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K-5 Social Studies Content Standards: Investigating Critical Thinking for Informed Action

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Abstract

Reform efforts in social studies education such as the *College Career, and Civic Life* (C3) framework encourage students to consider civic engagement and action based on the understanding of real-life social issues. Few studies have, however, systematically examined the foundational documents representing the official state stance on content selection. Fewer studies have sought to understand the affordances and constraints in the depth of reasoning expected from young students in social studies elementary education. This study explored the dynamics of context-based critical thinking within the frame of states' Kindergarten-5 social studies content standards in the U.S.A. Employing a quantitative content analysis approach, the results indicate complex variations in context-based critical thinking levels are required by the states' content standards with an extensive orientation towards superficial contextual thinking. The study discusses the implications of the states' K-5 standards expectations on engaging students in complex thinking. It provided a new lens to make sense of students' context-based critical thinking as they relate to standard expectations.

Keywords: Critical thinking in social contexts, content standards, social studies, elementary education, young children.

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Most educators and reformers agree critical thinking should be a core of the curriculum if students are to develop the competences needed to thrive in the present and shape their future (e.g. Harris, 2007; Herman, 2008; Lim, 2015; Organization for Economic Cooperation and Development, 2018). This perspective is observable in social studies education. Reform efforts in social studies education such as the *College, Career, and Civic Life* (C3) framework indicate a commitment to supporting students' development of a strong capacity for inquiry and informed civic action as the world becomes more polarized (Bartelds et al., 2020; Levinson & Levine, 2013; National Council for Social Studies [NCSS], 2013). A goal of the reform effort is to help students develop the capacity for social responsibility and social justice as the content standards expectation. The reform effort encourages students to consider civic engagements based on the understanding of real-life social issues and contextual realities and take informed action (NCSS, 2013; Swan & Griffin, 2013; Zhao, 2020).

Social studies education, with the curricular-instructional goal of informed action, challenges students' methodical reasoning to consider how social issues are constructed, experienced or ignored by different groups, and how they are sustained, as well as taking steps to address the issues of concern (Levinson et al., 2013; Sunal & Haas, 2011). These requirements denote the need for students to develop a special kind of critical thinking beyond cognition. As such, the reform effort demands students develop and apply thinking in real life situations, which is identified in the current study as critical thinking in social contexts (CTSC). Arguably, situating critical thinking in the social context would require both cognitive and constructive thinking and learning processes, reflecting the necessity of individual students developing the capacity to create meaning, to validate that meaning through communicative action, to engage in

democratic deliberation and to take informed actions (Author, 2021; Garrison, 1992, Lim, 2011, NCSS, 2013).

Several studies have examined the development of critical thinking in young learners. Discourses in research focus on crafting curricular resources supportive of a range of activities promoting critical thinking for young learners as they attend formal schools (Alloway, et al., 2005; Cote & Hay, 2002; Loeb et al., 2004). These studies indicate school contexts are the only compulsory place where young learners can develop the abilities for critical thinking, and social studies education curricula provide one of the channels for students to develop their abilities to inquire about social issues and transfer learning into action in social contexts (e.g. Bickford et al., 2020; Callahan et al., 2019; [NCSS], 2013; Scheer et al., 2012). Current shifts in social dynamics, which include the unfounded claims of election fraud have resulted in excessive, bitter rhetoric (Pearcy & Clabough, 2018). Disproportionate suffering of some community members from COVID-19, brutality, and violence, and proliferation of anti-vaccine rhetoric especially on social media, represent cases in point. A more polarized discourse on these issues based on ideologies make visible the urgent need to help students develop critical thinking and situate such reasoning in social contexts.

The *College, Career, and Civic Life Framework* demands today's students, as early as kindergarten, demonstrate competences in 'four dimensions: 1) Developing questions and planning inquiries; 2) Applying disciplinary concepts and tools; 3) Evaluating sources and using evidence; and 4) Communicating conclusions and taking informed action.' (NCSS, 2013, p. 12). The present study cut across the four dimensions. To help students achieve these goals, teachers of social studies are required to "plan and implement instruction and assessment that facilitate collaborative, interdisciplinary environments formulated to guide students in the learning of

disciplinary facts, concepts and tools, participate in disciplinary inquiry, and create relevant forms of representation" (NCSS, 2018, p. 22). Achieving the curricular and pedagogical reform goals requires an understanding of the nature of the learning objectives found in the standards states have adopted. The standards document is the official foundation for curricula framing in a state. Accordingly, it provides insights into affordances and constraints on helping K-5 students develop context-based complex reasoning that can nurture informed action.

Young learners need the experiential opportunity elementary social studies education provides in order to productively apply concepts in civic engagement necessary for informed action on social realities (Levinson & Levine, 2013). Many important components of schooling may contribute to the development or regression of cognition, civic engagement and informed actions. For example, scholars have identified various factors as potential facilitators and inhibitors of students' capacity for development including the ability to engage in complex and creative thinking (Johnson, 2019; Lim, 2015). Such factors include teachers as curricula gatekeepers (Thornton, 2005), the dynamics of teacher-curriculum interactions (Ball & Cohen, 1996; Brown, 2009; Remillard, 2005), and the nature and effective infusion of social studies education curriculum resources themselves (Author & Other, 2021; Bickford et al., 2020; Callahan et al., 2019; Johnson, 2019). Nurturing students' capacity for and actual performance of informed action does not occur in a vacuum. Arguably, it involves developing and applying critical thinking in a social context, which depends among other factors, on the commensurate substance of the foundational document for curricula materials framing such as the states' standards (Cote et al., 2003). The consensus among most educators is that elementary schooling should promote critical thinking for informed action among young learners as early as Kindergarten (Abrami et al., 2008; DeWitt et al., 2013; NCSS, 2013; 2018). Social studies

standards inclined to nurture context-based critical thinking are one way to enhance informed action.

State social studies standards are officially guides for potential content selection and organization for all school-aged students. Many teachers draw upon the state standards to design lessons, present activities and assess students' learning (Bellow & Bodle, 2017; Brophy et al., 1991; DeWitt et al., 2013; Eargle, 2016). Available evidence on critical thinking as it relates to social studies content standards for students provides unique insights. As DeWitt and colleagues (2013) reported, many states' standards and their learning objectives for high school students favor lower-level thinking while others expect students to demonstrate higher order thinking and problem solving. Attention is required on the examination of the very nature of K-5 states' social studies content standards, which are penultimate standards to high school, and the tools for curriculum alignment, instruction, and assessment of and for young students' learning (NCSS, 2010; Sunal et al., 2011). Limited studies have engaged in a systematic analysis of the content of K-5 state standards contents for insights into the degree to which social