, had time to finalize their work, and then, presented their Jamestown Minecraft worlds to the class. The focal students' scores ranged from 75% to 100% on the rubric. The three co-teachers did not write feedback on the rubric; thus, conclusions cannot be drawn for the focal students' point deductions in some cases (i.e., Molly and Maria). However, the Minecraft presentation day observation (12/7/18) as well as the co-teachers' and students' interviews provided additional insight on some of the focal students' rubric scores (i.e., Randall and Fabricao). During Randall's Minecraft presentation, he stayed seated while

his partner presented their project. Mr. Otto attributed Randall's lack of participation to a decision that he was making, "[Randall]'s project score surprised me a little bit, because he chose to not participate" (Interview, 12/13/18), while Mrs. Lily attributed Randall's lack of participation to a lack of effort, "I think that that's a lack of effort. [...] on the project he got minus 10 points because he refused to just go up and share" (Interview, 12/13/18). During the post-unit interview, Randall was asked why he did not present his Minecraft project with his partner. Randall shared (Interview, 12/14/18):

If there are a lot of people around me and I don't know them, it's like stage fright. If they're all around me, and I mean I know my class, but I don't actually know them know them, so when I talk up and everybody looks at me, I start getting embarrassed because I'm talking and everybody is just staring at me. It's kind of weird. [...] It's like stage fright, just shyness.

Randall could not "just go up and share" because he was uncomfortable with the thought of his classmates staring at him. With Fabrício, he went up with his peers to present their project, but he did not speak. Thus, his partial point deduction in the "presentation to class" component of the rubric could be attributed to that decision. When asked why he did not speak during the presentation, Fabrício connected his lack of speaking with not knowing what is being asked of him as well as not knowing the answers (Interview, 12/14/18):

Fabrício: I don't actually feel like it because sometimes I don't know the questions and I just close my mouth. [...] I just kind of stay quiet and listen.



Cornett: What do you mean by you don't know the questions? Do you mean that you do not understand what the questions are asking?

Fabício: No. Just I don't know what they are.

Cornett: Oh, like the answers?

Fabício: Yeah.

In comparison, another focal student, Maria, also went up with her peers to present their project, but she did not speak. When asked why she did not speak, Maria responded, “Well, I didn't really know that much about it and I was really nervous. I get nervous. [...] I'm like stage fright. That's why I didn't speak.” Even though she did not speak, she still received full credit in the “presentation to class” component of the rubric. Thus, this disconfirming evidence highlights that the three co-teachers’ rubric grading was inconsistent. As reflected in the focal students’ team selection, general thoughts, and scores, they had varied classroom experiences with and learning from their Minecraft projects.

The focal students’ classroom experiences with the Minecraft Performance Assessment consisted of time designing and building Jamestown with their peers as well as presenting their final projects to the class. Mrs. Lily led a Minecraft introduction lesson and provided the students with some initial time designing their Jamestown world (Observation, 11/13/18). During this initial time designing, Molly drew a sketch of the Jamestown fort with houses inside as well as farmland for gardens and animals (See Appendix V) and Jamie researched how to design the fort at Jamestown (See Appendix

X). Students had two other opportunities throughout the duration of the unit (11/16/18, and 11/19/18) where they were explicitly instructed to work on the project. However, they were always allowed to work on the project as an “option” task after completing their “must do” tasks. For example, Fabrício worked on the entrance to his fort at Jamestown (Observation, 12/7/18; See Appendix X) and Maria finalized how the Chesapeake Bay connected with the James River (Observation, 12/7/18; See Appendix Y). During their project presentations, the teams had three minutes to present their work. Typically, the teams had one student speaking, one or two students navigating the computer (i.e., moving the viewer through their Jamestown Minecraft world), and then, one student standing quietly and observing. Table 30 highlights the roles that each of the focal students as well as their team members played in their teams.

Table 30

*Focal Student and Team Member Roles in Minecraft Performance Assessment Teams*

Team	Speaker	Main Navigator	Supporting Navigator	Silent Observer	Not with Team for Presentation
4 <sup>th</sup>	Molly	4 <sup>th</sup> grade student		Maria	
8 <sup>th</sup>	4 <sup>th</sup> grade student				Randall
11 <sup>th</sup>	4 <sup>th</sup> grade student	4 <sup>th</sup> grade student	Will		
13 <sup>th</sup>	5 <sup>th</sup> grade student	Jamie			
19 <sup>th</sup>	5 <sup>th</sup> grade student	5 <sup>th</sup> grade student	5 <sup>th</sup> grade student	Fabrício	

Molly was the only focal student speaker. Jamie served as a main navigator while Will served as a supporting navigator. Maria and Fabrício were silent observers. Then, Randall

did not go up with his team member to present their work. In order to capture an example of a Jamestown Minecraft world presentation, as the only focal student speaker, Molly presented her team's work as follows (Observation, 12/7/18):

So, um, this is our Jamestown. And we built a bunch of houses, so most of them look like these little small houses. These little small houses have a bed and a chest. But this is the biggest house where a pretty wealthy person lived. So here, you have the kitchen and [inaudible] and then the living room and then the bedroom. And then, there's a medium sized house, but that's not where that was. It's somewhere. Yea, here's a medium sized house that we didn't exactly finish. Yea, we have a couple more houses. There are a bunch of horses. We have a bunch of horses on the outside, but I have no idea where they came from. I guess we have horses. [Mr. Otto interjected and asked if they could zoom out and show an aerial view of their Jamestown Minecraft world.] Then, we have that water thing and I'm not sure what it is.

After Molly finished speaking, Mr. Otto asked, "Is there anything else you want to show us?" Molly responded, "I don't think so," and her team sat down on the carpet. The Minecraft presentation content was similar across focal student groups. Students did not prepare what they were going to say ahead of time. The speaker fully relied on the main and supporting navigators to guide the viewers through their Jamestown Minecraft world. Wherever the navigators went, the speakers' content had to align with it. For example, when the main navigator followed Mr. Otto's request to zoom out for an aerial view, Molly saw the trough full of water for the horses outside of their fort at Jamestown.

That’s when she said, “Then, we have that water thing and I’m not sure what it is.”

Primarily, the presentations included factual knowledge that the students had learned during the unit on Jamestown (e.g., types of houses, animals and crops, fort, Chesapeake Bay, James River).

During the post-unit interview, the focal students were asked to describe what they learned from completing their Jamestown Minecraft worlds. Their responses showcased that the Minecraft performance assessment provided a greater opportunity for them to apply their knowledge of what was taught during the unit on Jamestown than the multiple choice unit test. While the focal students incorporated content from the substandards assessed on the multiple choice unit test (VS.3c, VS.3e, VS.3f, VS.4a) in their projects, they also included content from the following substandards that were outlined in the co-teachers’ unit plans and taught during the unit: VS.2c, VS.3b, VS.3d, VS.3g, VS.4b, and VS.4e (See Table 31). Additionally, there were other substandards that were in the three co-teachers’ unit plans and taught during the unit on Jamestown; they were not assessed on the multiple choice unit test and the focal students did not include them in their Jamestown Minecraft worlds. These substandards were VS.3a (i.e., explain the reasons for English colonization), VS.4c (i.e., explain the reasons for the relocation of Virginia’s capital from Jamestown to Williamsburg), and VS.4d (i.e., describe how money, barter, and credit were used in the Virginia colony).

Table 31

*Alignment Between Virginia Substandards and Focal Students’ Minecraft Projects*

Virginia Substandard (Not Tested on the Multiple Choice Unit Test)	Virginia Substandard	Focal Student	Interview
VS.2c	<p>The student will demonstrate an understanding of the relationship between physical geography and the lives of the native peoples, past and present, of Virginia by</p> <p>c) locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, Rappahannock River, and Lake Drummond and the Dismal Swamp)</p>	Will	<p>“I built a world and we made a little river, we called it the James River. Then, we made the Chesapeake Bay.”</p>
VS.3b	The student will demonstrate an understanding of the first permanent English settlement in America by	Randall	<p>“If you were going to make the triangle, you would have to perfectly make the bottom of the triangle, like the perfect length to where if you start pulling up the other side of the triangle, it would go to the top of the tip triangle and that took me a lot of tries, like three tries to do that. The boat was hard</p>

	b) describing the economic and geographic influences on the decision to settle at Jamestown		because the way that I just went like that, it looked good in my head, but when I actually made it, it wasn't that good. Then I just made the ground bigger in the boat and then made a door, then made the top deck. I didn't make a flag, but I put a ribbon there, put one bed.”
VS.3d	<p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <p>d) identifying the importance of the General Assembly (1619) as the first representative legislative body in English America</p>	Will	“We also had the House of Burgesses, but I realized, I just learned, apparently, that is in Williamsburg, not in Jamestown.”
VS.3g	<p>The student will demonstrate an understanding of the first permanent English settlement in America by</p> <p>g) describing the interactions between the English settlers and the native peoples, including the role of the Powhatan in</p>	Maria	<p>Cornett: “And then you said that you had a garden. What did you grow in your garden?”</p> <p>Maria: “Corn, tobacco, wheat, more corn.”</p> <p>Cornett: “And so for your chest that you had food in, what type of food was in your chest?”</p> <p>Maria: “The food from the garden. Fish, because they hunted. Yeah, mostly from the garden.”</p>
		Randall	“Where I put the trees was going to be where I put the Powhatan town, but then I didn't get time to do the

	the survival of the settlers		Powhatan town, so I didn't do the Powhatan town.”
VS.4b	<p>The student will demonstrate an understanding of life in the Virginia colony by</p> <p>b) describing how the culture of colonial Virginia reflected the origins of American Indians, European (English, Scots-Irish, German) immigrants, and Africans</p>	Molly	“But anyways, you make this ginormous house, and there were two rooms. There was a living room/kitchen, and a bedroom. So there was a couch and lots of pictures, and then, on the side there was a little kitchen area, and then there was a bed in the other room.”
		Will	“We actually learned that the houses were [...] well we actually learned this again when we went to Jamestown. The houses, it's like the marsh reeds. The roofs are made out of the marsh reeds, because it's waterproof. So they don't want the rain getting in.”
		Jamie	“We just put a bed and a kitchen in the slave's house. We put other things in the middle class house. We put a roof, three bedrooms, a kitchen, also a little dining table. For the high class, the rich people, we made a bunch of stuff. They own the land, they owned farms, and they had everything, a bunch of stuff in their house. Whereas in the slaves they only had a bed and a kitchen.”
		Randall	“The houses were hard because when I built the outside structure, the roof was probably the hardest because you had to make them go up perfectly, and then the sides were open so I was going to have to fill those in each time. If I did this, if I just put the wood ... I did it upwards because if I would've did the wood all crazy and stuff like put it

			upwards and then sideways, it would all look bad. It took me long to just make them all upwards to where you could see the top of the roof. The slave houses were hard because I had to make them where you could actually fit in the slave house, so those we're hard."
VS.4e	The student will demonstrate an understanding of life in the Virginia colony by  e) describing everyday life in colonial Virginia.	Molly	"So I can tell you there'd be back in the old times, it would be like the kids would have lots of chores. And then the dad would go hunting, and then the mom would take care of all the laundry. [...] And they would usually have a garden, which we didn't include, we had these really small houses with a bed and a chest and a little bookshelf."
			"We had this ginormous house by the way that was supposed to be for a wealthy person. A wealthy person had these big houses. So we made this ginormous house, where maybe the chief lived, or something."
		Fabrício	"The General's house and peoples house. The slave house."
		Jamie	"We made wood houses and we made two houses. We made one story houses and we made two story houses. The two story houses were for ... We also make three story houses, a little bit of those for the white, male, rich people. The two story houses, those were just for the middle class. And the one story house were for the slaves in Jamestown."
		Randall	"The normal houses, the sides of the houses, had six things, six blocks going across. Then the slave houses had four blocks going across. When you made



			the roof in the slave house, when you walked in, you want to be able to get inside because the roof that you made. The wood would have been too low and you wouldn't be able to get in. I had to make that bigger.”
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In the descriptions of their Jamestown Minecraft worlds, Maria and Fabrício described incorporating content from one additional substandard beyond the four that were assessed on the unit test, VS.3g and VS.4e, respectively. Molly and Jamie described including content from two additional substandards. They both mentioned content related to VS.4b and VS.4e. Will described incorporating content from three additional substandards: VS.2c, VS.3d, and VS.4b while Randall described including content from four additional substandards: VS.3b, VS.3g, VS.4b, and VS.4e. The focal students’ descriptions show an attention to detail that the three co-teachers wanted to see in their work. Their descriptions highlight the physical geography of Jamestown (VS.2c), the fort and other communal buildings that the colonists used (VS.3b and VS.3d), the colonists’ interactions with the Powhatans (VS.3g), and the ways in which the colonists and enslaved Africans lived in their everyday lives (e.g., work and homes; VS.4b and VS.4e). In a similar manner to the team presentations in class, the focal students demonstrated knowledge; however, they primarily focused on facts, rather than conceptual understandings or historical thinking skills. In the next section, I describe how the teachers’ instructional practices interacted with the students’ classroom experiences and learning of social studies.

## Interaction Between Instructional Practices and How Students Experienced and Learned Social Studies

To explore the interaction between the three co-teachers' instructional practices and how students experienced and learned social studies in an elementary multi-age classroom, coded interview and observation data was used to create "item files" (Nuthall & Alton-Lee, 1993). The item files traced the instructional interactions that the focal students had with tested content, how the focal students remembered learning the tested content, and if they learned the tested content or not. For example, Table 32 shows the item file for the second unit test question. The second question was the only one on the unit test to assess VS. 4a (i.e., The student will demonstrate an understanding of life in the Virginia colony by explaining the importance of agriculture and its influence on the institution of slavery). The bolded responses show overlap between the instructional interactions that the focal students had with tested content and how the focal students remembered learning the tested content.

Table 32

### *Item File for the First Unit Test Question*

Focal Student	Instructional Practices Used (* if remembered by co-teachers in relation to this unit test question)	Instructional Practices Remembered	Learned (or Did Not Learn) Content [as measured by the unit test]
Molly	<b>Three YouTube Videos* [Technology]</b>  <b>One End of the Day Review [Question/Response]</b>  Three Games [Technology]  One Reteach [Direct Instruction]	<b>Graphic Organizer</b>	Learned and Remembered
Maria		<b>Graphic Organizer</b>	Already Known
Will		Read Aloud	Already Known
Randall		<b>Graphic Organizer;</b>	Learned and Remembered

	Two Morning Works [Writing]	<b>End of the Day Review</b>	
Jamie	Two Reading Passages [Content Integration]	<b>End of the Day Review</b>	Already Known
Fabício	One PowerPoint [Direct Instruction]	<b>YouTube Video</b>	Learned and Remembered
	<b>Three Graphic Organizers [Writing]</b>		

For the unit test, the item files were created based on the test questions and aligned Virginia substandards (e.g., the first, fifth, and seventh unit test questions aligned with VS.3f). For the Minecraft performance assessment, the item files were created based on Virginia substandards. The item files illuminated networks of interacting activity (i.e., teaching and learning) and multiple perspectives (i.e., teachers and students), which I have captured with my conceptual framework, CHAT. In Table 33, Object 1 on the teaching side is comprised of the instructional practices used to teach all of the social studies standards during the unit on Jamestown. Object 2 on the teaching side is comprised of the instructional practices used to teach the social standards that were assessed on the unit test and through the Minecraft performance assessment. Object 1 on the learning side is comprised of the classroom experiences that the students remembered learning tested content. Object 2 on the learning side is comprised of the classroom experiences that improved (i.e., ‘learned and remembered’ and ‘already knew, forgot, and remembered’) the students’ standards-based social studies content knowledge, understandings, and skills in relation to the unit assessments. Object 3 highlights the interesection of teaching and learning. Object 3 is the overlap where classroom experiences and instructional practices aligned and students learned as measured on the unit assessments. The bolded content highlights the information that was carried over

from object 1 to object 2 on both the teaching and learning sides and from object 2 on both sides to object 3.

Table 33

*Unit on Jamestown: Interaction Between Instructional Practices and How Students Experienced and Learned Social Studies*

Teaching			Learning	
Object 1	Object 2	Object 3	Object 2	Object 1
Virginia Standards in Unit: VS.2c, VS.3a-g, VS.4a-e  <b>Nonfiction Texts on the Computer</b> <b>[Technology: Independent]; End of the Day Review</b> <b>[Question/Response: Whole Group];</b> <b>YouTube Videos</b> <b>[Technology: Grade-Leveled Large Groups and Whole Group];</b> <b>Graphic Organizers</b> <b>[Writing: Grade-Leveled Large Groups and Whole Group];</b> <b>Read Alouds</b> <b>[Direct Instruction: Grade-Leveled Large Groups and Whole Group];</b> <b>Games</b> <b>[Technology and Question/Response: Whole Group];</b> <b>PowerPoints</b> <b>[Direct</b>	Virginia Standards Assessed: VS2c, VS.3b-g, VS.4a-b, VS.4e [not assessed; VS.3a, VS.4c-d]  <b>Nonfiction Texts on the Computer</b> <b>[Technology: Independent]; End of the Day Review</b> <b>[Question/Response: Whole Group];</b> <b>YouTube Videos</b> <b>[Technology: Grade-Leveled Large Groups and Whole Group];</b> <b>Graphic Organizers</b> <b>[Writing: Grade-Leveled Large Groups and Whole Group];</b> <b>Read Alouds</b> <b>[Direct Instruction: Grade-Leveled Large Groups and Whole Group];</b> <b>Games</b> <b>[Technology and Question/Response: Whole</b>	Nonfiction Texts on the Computer [Technology: Independent]; End of the Day Review [Question/Response: Whole Group]; YouTube Videos [Technology: Grade-Leveled Large Groups and Whole Group]; Graphic Organizers [Writing: Grade-Leveled Large Groups and Whole Group]; Read Alouds [Direct Instruction: Grade-Leveled Large Groups and Whole Group]; Games [Technology and Question/Response: Whole	<b>Reading Passages;</b> <b>Graphic Organizers;</b> <b>End of the Day Reviews;</b> <b>YouTube Videos;</b> <b>Poster;</b> <b>Read Alouds;</b> <b>Jeopardy;</b> <b>Nonfiction Text on Computer;</b> <b>Question/Response (“They use the board and they write questions. Sometimes we call out and sometimes we get picked on.”)</b>	<b>Reading Passages;</b> Minecraft; KWL chart; <b>Read Alouds;</b> <b>Nonfiction Text on Computer;</b> Reteach; <b>Graphic Organizers;</b> <b>End of the Day Reviews;</b> <b>YouTube Videos;</b> Writing Prompt; Maker Experience; <b>Poster;</b> Brain POP; <b>Jeopardy;</b> Direct Instruction (“They told us”); <b>Question/Response (“They use the board and they write questions. Sometimes we call out and</b>

<b>Instruction:</b> <b>Grade-Leveled</b> <b>Large Groups and</b> <b>Whole Group];</b> <b>Reading Passages</b> <b>[Content</b> <b>Integration:</b> <b>Grade-Leveled</b> <b>Large Groups and</b> <b>Individual];</b> <b>Maker Experience</b> <b>[Hands-on:</b> <b>Individual];</b> <b>Writing Prompt</b> <b>[Writing:</b> <b>Individual]; Poster</b> <b>[Writing:</b> <b>Individual];</b> <b>Minecraft and</b> <b>Minecraft</b> <b>Presentations</b> <b>[Technology:</b> <b>Independent,</b> <b>Multi-Age Small</b> <b>Group or Grade-</b> <b>Leveled Small</b> <b>Group]; Morning</b> <b>Meeting Share</b> <b>[Direct</b> <b>Instruction:</b> <b>Whole Group];</b> <b>Morning Work</b> <b>[Writing:</b> <b>Independent];</b> <b>Jamestown Exit</b> <b>Slip Review/</b> <b>“Reteach” [Direct</b> <b>Instruction: Multi-</b> <b>Age Small Group]</b>	<b>e: Whole Group];</b> PowerPoints [Direct Instruction: Grade-Leveled Large Groups and Whole Group]; <b>Reading Passages</b> <b>[Content</b> <b>Integration:</b> <b>Grade-Leveled</b> <b>Large Groups and</b> <b>Individual]; Maker</b> <b>Experience [Hands-</b> <b>on: Individual];</b> <b>Writing Prompt</b> <b>[Writing:</b> <b>Individual]; Poster</b> <b>[Writing:</b> <b>Individual];</b> <b>Minecraft and</b> <b>Minecraft</b> <b>Presentations</b> <b>[Technology:</b> <b>Independent, Multi-</b> <b>Age Small Group</b> <b>or Grade-Leveled</b> <b>Small Group];</b> <b>Morning Meeting</b> <b>Share [Direct</b> <b>Instruction: Whole</b> <b>Group]; Morning</b> <b>Work [Writing:</b> <b>Independent];</b> <b>Jamestown Exit</b> <b>Slip Review/</b> <b>“Reteach” [Direct</b> <b>Instruction: Multi-</b> <b>Age Small Group]</b>	Group]; Reading Passages [Content Integration: Grade-Leveled Large Groups and Individual]; Poster [Writing: Individual]		<b>sometimes we</b> <b>get picked</b> <b>on.”)</b>
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The overlap of instructional practices (formats, teacher actions, and materials) and remembered classroom experiences associated with student learning provides a clearer understanding of particular formats, teacher actions, and materials that were effective

during the unit on Jamestown. The formats that supported student learning during the unit included whole group, grade-leveled large groups, and independent. The teacher actions that supported student learning during the unit included technology, question/response, writing, direct instruction, and content integration. Technology was the most effective since it was connected with three differing types of materials (i.e., nonfiction texts on the computer, YouTube videos, and games). Question/response and writing were each connected with two materials while direct instruction and content integration were each connected with one material. The materials that supported student learning during the unit included nonfiction texts on the computer, end of the day review questions, YouTube videos, graphic organizers, read alouds, games, reading passages, and posters. In the following section, I summarize the chapter and findings from this study.

### **Chapter Summary**

In summary, the findings presented in this chapter suggest that the three co-teachers employed an informal “divide and conquer” approach to planning, which led to unclear aims and content objectives for the unit on Jamestown as well as uncertainty surrounding who would be responsible for teaching what content. In addition, I found that the three co-teachers’ day-to-day instruction included a number of instructional practices (formats, teacher actions, and materials) that reflected elements of best practice in social studies (meaningful, active, challenging, and interactive; e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; NCSS, 2009, 2017) to varying extents. However, only a few teacher actions and none of the materials used reflected best practice in history education (Levstik & Barton, 2005). Students did have the opportunity to reach conclusions based on evidence through the three co-teachers’ use of content

integration with the reading passages, but the comprehension questions did not deal with significant themes or questions in history. Then, students were able to recognize as well as understand multiple perspectives that may be different than their own through Mrs. Lily's and Ms. Skeen's use of direct instruction in their lessons rather than through their materials (e.g., PowerPoint, writing prompt, maker experience). Mr. Otto developed the unit test and Ms. Skeen adjusted the Minecraft performance assessment; however, Mrs. Lily taught the vast majority of the content. How the three co-teachers remembered the unit test question content being taught and how the unit test question content was taught rarely aligned. With the Minecraft performance task, the three co-teachers did not introduce the rubric until the day of their presentations because they wanted the students to have creative freedom in designing their Jamestown Minecraft worlds throughout the unit. Overall, they were pleased with student participation and their incorporation of details.

During the unit on Jamestown, the focal students experienced the same instruction (even when in grade-leveled rotations), yet answered in different ways when asked to talk aloud about why they chose specific answers on the unit test (Fitzpatrick, van Hover, Cornett, & Hicks, 2019). Focal students 'already knew,' 'learned and remembered,' or 'already knew, forgot, and remembered' more than they 'already knew and forgot,' 'learned and forgot,' or 'did not learn' on the unit test. The Minecraft performance assessment provided greater opportunity for students to apply their knowledge of what was taught than the unit test, which only assessed four out of 13 Virginia substandards for the unit. While the focal students demonstrated knowledge, they primarily focused on

facts rather than conceptual understandings or historical thinking skills. In the following chapter, I discuss the findings and present implications related to this study



## **CHAPTER V**

### **DISCUSSION AND IMPLICATIONS**

In this chapter, I discuss the findings for this study, which address the following research questions:

- How do three elementary co-teachers plan, teach and assess a social studies standards-based unit in one multi-age classroom? In what ways does their instruction reflect best practice in social studies?
- How did elementary students experience instruction and what did they learn during a social studies standards-based unit in a multi-age classroom?

Data analysis from this multiple case study generated findings that contribute to the research bases of elementary social studies education as well as multi-age education. First, despite an emphasis on teamwork and collaboration, the three co-teachers employed a “divide and conquer” approach to planning for the unit’s instruction and assessments. Second, the focal students experienced the same instruction (even when in grade-leveled rotations), yet answered in different ways when asked to talk aloud about why they chose specific answers on the unit test (Fitzpatrick, van Hover, Cornett, & Hicks, 2019) and they each incorporated differing Virginia substandards into their Minecraft performance assessments. Third, there was little overlap between the three co-teachers’ use of particular formats, teacher actions, and materials and how students experienced and learned social studies during the unit on Jamestown.

The findings from this study suggest that many factors influenced how elementary co-teachers planned, taught, and assessed as well as how students experienced and learned during a social studies unit in a multi-age classroom within a standards-based setting in a tested state. First, the three co-teachers' use of a "divide and conquer" approach led to unclear aims and content objectives for the unit on Jamestown as well as uncertainty surrounding who would be responsible for teaching what content. Without a carefully considered purpose, research suggests that teachers will find it easier to adopt instructional practices that are contrary to best practice (McCall, 2006). A number of the three co-teachers' instructional practices (format, teacher actions, materials) reflected elements of best practice in social studies (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; NCSS, 2009, 2017) to varying extents, but only some of their teacher actions and none of their materials reflected best practice in history education (Levstik & Barton, 2005). Second, the focal students demonstrated knowledge on the unit test and Minecraft performance assessment, but they primarily focused on facts rather than conceptual understandings or historical thinking skills. Lastly, the interaction between teachers' instructional practices and how students experienced and learned social studies suggests that only a few formats, teacher actions, and materials (instructional practices) were effective in regards to both teaching and learning social studies.

In this chapter, I situate these findings in the context of scholarship. Then, I present the limitations of this study. Next, I examine the potential implications for research and practice. Lastly, I will suggest directions for future research. Figure 30 provides an overview of the chapter.

Overview of Chapter V

“Divide and Conquer” Approach: Influence on Planning, Instruction, and Assessment  
 Attributing Learning to Different Classroom Experiences Despite the Same Instruction  
 Little Overlap in Regards to Teaching and Learning Social Studies  
 Limitations  
 Implications  
     For Research: Two Fields and Theory Development  
         Elementary Social Studies Education  
         Multi-Age Education  
         Cultural-Historical Activity Theory (CHAT)  
     For Practice: Elementary Teachers and Teacher Educators  
         Elementary Social Studies Education  
         Multi-Age Education  
         Co-Teaching  
 Future Research  
 Chapter Summary

*Figure 30. Overview of Chapter V*

**“Divide and Conquer” Approach: Influence on Planning, Instruction, and  
Assessment**

Despite an emphasis on teamwork and collaboration, the three co-teachers employed a “divide and conquer” approach to planning, which influenced the instruction implemented and assessments used during the unit. Employing CHAT to understand the complex interactions involved, interviews revealed that the three co-teachers (subjects-teaching) were not “on the same page” (Mrs. Lily, Interview, 11/16/18) in regards to their aims or content objectives and this impacted teachers’ decision-making about instructional practices (object 1- teaching) to use within the multi-age classroom (community- teaching) during the unit on Jamestown. At the beginning of the unit, there was also uncertainty surrounding who would be responsible for teaching what content

(planned division of labor- teaching), and during the unit, the three co-teachers were still not aware of who was teaching what content (enacted division of labor- teaching).

Lacking a set of clear, shared aims and content objectives for the unit, the three co-teachers separately resorted to a heavy reliance on the Virginia standards, which are assessed on the end-of-the-year social studies high-stakes test (i.e., for either fourth or fifth grade students, depending on the school district). More specifically, they focused on the factual knowledge components of the Virginia standards (rather than content understandings or skills) when planning and implementing their instruction. This is consistent with other studies that show in states where social studies is tested, like Virginia, teachers are more likely to narrow the social studies curriculum and focus on facts found in the standards (e.g., Evans, 2001; McCall, 2006; Savage, 2003; Stanley & Longwell, 2004). Moreover, research suggests that teachers will find it easier to adopt instructional practices that are contrary to best practice when they do not have clear aims or content objectives (McCall, 2006). However, despite not having clear aims or content objectives, a number of the three co-teachers' instructional practices did reflect elements of best practice in social studies (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; NCSS, 2009, 2017) to varying extents. These results with in-service teachers mirror how pre-service teachers have incorporated elements of best practice in social studies into their instruction (Bauml, 2016; Curry, 2010). In this study, the three co-teachers most frequently used meaningful social studies instruction (either alone or with one to three other characteristics). Similarly, 75 pre-service teachers in Bauml's study emphasized the importance of meaningful social studies instruction more so than active, challenging, value-based, or integrative social studies instruction. Two out of the

three pre-service teachers in Curry's study also used meaningful social studies instruction during their student teaching experiences. However, only some of the three co-teachers' teacher actions and none of their materials reflected best practice in history education (Levstik & Barton, 2005). For example, content integration (teacher action) reflected best practice in history education through the reading passages, which required students to use evidence to support their answers to open-ended questions. Yet, the reading passage comprehension questions (materials) focused on timelines, names, and memorized 'facts' rather than significant themes and questions in history (Levstik & Barton, 2005).

The specific context, multi-age, did not influence the three co-teachers' instructional practices as expected. I hypothesized that in a space where leveling is intentionally obviated (Anderson & Pavan, 1993) and developmentally appropriate student progress is encouraged (Song, Spradlin, & Plucker, 2009) social studies would be taught in creative ways that might inform the field, more generally. Instead, the three co-teachers predominantly grouped students by grade-level for instruction and the students had few opportunities to be in flexible groups. This reflects Cornish's (2013) argument that "what goes on inside the classroom is more important than the type of class" (p. 124); however, while the district labeled the classroom as "multi-age," the classroom mainly operated as three grade-leveled classes within one open space. This led to the absence of a key distinguishing feature of multi-age education: flexible grouping (e.g., Cornish, 2013; Day & Yarbrough, 1998; Hattie, 2008). With flexible grouping, would the type of classroom (multi-age or grade-leveled) influence teachers' instructional practices? In conclusion, the current study contributes to the body of case studies that explores elementary social studies teaching, and provides insight into "what is really happening in

schools” (O’Connor et al., 2007, p. 259) in regards to elementary social studies planning, teaching, and assessing. The following section provides insight into students’ classroom experiences and learning of social studies in a multi-age classroom within a standards-based setting in a tested state.

### **Attributing Learning to Different Classroom Experiences Despite the Same Instruction**

The focal students experienced the same instruction (even when in grade-leveled rotations), yet answered in different ways when asked to talk aloud about why they chose specific answers on the unit test (Fitzpatrick, van Hover, Cornett, & Hicks, 2019) and they incorporated differing Virginia substandards into their Minecraft performance assessments as well. Using the constructs of CHAT, interviews illuminated how the focal students (subjects- learning) remembered learning the tested unit content through particular classroom experiences (object 1- learning) in the multi-age classroom (community- learning). Particular instructional practices resonated with certain students more so than other instructional practices as well. This speaks to the importance of having a “plethora of avenues to get to the learning” (Mrs. Lily, Interview, 12/13/18) for students, which the three co-teachers provided through a wide variety of formats, teacher actions, and materials (instructional practices) that were used during the unit on Jamestown. Additionally, this supports Heafner, Lipscomb, and Fitchett’s (2014) finding that in states with a social studies end-of-the-year high-stakes test (like Virginia), elementary teachers tend to use a wide range of instructional practices; they, unlike teachers in non-tested states, do not cite testing pressures in language arts and

mathematics as justification for not teaching social studies through a variety of instructional practices.

The focal students demonstrated knowledge on the unit test and Minecraft performance assessment, but they primarily focused on facts rather than conceptual understandings or historical thinking skills. Applying CHAT, students had similar opportunities to participate during classroom experiences that were related to the unit test (division of labor- learning); however, during classroom experiences related to the Minecraft performance assessment, the students had differing opportunities to participate (division of labor-learning). For example, during the Minecraft performance assessment presentations, focal students and their team members took on differing roles (i.e., speaker, main navigator, supporting navigator, or silent observer). The focal students (Molly, Will, and Jamie) who took on more active roles such as speaker, main navigator, and supporting navigator received some of the highest scores on both the unit test and Minecraft performance assessment. As Nuthall (2000) demonstrated in his study with fifth and sixth grade students, elementary students who learn the most from classroom experiences have the clearest understanding of the systems in which classroom experiences occur as well. In this study, during the post-unit student interview, these three focal students demonstrated clear understandings of the systems in which their classroom experiences occurred through their responses. The three co-teachers' heavy reliance on materials (which were not reflective of best practice in history education; focused on timelines, names, and memorized facts) guided the focal students' classroom experiences. For focal students, these classroom experiences provided them with opportunities to learn facts about Jamestown rather than engage in explorations of content

understandings or develop historical thinking skills. In the following section, I discuss the ways in which students' classroom experiences and learning of social studies interacted with the instructional practices that the three co-teachers used during the unit on Jamestown.

### **Little Overlap in Regards to Teaching and Learning Social Studies**

There was little overlap between the three co-teachers' use of particular formats, teacher actions, and materials (instructional practices) and how students experienced and learned social studies. During the unit, the three co-teachers carried out instruction on 13 Virginia substandards; however, only nine Virginia substandards were assessed with the two unit assessments (multiple choice unit test and Minecraft performance assessment). Thus, drawing upon the constructs of CHAT, a subset of the instructional practices utilized during the entire unit was used to teach the social studies substandards that were assessed (object 2- teaching). Also, only a subset of the classroom experiences that the focal students remembered contributed to the improvement of their standards-based social studies knowledge, understandings, and skills related to the two unit assessments (object 2- learning). The interaction among teachers' instructional practices and how students experienced and learned social studies (object 3) suggests that only a few formats, teacher actions, and materials were effective in regards to both the teaching and learning social studies. As evidenced in the subsection before this, the quality of your instruction matters and extending that notion, the quality and alignment of your assessment(s) matters as well.

The two assessments used with the unit on Jamestown did not fully align with the instruction that the focal students received. This is, in part, a direct result of the fact that



the teacher who taught the vast majority of the unit content, Mrs. Lily, did not have the opportunity to contribute to the development of the multiple choice unit test or to the adjustment of the Minecraft performance assessment. Mr. Otto developed the unit test and Ms. Skeen adjusted the Minecraft performance assessment. Thus, the creators of the assessments were not teaching as much as Mrs. Lily, but they also did not have an awareness of what Mrs. Lily's instruction entailed (or even an awareness of what their fellow assessment creator's instruction entailed). In regards to quality, the Minecraft performance assessment rubric that Ms. Skeen made explicitly focused on 'including Jamestown items learned from class' (i.e., facts). This was the only content-related component on the rubric; the other three components focused on students' participation, creativity, and presentations. The questions that Mr. Otto pulled for the unit test were repetitive, focusing on the same four substandards rather than a wider variety of substandards from the unit. Primarily, the questions focused on remembering a single piece of factual knowledge or a series of related factual knowledge; they did not focus on content understandings or skills. To be able to have high-quality assessments, VanSledright (2018) asserts that the field of social studies must conduct research on how students learn. Then, we can draw upon that work to develop "evidence- and learning-model-based assessments" (p. 150) and this could potentially "counter the widespread misuse of high-stakes tests as accountability tools" (p. 150). This study further illuminates "[...] the complexity- and diversity- of student learning experiences in the classroom and how important it is to dig beneath the surface and understand the interactional relationship between context, teaching and learning" (Fitzpatrick, van

Hover, Cornett, & Hicks, 2018, p. 212-213). In the following section, I explore the limitations associated with this study.

### **Limitations**

This study's qualitative case study design allowed for an in-depth inquiry of a novel context (i.e., an elementary multi-age classroom), which provided an opportunity to respond to the research questions in the form of a composite portrait (Ragin, 1999) of elementary teachers' instructional practices and students' classroom experiences and learning during a social studies standards-based unit. Furthermore, the purposeful selection of three co-teachers and six focal students through theoretical sampling (Eisenhardt & Graebner, 2007) yielded opportunities to collect data on multiple teacher and student perspectives as well as experiences. It is important to note, when considering this study's implications, that the findings reflect the bounded cases of nine individuals. With my small sample size, I was only able to examine the implementation of one social studies standards-based unit within one multi-age classroom in one elementary school. While my thick, rich description (Denzin, 1989) in the findings increases the likelihood that a reader could extend this study's findings to his or her own context (i.e., qualitative transferability or "user generalizability"; Merriam, 2002), I intend to incorporate an increased number of teachers and students across multiple classrooms and schools in future research on elementary social studies teaching and learning.

Through the design of the study, I experienced prolonged observation (Erickson, 1986) in the elementary multi-age classroom. Additionally, I used the triangulation of multiple data sources (Gall, Gall, & Borg, 2015) and analytic memo writing (Miles, Huberman, & Saldana, 2014) to strengthen and ensure the credibility, dependability, and

trustworthiness of the findings (Merriam, 2002). Even though I have taken these steps, I must bring attention to my findings and conclusions, which reflect my own sense-making and interpretations (Flyvbjerg, 2001) as a division ‘insider’ and school site ‘outsider’ (Lofland, Snow, Anderson, & Lofland, 2005) as well as my multiple identities (Norton & Early, 2011) as a Virginian, White female educator and researcher. I was not able to use member checking to “incorporate participants’ comments into the final narrative” (Creswell & Miller, 2000, p. 127) due to scheduling; however, I intend to use member checking (i.e., with the multi-age teachers and educational stakeholders) when I work on the anticipated manuscripts associated with this study. In the following section, I explore potential implications associated with this study that are related to research and practice.

### **Implications**

In this section, I examine possible implications that are related to this study’s findings. In the subsections, I describe potential implications for research in regards to two fields (elementary social studies education and multi-age education) as well as theory development and for practice in regards to elementary teachers as well as teacher educators.

#### **For Research: Two Fields and Theory Development**

This multiple case study has the potential to add to the literature in two fields: elementary social studies education and multi-age education. It also highlights new understandings about how to use CHAT as a theoretical framework with elementary social studies education research as well as multi-age education research.

### **Elementary Social Studies Education.**

The present study has the potential to add to the literature on the teaching and learning of elementary social studies. The findings contribute most directly to the research on best practice in elementary social studies (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; NCSS, 2009, 2017) and more specifically, best practice in history education (Levstik & Barton, 2005), as well as student learning of social studies in elementary classrooms, in context (van Hover & Hicks, 2017). High-quality elementary social studies instruction has been operationalized and observed in the form of distinct characteristics (i.e., meaningful, integrative, value-based, challenging, and active; e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; NCSS, 2009, 2017); these characteristics have not frequently been viewed as a collective, overlapping group of best practices in social studies (Misco, 2014). This study, along with Bauml's (2016) and Curry's (2010) work with pre-service teachers, illuminates how specific instructional practices can be aligned with none, one, or multiple of these characteristics of best practice in social studies. A number of the three co-teachers' instructional practices (formats, teacher actions, methods) did reflect elements of best practice in social studies to varying extents; however, only some of their teacher actions and none of their materials reflected best practice in history education (Levstik & Barton, 2005). This finding provides additional insight into the distinction between best practice in social studies and best practice in history education. In sum, I argue that an instructional practice considered best practice in social studies does not mean it is necessarily considered best practice in a specific elementary discipline that comprises social studies (i.e., history, geography, civics, economics). "Social studies" is an umbrella term, which

houses several disciplines; due to this, social studies is more general in nature so that it can highlight the commonalities of the disciplines that comprise it. This study cautions educators to not overlook the distinctions among the disciplines. When these distinctions are not known (or ignored), teachers' instruction as well as students' classroom experiences and learning are impacted and at times, in negative ways.

The findings provide a more nuanced understanding of how students learn social studies in elementary classrooms, in context (van Hover & Hicks, 2017). Similar to my prior work with colleagues in a secondary history classroom (Fitzpatrick, van Hover, Cornett, & Hicks, 2019), I found that the six focal students in this study experienced the same instruction (even when in grade-leveled rotations), yet answered in different ways when asked to talk aloud about why they chose specific answers on the unit test and they each incorporated differing Virginia substandards into their Minecraft performance assessments. This finding further stresses the importance of qualitatively exploring elementary students' classroom experiences and learning of social studies in classrooms, in context, rather than relying solely or predominantly on quantitative measures to guide decision-making about curriculum, instruction, and assessments. Moreover, this study demonstrated how an in-depth analysis, through a multiple case study design, has the potential to provide rich descriptions on both the individual and group level of students' classroom experiences and learning of social studies.

### **Multi-Age Education.**

The findings also contribute to the scant body of research on multi-age education in the 21<sup>st</sup> century. This study provides a composite portrait (Ragin, 1999) that researchers (e.g., Bailey et al., 2016; Kolstad & McFadden, 1998; Stone, 2009) have

called for in regards to the ways in which teaching and learning occurs in a contemporary multi-age elementary classroom. The type of classroom, multi-age, did not influence the three co-teachers' instructional practices (as hypothesized) and this reflects Cornish's (2013) argument that "what goes on inside the classroom is more important than the type of class" (p. 124). The students were primarily grouped in grade-levels for instruction and had few opportunities to be in flexible groups, which is a distinguishing feature of multi-age classrooms (e.g., Cornish, 2013; Day & Yarbrough, 1998; Hattie, 2008). This study continues to highlight the challenge of defining what "multi-age" entails in the research literature as well as in practice.

This is also the first study in the U.S. to examine the intersection of the following two fields: elementary social studies education and multi-age education. Before this work, a study from Turkey was the only one to examine this intersection (Palavan, 2012). Palavan's quantitative findings highlighted elementary students' learning of social studies in multiple multi-age classrooms on a single assessment. His assessment data was from only one grade-level of multi-age students (fourth) rather than surveying a range of grade levels (e.g., third, fourth, and fifth). Furthermore, he did not include teachers in the study or capture the students' classroom experiences and instruction during the unit (*İyi ki Var*; i.e., *luckily it is present*; Kahveci & Atalay, 2015) in the multi-age classrooms, in context. During a unit on Jamestown, this study used observations, interviews, and artifacts to examine how co-teachers' social studies instructional practices and students' classroom experiences and learning of social studies, as measured by two assessments, interacted in an elementary multi-age classroom within a standards-based setting in a tested state. Moreover, this study captured the experiences of third, fourth, and fifth grade students as

well as their three multi-age co-teachers. With this being the first study in the U.S. to examine the intersection of these two fields, I suggest that researchers continue to explore the ways in which elementary social studies is taught and learned in multi-age settings. Findings from each future study on this topic will further confirm or disprove the findings from this study as well as illuminate new understandings on the topic that could inform research, practice, and potentially, policy.

### **Cultural-Historical Activity Theory (CHAT).**

Employing CHAT (Engeström, 2001) for this study's conceptual framework, I examined networks of interacting activity (i.e., teaching and learning) as well as multiple perspectives (i.e., teachers and students). Using constructs from CHAT provided an opportunity to analyze formats, teacher actions, and materials (instructional practices) that were effective in regards to social studies teaching and learning, as measured by the unit assessments. While Nuthall (2000) used CHAT to examine elementary student participation during a social studies unit and Schul (2010; 2012) used CHAT to explore how secondary students' relationships with mediators shaped their composition of historical documentaries, my use of CHAT connected elementary teachers' social studies instruction with students' classroom experiences and learning in social studies; I investigated how social studies teaching and learning interacted in a unique elementary classroom context – multi-age – within a standards-based setting in a tested state. Findings revealed that there was little overlap between the three co-teachers' use of particular formats, teacher actions, and materials and how students experienced and learned social studies during the unit. Thus, the overlap in teaching and learning is where future research should observe if in the same or other contexts, these are the instructional

practices that arise as effective once again. I describe the potential implications for elementary teachers and teacher educators in the following subsection.

### **For Practice: Elementary Teachers and Teacher Educators**

The implications for elementary teachers include the instructional practices that they should utilize to teach social studies and how they should facilitate student learning within a multi-age space. Similarly, teacher educators should be training elementary pre-service teachers to teach social studies in ways that reflect best practice in social studies as well as best practice in the specific disciplines that comprise social studies (i.e., history, economics, civics, geography). Teacher educators should also bring attention to the different types of classrooms that pre-service teachers might be assigned to in U.S. elementary schools (e.g. grade-leveled, multi-age, etc.). Additionally, findings suggest there are implications for co-teaching with one or multiple teachers as well.

#### **Elementary Social Studies Education.**

Findings from this study highlight the ways in which teachers' instructional practices can reflect elements of best practice in social studies (e.g., Anderson, 2014; Holloway & Chiodo, 2009; McCall, 2006; NCSS, 2009, 2017) to varying extents (i.e., aligning with one characteristic or multiple); however, the vast majority of instructional practices did not reflect best practice in history education (Levstik & Barton, 2005). Thus, these findings illustrate that best practice in social studies is not synonymous with best practice in history education. In the elementary social studies methods course, teacher educators should clearly detail how best practice in social studies as well as best practice in the specific disciplines that comprise social studies (i.e., history, economics, civics, geography) compare and contrast. Elementary pre-service and in-service teachers



should be equipped with an understanding of these distinctions. Yet, research has shown that even with knowledge of best practice in social studies, elementary teachers' instruction did not change and they continued to use more traditional approaches (e.g., lecture and worksheets; Burstein, Hutton, & Curtis, 2006), which have frequently been viewed as disconnected with the characteristics of best practice in the literature. Perhaps, having knowledge of the aforementioned distinctions rather than just best practice in social studies might inform their instruction in ways that have not yet been observed.

### **Multi-Age Education.**

In this study, I have defined multi-age as an educational (re)structuring effort, where students of different ages and grade bands (e.g., K-2, 3-5) learn in one space (e.g., Day & Yarbrough, 1998; Domenech, 1999; Hattie, 2008; Kolstad & McFadden, 1998; Melliger, 2005; Sims, 2008; Veenman, 1995, 1996). The multi-age classrooms in WES (and the rest of CCPS) were developed through a (re)structuring effort that was focused on both innovative (philosophy and pedagogy) and pragmatic (administrative challenges) reasons; however, in the case of the three co-teachers' classroom, multi-age was not executed in a manner that fully reflected the distinguishing features of "multi-age" in the literature. For example, the vast majority of instruction occurred in grade-leveled groups rather than flexible multi-age groups (e.g., Cornish, 2013; Day & Yarbrough, 1998; Hattie, 2008). Additionally, all three co-teachers had minimal training on what multi-age education entailed. This aligns with research that has shown in-service multi-age teachers do not feel that they have been taught the skills that are required to teach in a multi-age setting (Broome, 2009, 2016; Mariano & Kirby, 2009; Miller, 1991b). Without exposure to multi-age classrooms during their teacher preparation programs, many pre-service and

in-service teachers could potentially feel this lack of preparedness. They may not receive multi-age professional development from their schools or school districts either. Teachers who have primarily been prepared for grade-leveled classrooms must be provided with in-service training experiences related to multi-age teaching and learning. In regards to teacher preparation, teacher educators should ensure that elementary pre-service teachers have an awareness of the distinguishing features of multi-age classrooms.

### **Co-Teaching.**

During this study, the three co-teachers employed a “divide and conquer” approach to planning, which influenced the unit’s instruction and assessments. Data suggests that the three co-teachers’ “divide and conquer” approach during the unit on Jamestown was haphazard (e.g., unclear aims and content objectives, lack of awareness in regards to responsibility for instruction). Both Mr. Otto (Interview, 10/23/18) and Mrs. Lily (Interview, 11/16/18) identified co-teaching as a challenge associated with working in a multi-age classroom while Ms. Skeen (Interview, 12/13/18) identified co-teaching as a strength. When co-teaching with one or multiple teachers, the “divide and conquer” approach must be strategic. To this end, I argue that co-teachers need to clearly communicate aims and content objectives (Cook & Friend, 1995), collaboratively design instruction and assessments (Pugach & Winn, 2011; Pratt et al., 2017), and assign responsibility for teaching particular content (Friend, 2008; Ploessi et al., 2010) prior to the start of a unit. Then, throughout the unit, they should communicate instructional decisions as well as how they formatively perceive students’ responses to instruction. In the next section, I explore possible implications for future research.

### **Future Research**

From this study, the findings prompt new questions that could be studied in relation to the fields of elementary social studies education as well as multi-age education. In this section, I suggest how the findings can be extended in order to better understand teachers' instructional practices and students' classroom experiences and learning of social studies in elementary classrooms (i.e., grade-leveled or multi-age), in context. First, to extend the finding that despite an emphasis on teamwork and collaboration, the three co-teachers employed a "divide and conquer" approach to planning for the unit's instruction and assessments, future research could include following teachers that work alone, in multi-age classrooms, as well as co-teachers, in multi-age or grade-leveled classrooms, who actively collaborate with their teammates during a unit of study. Multi-age teachers who work alone in a classroom might not have the opportunity to "divide and conquer" with another educational stakeholder (e.g., teaching assistant, interventionist). Such inquiry may lead to broader understandings of the various factors that influence elementary social studies planning, teaching, and assessing; thus, the following questions could be explored: How does one multi-age teacher plan, teach, and assess social studies across elementary grade levels? How do elementary co-teachers (who collaborate as a team) plan, teach, and assess a social studies standards-based unit?

Second, to build on the finding that focal students experienced the same instruction (even when in grade-leveled rotations), yet they answered in different ways when asked to talk aloud about why they chose specific answers on the unit test (Fitzpatrick, van Hover, Cornett, & Hicks, 2019) and they incorporated differing Virginia

substandards into their Minecraft performance assessments, future research could examine elementary students' classroom experiences and learning of social studies when they receive the same instruction and are in flexible groups (multi-age or grade-leveled). Flexible multi-age or grade-leveled grouping could potentially lead to students hearing more varied perspectives and that might impact their interactions with instruction as well. Such research could allow for inquiry into the following questions: To what extent are students' classroom experiences similar or different when they experience the same social studies instruction within flexible multi-age groups or flexible grade-leveled groups? How do those experiences compare to or contrast with inflexible multi-age groups or inflexible grade-leveled groups?

Finally, to further explore the finding that there was little overlap between the teachers' instructional practices and how students experienced and learned social studies, I propose future research into the interaction of context, teachers' instructional practices, and students' classroom experiences and learning over time (e.g., across multiple units of study, across multiple years of working together). Longitudinal studies could potentially be informative for this research. For example, studying a particular student or multi-age cohort over the span of three years (i.e., the time that they are in a multi-age classroom; K-2 or 3-5) might provide insights into how students experience and learn the same unit of study either with or without the same teacher(s). Such research might address such questions as: How do the ways in which students experience and learn social studies, as measured by unit assessments, intersect with teachers' instructional practices over time? In what ways do the students' classroom experiences over time contribute to their

learning of social studies knowledge, understandings, and skills related to a particular social studies standards-based unit?

### **Chapter Summary**

In this chapter, I have situated the study's findings in relation to the bases of literature in two fields: elementary social studies education and multi-age education. The data analysis from the study revealed that there was little overlap between the three co-teachers' use of particular formats, teacher actions, and materials (i.e., instructional practices) and how students experienced and learned social studies during the unit on Jamestown. The three co-teachers' "divide and conquer" approach influenced the quality and alignment of planning, teaching, and assessing associated with the unit. Despite receiving the same instruction, the focal students answered in different ways when asked to talk aloud about why they chose specific answers on the unit test (Fitzpatrick, van Hover, Cornett, & Hicks, 2019) and they each incorporated differing Virginia substandards into their Minecraft performance assessments. These findings highlight the influence of teachers' instruction on students' classroom experiences and learning, in context (van Hover & Hicks, 2017).

From this study, the findings have potential implications related to research as well as practice. First, the findings add to the knowledge base on the teaching and learning of elementary social studies as well as to the scant body of knowledge on multi-age education in the 21<sup>st</sup> century. Second, CHAT was used in ways not observed before in the broader field of social studies education (i.e., elementary and secondary) with this study; the conceptual framework allowed for the analysis of how elementary teachers' social studies instruction interacted with students' classroom experiences and learning of

social studies in a unique elementary classroom context – multi-age – within a standards-based setting in a tested state. Third, the findings suggest that elementary teachers as well as teacher educators need to detail the distinctions among best practice in social studies as well as best practice in the specific disciplines that comprise social studies (i.e., history, economics, civics, geography). Also, the findings contribute to an understanding that elementary teachers need in-service training on multi-age education (i.e., teaching and learning) and teacher educators need to ensure that elementary pre-service teachers have an awareness of the distinguishing features of multi-age classrooms. Lastly, the findings show that when co-teaching, a “divide and conquer” approach to planning, teaching, and assessing should be strategic rather than haphazard. If haphazard, issues with quality and alignment can arise. Social studies research must continue to unpack the complexities associated with how varying contexts, teaching and learning interact.

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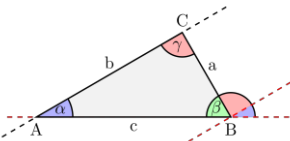
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## Appendix A

Monday	Tuesday	Wednesday	Thursday	Friday
<p><b>Must Do:</b></p>  <p><b>Teachers will call groups to introduce new words. In the meantime, practice your grammar skills. Click on your dog below.</b></p>   	<p><b>Must Do:</b></p> <p>Meet with teachers for lessons on Math, Literacy, or Jamestown!</p>  <p>If you are NOT meeting with a teacher, then you are working on WORD STUDY (Sort first, then choose an activity)</p>	<p><b>Must Do:</b></p> <p>Meet with teachers for lessons on Math, Literacy, or Jamestown!</p>  <p>If you are NOT meeting with a teacher, then you are working on WORD STUDY (Sort first, then choose an activity)</p>	<p><b>Must Do:</b></p> <p>Meet with teachers for lessons on Math, Literacy, or Jamestown!</p>  <p>If you are NOT meeting with a teacher, then you are working on WORD STUDY (Sort first, then choose an activity)</p>	<p><b><u>Must Do:</u></b></p> <p><b><u>sPeLI ChEcKs</u></b></p>  <p><b>Teachers will pull groups</b></p> <p><b><u>EXIT SLIPS</u></b></p> 

<p><b><u>Option 1:</u></b></p>  <p><u>Veterans Day Activity</u></p> <ol style="list-style-type: none"> <li>1. Watch the BrainPOP video  </li> <li>2. Write an acrostic poem for FREEDOM in your writing journal  <u>(Ex. of acrostic poem)</u></li> </ol> <p>Optional - Make this craft. Click the star for directions</p> 	<p><b><u>Option 1:</u></b></p> <p>Organize and clean out your book tub!</p> 	<p><b><u>Option 1:</u></b></p> <p><b><u>Chihuahuas &amp; Golden Retrievers:</u></b></p> <ol style="list-style-type: none"> <li>1. <u><a href="#">Lines, Segments, and Rays, oh my!</a></u> Then...</li> <li>2. <u><a href="#">Practice</a></u></li> </ol> <p><b><u>Huskies:</u></b></p> <ol style="list-style-type: none"> <li>1. <u><a href="#">Geometry Time :)</a></u> Then....</li> <li>2. <u><a href="#">Take the online quiz here</a></u></li> </ol> <ol style="list-style-type: none"> <li>3. One last thing, complete the worksheet on the white bookshelf and have it checked.</li> </ol> 	<p><b><u>Option 1:</u></b></p> <p><b>Work independently or with a group of no more than 3 to teach others about the geometry you learned about in math this week.</b></p> <p><b><u>Chihuahuas and Golden Retrievers:</u></b>  <b>Lines, line segments, rays, angles, endpoints, vertices</b></p> <p><b><u>Huskies:</u></b>  <b>Angles; right, acute, straight, obtuse</b></p> <p><b><u>Make one of the following...</u></b></p> <ol style="list-style-type: none"> <li>1. A rap,</li> <li>2. An informational poster, or video</li> <li>3. A chart in your math journal</li> </ol> <p><b>Share with your teachers!</b></p>	<p><b><u>Option 1:</u></b></p> <p><b><u>Readworks</u> Passage:</b></p> <p>Work independently to read and complete comprehension question about Jamestown.</p> <p>Double check that you've answered all questions before submitting.</p> <p><b>Reread and prove your answers!</b></p>
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<b><u>Option 2:</u></b>  Create a morning work slideshow in Google Docs and share it with a teacher for possible consideration.	<b><u>Option 2:</u></b>  Using your SS textbook and Minecraft, build the Jamestown colony.	<b><u>Option 2:</u></b>  Create a morning work slideshow in Google Docs and share it with a teacher for possible consideration.	<b><u>Option 2:</u></b>  Using your SS textbook and Minecraft, build the Jamestown colony.	<b><u>Option 2:</u></b>  Using your SS textbook and Minecraft, build the Jamestown colony.
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**Snack Break :) Feed the brain and the body. After snack tasks on next page...**

**Word Study****Monday**

[Click here to make your own word search and either print or play online](#)

**Tuesday/Wednesday/Thursday**

1. Sort and write your words in your word study journal
2. Choose and complete 1 activity from the board

**Friday**

Online option - [play word games on ABCya](#)

Writing - create a short story using words from this week

Create - a comic and use 10 or more of your words

**SSR- Read for 20 minutes.**

Enjoy a good book :)

**Summarize:**

Write a 5 sentence paragraph sharing the following information:

- ★ Retell what you read...  
What did you read? Who were the characters? What were the characters feeling/thinking? What happened? Was there a problem? Did it get resolved? What will happen next? Where did it all take place?

**ST Math-** Continue to work towards your **monthly goal!**  
**Max time - 20 minutes**

Mon.	Tues	Wed.	Thur.	Fri.
%	%	%	%	%

**November**

%

**Have you met your monthly goal?**

**Yes - Permission to practice your math skills on Prodigy, granted.**

**Not yet - keep trying! You CAN do it!  
Find a teacher for help!**



## Appendix B

7:40-8:00	Arrival Morning jobs
8:00-8:05	Morning Announcements
8:05-8:25	Morning Meeting
8:30-11:45	Learning Rotations
#1	8:30-9:10
#2	9:15-9:55
SNACK/BREAK	
#3	10:20-11:00
#4	11:05-11:45
11:50-12:20	Lunch (All)
12:20-12:50	Recess
12:50	Specials
1:25-2:00	Homeroom Time
2:05-2:15	Clean up/Pack up
2:15-2:30	Closing Meeting
2:35	Dismissal

Daily Specials		
Monday	P.E. (All)	12:50-1:20
	Art/Library	1:20-2:00
	SPLIT	
Tuesday	P.E./Music	12:50-1:50
	SPLIT	
Wednesday	P.E. (All)	12:50-1:20
Thursday	P.E. (All)	12:50-1:20
Friday	P.E. (All)	12:50-1:20
	Art/Library	1:20-2:00
	SPLIT	



## **Appendix C**

### Classroom Observational Protocol

#### Context

- (i.e., individual, partner, small group, whole group, etc.)

#### Instructional approaches

- (i.e., content integration, direct instruction, indirect instruction, experiential learning, etc.)

#### Participants' behaviors [teacher and students]

- (i.e., listening, reading, talking, writing, etc.)

#### Participants' interactions

- (i.e., teacher with one student, teacher with small group, teacher with whole group)
- (i.e., student with one student, student with small group, student with whole group)

#### Materials

- (i.e., PowerPoint, textbooks, worksheets, graphic organizers, etc.)

## Appendix D

### Educational Stakeholder Questions (Everyone except Mr. Gomez)

1. Tell me a little about yourself and your role with education.

- What positions have you held?
- Where have you been [an administrator, superintendent, principal, teacher, etc.]?
- Describe your current role in/with [CCPS, WES, etc.]?

2. How do you define multi-age?

- How did this vision/innovation come to be in CCPS (i.e., emerge organically or planned)?
- How did the school board receive it?
- As a policy, were schools allowed to op-in?
  - How much of a voice did school-based administrators have in how it was implemented at their schools?
- (For Dr. Rand and Ms. Corbin)- Did you think about specific characteristics that you'd want for a principal at a school with multi-age?
- What professional development was employed with multi-age schools (i.e., for principals, for teachers)?
- How did you all envision implementing different curricula for different subject areas in multi-age?
  - What does assessment look like with multi-age?
    - How much does the context impact grade-level and content-area specific alternative assessments?

- What does multi-age look like when done well?
- What are some challenges associated with multi-age?

3. Tell me about WES's journey with multi-age.

- (For Mrs. Cooper and Mr. Wright)- Did you think about specific characteristics that you'd want for multi-age teachers?
- Do you think the change was beneficial for the school (economic, administrative, etc.)?

4. Multi-age: I walk in, what will I see?

- Is multi-age an elementary only innovation? Could it be success in a middle school and/or high school?

## **Appendix E**

### Educational Stakeholder Questions (Only Mr. Gomez)

1. Tell me a little about yourself and your role as an architect.
  - How did you start working with CCPS?
    - Have you worked on other projects with CCPS before the WES project?
  - How did designing a space for a school differ from other projects that you've been involved with as an architect?
2. WES Addition and Renovation
  - How do you define multi-age?
  - How did CCPS communicate this vision/innovation to you all?
    - What stakeholders provided you all with input (i.e., division officials, principals, teachers, students, parents)?
  - Did you all do any research on multi-age classrooms before designing the space?
  - Did you all experience any challenges along the way or after the project was complete?
  - Do think that you all accomplished your mission (as written on your website)?
    - Have you stayed in contact with CCPS about the project?
  - Do you think the change was beneficial for WES (economic, administrative, etc.)?

3. Would you want your own children learning and working in this space? Why or why not?
4. Do you think multi-age spaces like this would be useful and/or successful in middle schools and/or high schools?

## **Appendix F**

### **Pre-Unit Individual Teacher Participant Interview**

1. How long have you been teaching?
2. What grade levels have you taught?
3. Where have you taught?
4. Describe your elementary teacher training.
  - How would you describe your educational philosophy?
5. Describe your current classroom and students.
6. Did you choose multi-age?
  - Tell me about your experiences in a multi-age classroom.
  - Teaching approach in multi-age: I walk in, what will I see?
8. Were you at WES when it adopted multi-age in 2015? Also, were you a part of the multi-age staff, at that time?
  - Why did WES adopt multi-age?
    - What are your feelings about this? Do you think the change was beneficial for WES (economic, administrative, etc.)?
  - Have you experienced any professional development related to multi-age and what has it entailed?
  - What are some strengths about teaching in a multi-age classroom?
  - What are some challenges associated with teaching in a multi-age classroom?
9. What do you want kids to leave this classroom with?

## **Appendix G**

### **Pre-Unit Focal Group Teacher Participant Interview**

1. What social studies unit will you all be teaching?
  - When will the unit tentatively begin and end?
2. What do you all intend to accomplish with this unit?
3. How did you all prepare for this unit?
4. What are your content objectives?
  - Do they differ by grade-level or are these collective for 3-5?
5. What instructional approaches will you all use with this unit?
6. How do each of you approach assessment (generally)?
  - What forms of assessment will you all use with this unit (i.e., pre-unit, during, post-unit)?
7. Describe each of your teaching styles.
  - What roles will you have during this unit?

## **Appendix H**

### **Post-Unit Individual Teacher Participant Interview**

#### **Multi-Age Education**

1. Talk about the ups and downs of teaching in a multi-age classroom.
2. Moving forward into next year, do you plan on staying in multi-age?
3. If you are in multi-age next year, what would you change and what would you keep the same?

#### **Standards-Based Social Studies Education**

1. How would you define social studies?
2. How do you all tend to teach social studies as a team? Also, does this differ from the Jamestown unit?
  - In what ways do you all incorporate social studies into your daily schedule?
  - How do you tailor your social studies instruction for diverse learners?
4. How do you feel about the Jamestown unit?
5. How well did you all accomplish your original unit goal(s)? (The researcher will remind the teacher of the response from question two of the pre-unit focal group teacher participant interview.)
6. Did you meet your content objectives? (The researcher will remind the teacher of the response from question four of the pre-unit focal group teacher participant interview.)
7. What types of instructional approaches did you use?
8. Why did you use those instructional approaches?



9. What do you think the students learned and how do you think they learned it?
10. How do you think the students did with the Minecraft project?
11. Looking at the post-unit test assessment data, what surprises you?
12. Reflecting on the unit, would you change anything? If yes, how would that effect your preparation and teaching next time?

## **Appendix I**

### Post-Unit Individual Focal Student Interview

1. What is your name, age, and grade level?
  - How long have you been in a multi-age classroom?
  - Have you always been at WES?
2. What do you like about school?
  - What do you like about multi-age, in particular?
  - Do you dislike anything about multi-age?
  - Do you have friends that are not in multi-age?
    - Does a grade-leveled class sound different (in comparison with multi-age)? Why or why not?
3. What is social studies and why do we study it?
4. Do you enjoy social studies? Why or why not?
5. Tell me about your Minecraft project.
  - What did you learn?

With each post-test question, the researcher will ask the following questions:

1. Did you learn [that] in this class or did you already know it?
2. How did you learn [that]?
3. Do you remember [that] coming up in class?
4. Was anything said about [that topic] in class?
5. Did you all do anything regarding [that topic] in class?

## Appendix J

## Powhatan Contributions to Survival of Jamestown

living in  
harmony

friendship

introducing  
crops

### VS.3g Powhatan contributions to survival

**Teacher Tips:** Make a hot dog fold with a 1 1/2" tab uncovered along the side. Cut the overlapping section to make 3 flaps. Glue the title in the 2" tab. Glue the harmony, friendship, and crops rectangles on the flaps, one per section. Students write more details to describe each underneath the flap. For details and facts, refer to the Curriculum Framework, page 15. Or, use the rectangles below to glue inside the flaps, if desired for added support. Have students add drawings to show understanding.

Pocahontas, daughter of Chief Powhatan, hoped the English and American Indians could live in harmony.

Pocahontas helped the colonists survive by beginning friendships.

Corn and tobacco were introduced to the English by the Powhatan.

## Appendix K

Pocahontas, daughter  
of Chief Powhatan,  
hoped the English and  
American Indians  
could live in harmony.

they Helep  
each other grow  
crops.

Pocahontas helped the  
colonists survive by  
beginning friendships.

they traded  
Back and forth.

Corn and tobacco  
were introduced to  
the English by the  
Powhatan.

it Helep the  
colanist survive.

## Appendix L

### The Arrival of Women and Africans at Jamestown

①



### The Arrival of Additional Women at Jamestown

②

- In the year 1620, Jamestown became a more diverse (different) settlement.
- In 1620, the Virginia Company of London sent additional women to the colony.
- The arrival of these additional women made it possible for more settlers to establish families and a permanent settlement at Jamestown.



### The Arrival of Women at Jamestown

③



- Women played many important roles once they arrived at Jamestown. Women did chores and were responsible for educating the children.
- The women were sent to Jamestown to marry the men who were already there!

### Indentured Servants

④

- Indentured servants – a person who worked for another person for a period of time to pay back money that is owed.
- Many settlers came to Jamestown as indentured servants. They agreed to work for the person who paid for their passage to the New World. Most indentured servants worked for a period of seven (7) years.

### Africans Arrive at Jamestown: The Beginning of Slavery in America

⑤

- As plantations in the Tidewater region expanded, more hands were needed to work the land!
- Africans were brought to Virginia as a source of labor.



### Africans Arrive at Jamestown: The Beginning of Slavery in America

⑥

- Portuguese sailors captured African men and women from what is present day Angola. The status of these early African men and women as either servants or slaves in Virginia is unknown.
- Africans arrived in Jamestown against their will in 1619.
- The arrival of Africans made it possible to expand the tobacco economy.



## Appendix M

1620:

Women arrived  
because they needed  
to make families in  
Virginia and needed to  
do chores and teaching  
the children

## Appendix N





## Jamestown Settlement

the Virginia company send:  
a colony they come back.  
they send another one  
and they come back they  
send one more and some  
of them come back but...

## Arrival of Women

In the year 1620 the Virginia  
company sent more women  
because lots of people  
were dying. The Virginia  
company sent women to  
increase the amount of people  
so they could survive.

## location

The location of Jamestown  
had to be perfect, they chose  
Jamestown because they  
thought they had good  
drinking water. It was  
on a Peninsula so other colonies  
it would be harder to attack.  
King James I signed the  
charter so they could do it.

## Survival

Since they didn't  
choose a very clear  
location it led to lack  
of survival skills.  
this was called the  
"starving time," many  
died during this time.

stretch!  
↑  
if you're Bored...

## Appendix O

## Pocahontas and John Smith



Two of the most famous historical figures from Jamestown were Pocahontas and John Smith. Their story of friendship would create a time of peace between the Jamestown colonists and the Powhatan tribe.

John Smith was an early leader of Jamestown and motivated the colonists to "pull their own weight" in the colony. Smith told Jamestown residents that if "they did not work, they did not eat." Along with being a successful leader of Jamestown, Smith was also an explorer. During one of his expeditions outside of Jamestown, he was taken captive by the Powhatan tribe and sentenced to death. According to Smith, he was saved by Chief Powhatan's daughter, Pocahontas.



Pocahontas and John Smith became friends and their friendship helped to ease tensions between the Jamestown colonists and the Powhatan tribe. The two groups started trading and living in peace.



John Smith and Pocahontas were close friends until he was injured in a gunpowder accident in 1609 and was forced to return to England for medical attention.

- 1 Which colony was John Smith a leader of?

James Town

- 2 How did John Smith motivate the colonists to work?

if they didn't work they can't eat

- 3 Why did John Smith have to return to England in 1609?

because he got a gun powder injury in a accident

- 4 Who captured John Smith?

powhatan tribe

- 5 Who saved John Smith from the Powhatan tribe?

Pocahontas the chief's daughter



## Appendix P

### John Rolfe comes to Jamestown

John Rolfe was on his way to Jamestown when the ship he was on, the Sea Venture was shipwrecked in Bermuda. After 10 months of waiting and building two smaller ships from the wood of the wrecked Sea Venture the group finally made it to Jamestown in 1610

When John Rolfe arrived in Jamestown the colony was struggling to ship enough goods back to England to repay the Virginia Company for their investment in the colony and many of the colonists had starved and died during the winter

John Rolfe seemed to have the answer. He had brought with him tobacco seeds. Tobacco was a major money making crop for the Spanish and now the English would be able to grow their own in Jamestown. Tobacco became an important cash crop for Jamestown and helped the colony to become prosperous. A cash crop is a crop that people grow to sell and make a profit or money from.

John Rolfe also met Pocahontas while he was in Jamestown. They became friends and got married in April of 1614. John and Pocahontas had one son named Thomas



1 Where was John Rolfe shipwrecked?

in Bermuda

2. Who did the Jamestown colony need to repay back in England?

Virginia Company

3. What type of seeds did John Rolfe bring to Jamestown?

Tobacco seeds

4. What is a cash crop?

It's a crop that people grow to sell and make a profit or money from

5. Who married John Rolfe?

Pocahontas

### Appendix Q

Day 1	11-7-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)	<b>“Meet the Ships” [Reading Passage-Independent]</b>		
Learning Rotations (9:15-9:55)			
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			

Day 2	11-8-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)	<b>Jamestown Explained (HipHughes History) [YouTube Video- Whole Group]</b>  <b>Jamestown KWL [Graphic Organizer-Whole Group]</b>  <b><i>Jamestown, Virginia</i> (Fradin) [Read Aloud- Whole Group]</b>		
*stretched into first learning rotation and a little of second learning rotation (8:25-9:20)			
Learning Rotations (9:20-9:55)			
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)	<b>End of the Day Review [Whole Group]</b>		

Day 3	11-9-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)	<b>What are you looking forward to learning about Jamestown?</b> <b>[Morning Meeting Share- Whole Group]</b>  <b>The Jamestown Online Adventure (Dunn, 2002) [Game- Whole Group]</b>		
Learning Rotations (8:30-9:10)			<b>“Asking Questions”</b> <b>[Graphic Organizer - Small Group]</b>  <i>Jamestown Colony</i> <b>(Yarborough, 2016)</b> <b>[Reading Passage- Small Group]</b>
Learning Rotations (9:15-9:55)		<b>“Asking Questions”</b> <b>[Graphic Organizer - Small Group]</b>  <i>Jamestown Colony</i> <b>(Yarborough, 2016)</b> <b>[Reading Passage - Small Group]</b>	
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)	<b>“Asking Questions”</b> <b>[Graphic Organizer - Small Group]</b>  <i>Jamestown Colony</i> <b>(Yarborough, 2016)</b> <b>[Reading Passage - Small Group]</b>		
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)	<b>End of the Day Review [Whole Group]</b>		

Day 4	11-12-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)	<b>Jamestown Kahoot [Game- Whole Group]</b>		
Learning Rotations (8:30-9:10)			
Learning Rotations (9:15-9:55)			
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)	<b>End of the Day Review [Whole Group]</b>		

Day 5	11-13-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)		Choosing the Location of Jamestown and Writing “3 Reasons Jamestown Location was Picked” [PowerPoint and Content Notebook- Small Group]  Intro to Minecraft and Designing Minecraft Jamestown [Virtual Reality Software and Content Notebook- Small Group and Independent]	<i><b>Jamestown, Virginia (Fradin)</b></i> <b>[Read Aloud- Whole Group]</b>
Learning Rotations (9:15-9:55)	<i><b>Jamestown, Virginia (Fradin)</b></i> <b>[Read Aloud- Whole Group]</b>		Choosing the Location of Jamestown and Writing “3 Reasons Jamestown Location was Picked” [PowerPoint and Content Notebook- Small Group]  Intro to Minecraft and Designing Minecraft Jamestown [Virtual Reality Software and Content Notebook- Small Group and Independent]

Learning Rotations (10:20-11:00)	<p>Choosing the Location of Jamestown and Writing “3 Reasons Jamestown Location was Picked” [PowerPoint and Content Notebook- Small Group]</p> <p>Intro to Minecraft and Designing Minecraft Jamestown [Virtual Reality Software and Content Notebook- Small Group and Independent]</p>	<b><i>Jamestown, Virginia (Fradin)</i></b> <b>[Read Aloud- Whole Group]</b>	
Learning Rotations (11:05-11:45)	Minecraft [Virtual Reality Software- Small Group and Independent]		
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			



Day 6	11-14-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)			<b>Life in Colonial America</b> <b>[PowerPoint- Small Group]</b>  <i>Surviving in Jamestown</i> [Reading Passage- Small Group]  <b>Everyday Life in Colonial Jamestown</b> <b>[Graphic Organizer - Small Group]</b>
Learning Rotations (9:15-9:55)	<b>Life in Colonial America</b> <b>[PowerPoint- Small Group]</b>  <i>Surviving in Jamestown</i> [Reading Passage- Small Group]  <b>Everyday Life in Colonial Jamestown</b> <b>[Graphic Organizer - Small Group]</b>		
Learning Rotations (10:20-11:00)		<b>Life in Colonial America</b> <b>[PowerPoint- Small Group]</b>  <i>Surviving in Jamestown</i> [Reading Passage- Small Group]  <b>Everyday Life in Colonial Jamestown</b>	

		<b>[Graphic Organizer - Small Group]</b>	
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)	<b>End of the Day Review [Whole Group]</b>		

Day 7	11-16-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)	<b>Jamestown [YouTube Video- Whole Group]</b>		
Learning Rotations (8:30-9:10)	Minecraft [Virtual Reality Software- Small Group and Independent]		
Learning Rotations (9:15-9:55)			
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)	<b>End of the Day Review [Whole Group]</b>		

Day 8	11-19-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)			
Learning Rotations (9:15-9:55)		<b>Task Sheet [Independent]- Readworks book on Jamestown (November 12, 2018)</b>	
Learning Rotations (10:20-11:00)	<b><i>Jamestown, Virginia</i> (Fradin) [Read Aloud- Whole Group]</b>		
Learning Rotations (11:05-11:45)	Minecraft [Virtual Reality Software- Small Group and Independent]		
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			

Day 9	11-20-2018		
	UVA BASKETBALL GAME DAY		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)			
Learning Rotations (9:15-9:55)			
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			

Day 10	11-26-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)			
Learning Rotations (9:15-9:55)			
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)	Maria ONLY <b>Jamestown Exit Slip Review/ “Reteach” [Small Group]</b>		Fabício ONLY <b>Jamestown Exit Slip Review/ “Reteach” [Small Group]</b>
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			

Day 11	11-27-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)	Virginia Assembly vs. Virginia House of Burgesses (Orr, 2005) [Graphic Organizer- Small Group]		
Learning Rotations (9:15-9:55)			Virginia Assembly vs. Virginia House of Burgesses (Orr, 2005) [Graphic Organizer- Small Group]
Learning Rotations (10:20-11:00)		Virginia Assembly vs. Virginia House of Burgesses (Orr, 2005) [Graphic Organizer- Small Group]	
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			

Day 12	11-28-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)	<p>What do you think happened to the settlers on Roanoke Island that disappeared before Jamestown began? [Morning Meeting Share-Whole Group]</p> <p>What happened to the lost colony of Roanoke? [YouTube Video-Whole Group]</p>		
Learning Rotations (8:30-9:10)		<p>Guardians of Jamestown, 1619: The First English Thanksgiving [YouTube Video- Small Group]</p> <p>Powhatan Contributions to Survival [Graphic Organizer - Small Group]</p>	<p><b>Guardians of Jamestown, 1619: The Arrival of English Women to Virginia [YouTube Video- Small Group]</b></p> <p><b>The Arrival of Women and Africans to Jamestown [Reading Passage- Small Group]</b></p> <p><b>The Arrival of Women and Africans to Jamestown [Poster]</b></p>
Learning Rotations (9:15-9:55)	<p>Guardians of Jamestown, 1619: The First English Thanksgiving [YouTube Video- Small Group]</p> <p>Powhatan Contributions to Survival [Graphic Organizer- Small Group]</p>	<p><b>Guardians of Jamestown, 1619: The Arrival of English Women to Virginia [Youtube Video- Small Group]</b></p> <p><b>The Arrival of Women and Africans to Jamestown [Reading Passage- Small Group]</b></p>	

		<b>The Arrival of Women and Africans to Jamestown [Poster]</b>	
Learning Rotations (10:20-11:00)	<p><b>Guardians of Jamestown, 1619: The Arrival of English Women to Virginia [YouTube Video- Small Group]</b></p> <p><b>The Arrival of Women and Africans to Jamestown [Reading Passage- Small Group]</b></p> <p><b>The Arrival of Women and Africans to Jamestown [Poster]</b></p>		<p>Guardians of Jamestown, 1619: The First English Thanksgiving [YouTube Video- Small Group]</p> <p>Powhatan Contributions to Survival [Graphic Organizer- Small Group]</p>
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)	<i>Chief Powhatan and the Powhatan Confederacy [Reading Passage- Independent]</i>		
Closing Meeting (2:15-2:30)			

Day 13	11-29-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)	Jamestown: Reasons to Choose the Site [Morning Work-Independent]  What are the main reasons why the settlers chose Jamestown? [Morning Meeting Share- Whole Group]		
Learning Rotations (8:30-9:10)		<b>Packing for Jamestown [Writing Prompts/ Maker Space Product-Small Group]</b>	<b>Cause and Effect: Agriculture's Influence on Slavery (Orr, 2005) [Graphic Organizer - Small Group]</b>
Learning Rotations (9:15-9:55)	<b>Cause and Effect: Agriculture's Influence on Slavery (Orr, 2005) [Graphic Organizer - Small Group]</b>		<b>Packing for Jamestown [Writing Prompts/ Maker Space Product-Small Group]</b>
Learning Rotations (10:20-11:00)	<b>Packing for Jamestown [Writing Prompts/ Maker Space Product-Small Group]</b>	<b>Cause and Effect: Agriculture's Influence on Slavery (Orr, 2005) [Graphic Organizer - Small Group]</b>	
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)	<i>John Rolfe Comes to Jamestown</i> [Reading Passage - Independent]  <i>Pocahontas and John Smith</i> [Reading Passage- Independent]		
Closing Meeting (2:15-2:30)			



Day 14	11-30-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)			
Learning Rotations (9:15-9:55)			
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			

Day 15	12-3-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)			
Learning Rotations (9:15-9:55)			
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			

Day 16	12-4-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)	<b>Jamestown: 5 Facts and 5 Questions [Morning Work-Independent]</b>  <b>Jamestown (MrBettsClass) [YouTube Video- Whole Group]</b>		
Learning Rotations (8:30-9:10)		<i>The Jamestown Colony</i> [Reading Passage- Small Group]	
Learning Rotations (9:15-9:55)			<i>The Jamestown Colony</i> [Reading Passage- Small Group]
Learning Rotations (10:20-11:00)	<i>The Jamestown Colony</i> [Reading Passage- Small Group]		
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)	<b>End of the Day Review [Whole Group]</b>		

Day 17	12-5-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)	<b>Reviewing Jamestown Facts in Content Notebook [Morning Work- Independent]</b>		
Learning Rotations (8:30-9:10)	<b>Jamestown- Providing Examples and Facts [Worksheet- Small Group]</b>		
Learning Rotations (9:15-9:55)		<b>Jamestown- Providing Examples and Facts [Worksheet- Small Group]</b>	
Learning Rotations (10:20-11:00)			<b>Jamestown- Providing Examples and Facts [Worksheet- Small Group]</b>
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)	<b>Jeopardy [Game- Whole Group]</b>		
Closing Meeting (2:15-2:30)			

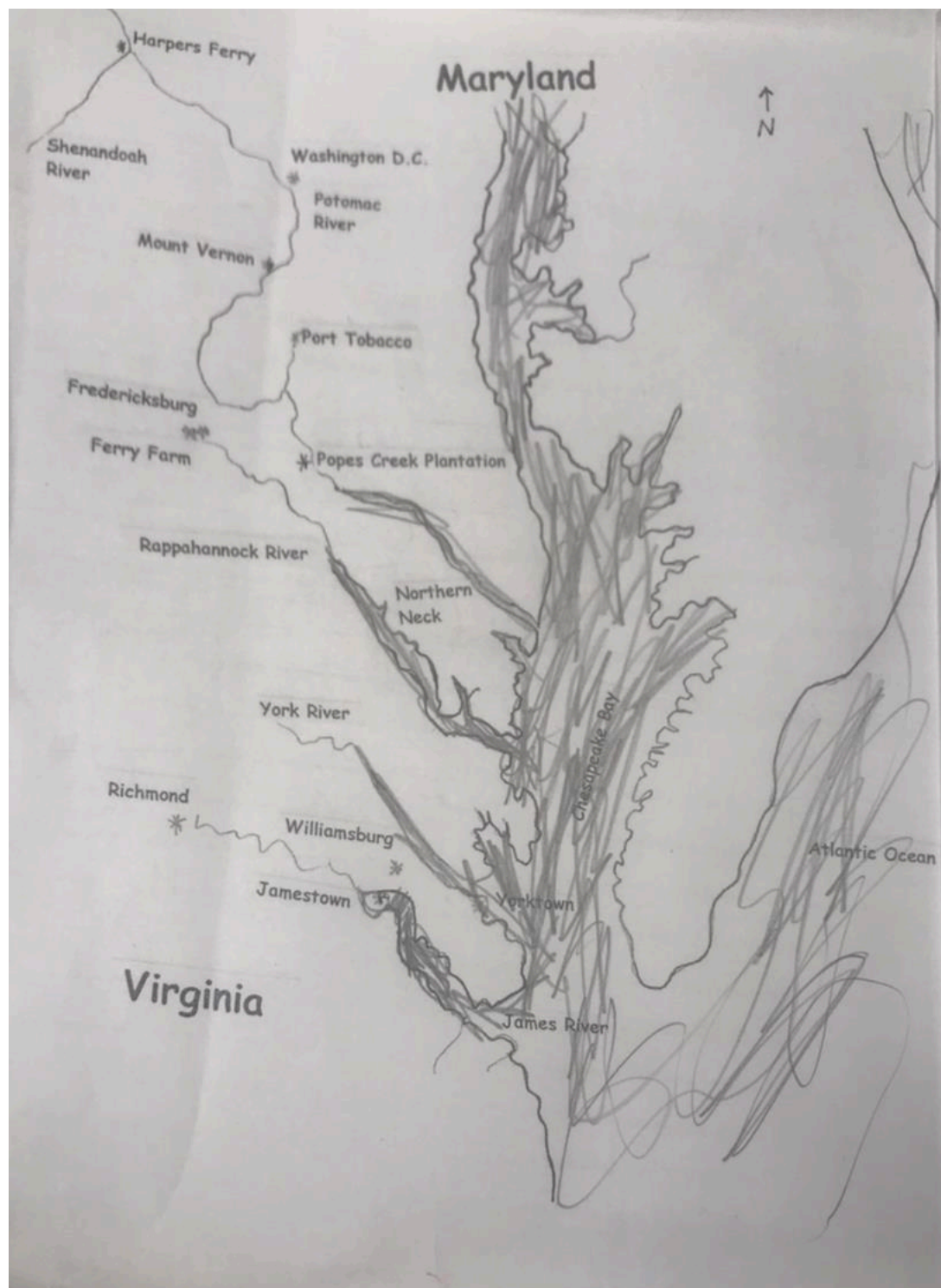
Day 18	12-6-2018		
	FIELD TRIP		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)			
Learning Rotations (8:30-9:10)			
Learning Rotations (9:15-9:55)			
Learning Rotations (10:20-11:00)			
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			

Day 19	12-7-2018		
Instructional Time (Not Full Day)	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Morning Meeting (8:05-8:25)	<b>Jamestown Field Trip [PowerPoint- Whole Group]</b>		
Learning Rotations (8:30-9:10)			
Learning Rotations (9:15-9:55)			
Learning Rotations (10:20-11:00)	Minecraft Presentations [Small Group- Individual]		
Learning Rotations (11:05-11:45)			
Homeroom Time (1:25-2:00)			
Closing Meeting (2:15-2:30)			

## Appendix R

Everyday Life in Colonial Jamestown			
Food	Housing	Clothes	Jobs
Pigs Chickens Corn Potatoes Apples Hunting	1, Bed Houses <hr/> Small Except Wheelohy and White	Cotton Wool Women in the places	Farmer Blacksmith Farming Carpenter Cook Keebler Seamster

## Appendix S



## Appendix T

11/13/18

# Jamestown Location

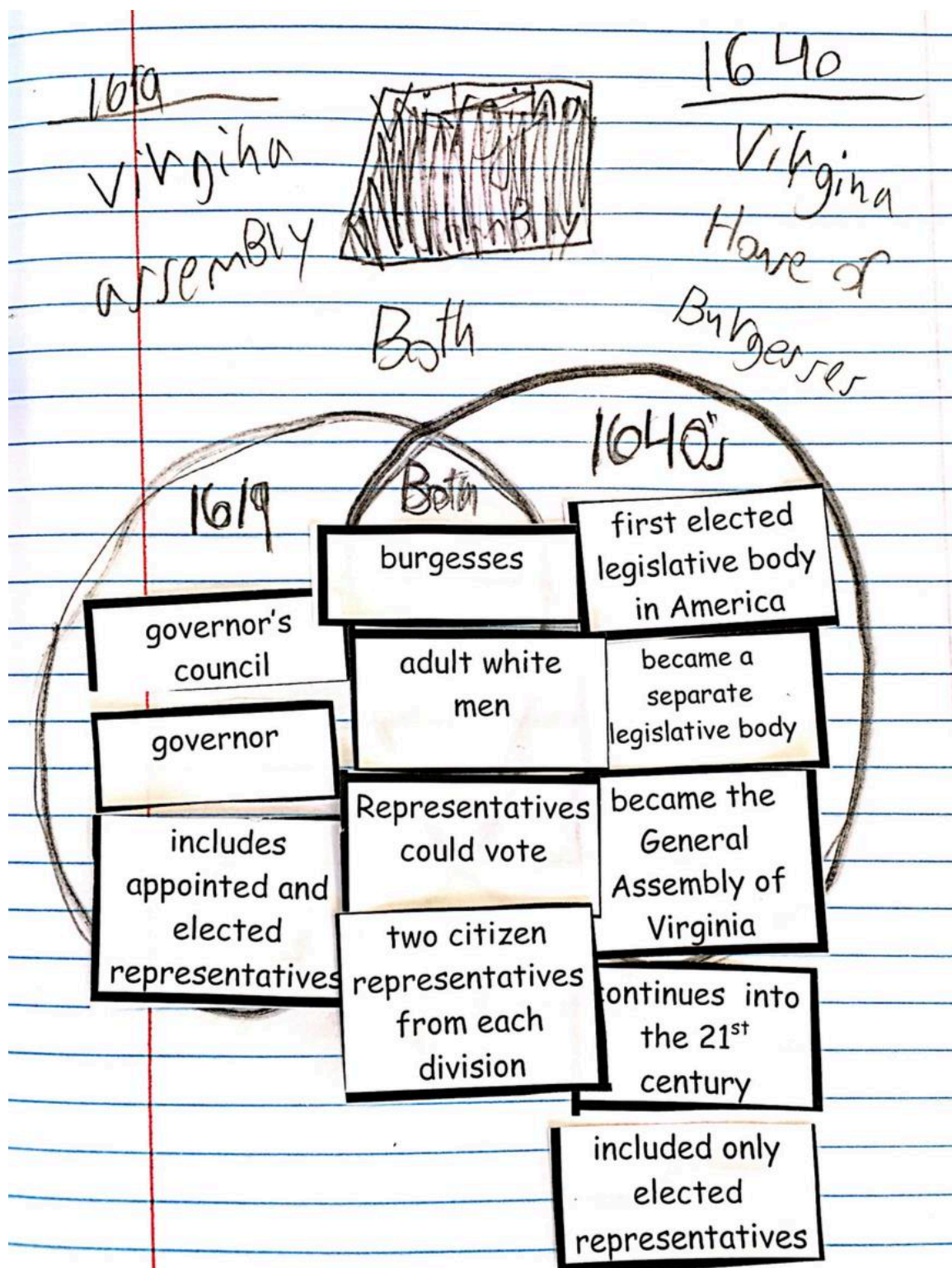
8:45-9:15 #1  
9:20-9:50 #2  
9:55-10:25 #3  
<Snack>  
10:50-11:40 #4

3 reasons the location was picked:

1. Safety - safe from attacks at sea
2. Thought they had good drinking water  
min
3. Water was deep enough to dock a ship

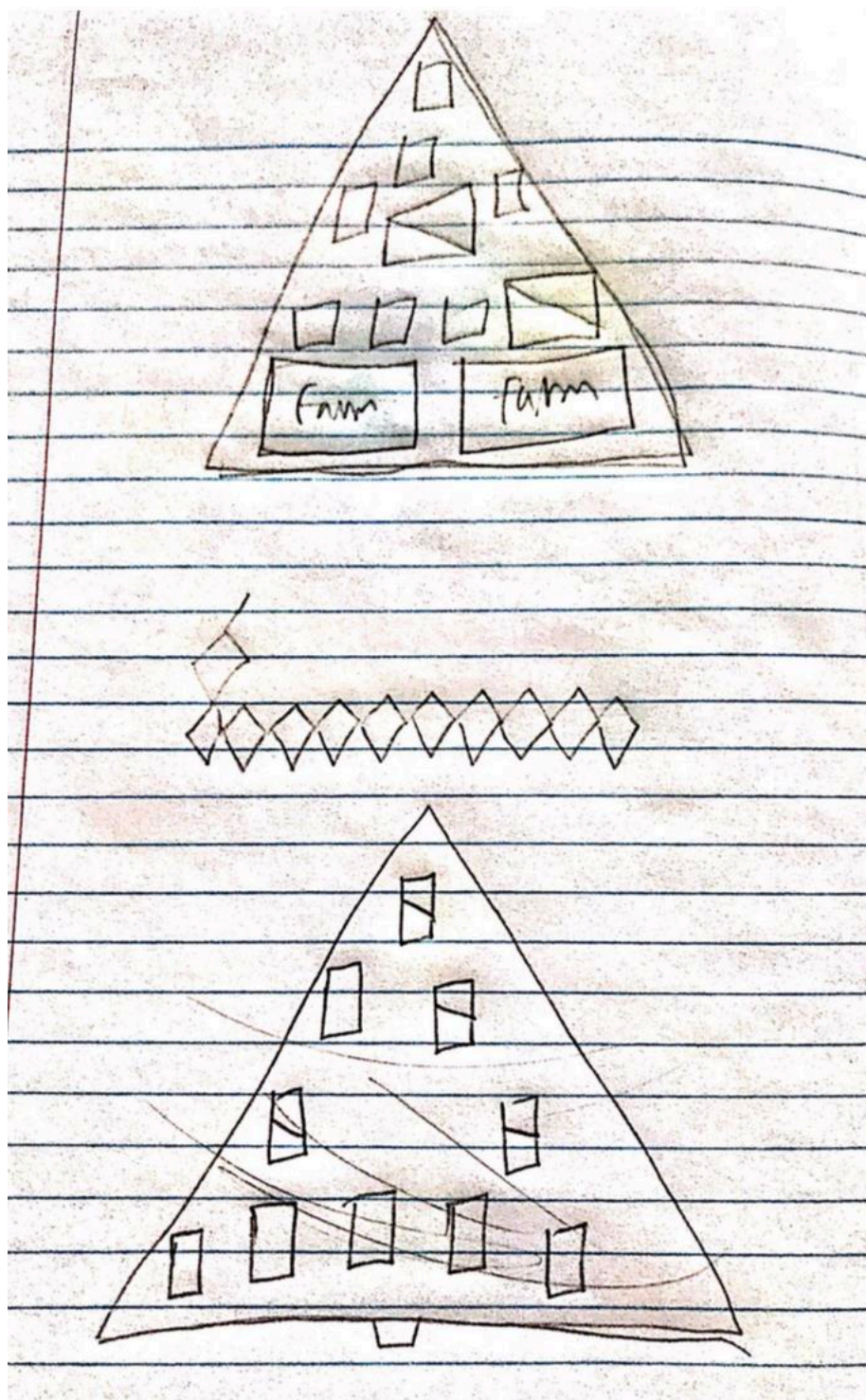


## Appendix U

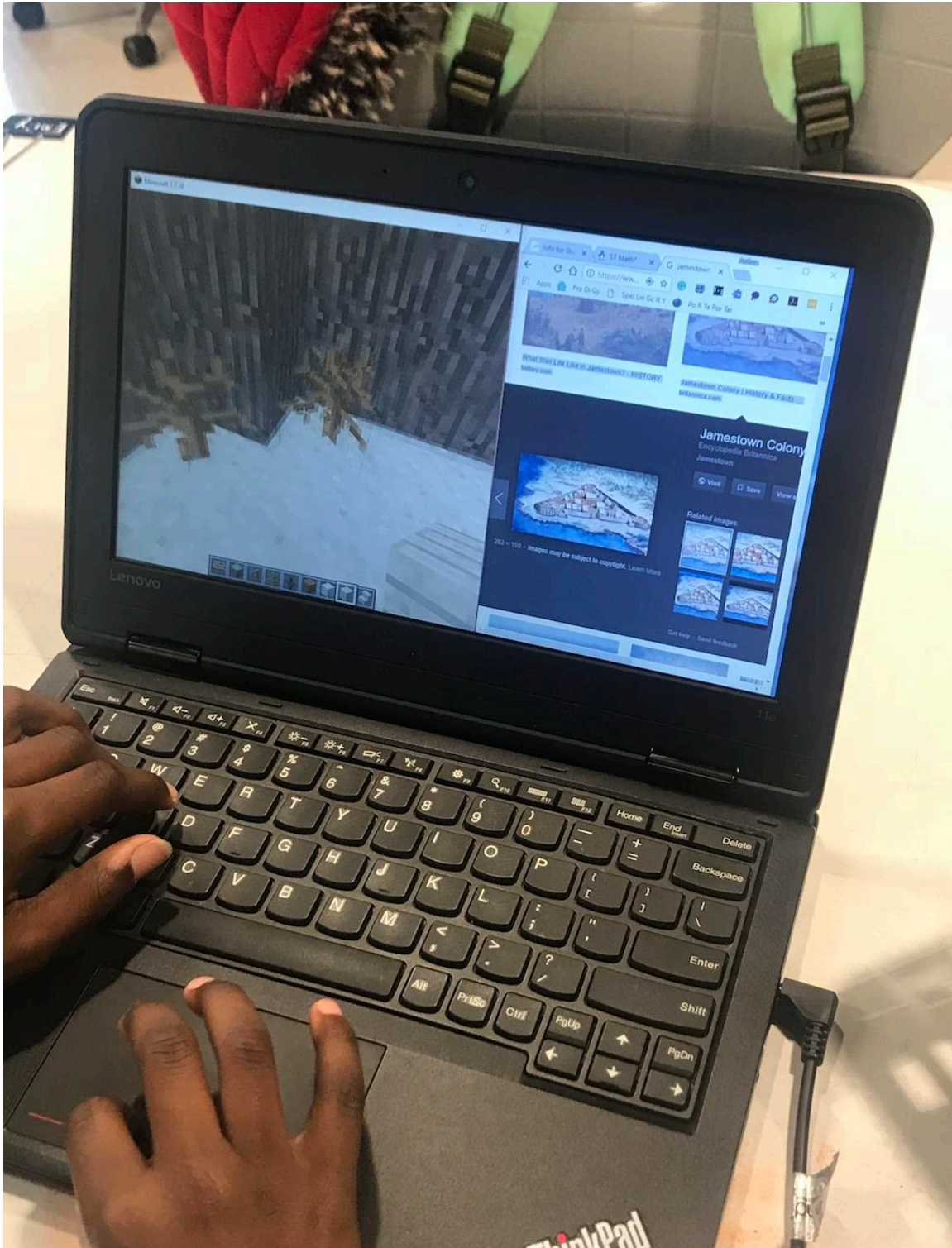




## Appendix V



## Appendix W





## Appendix X



## Appendix Y

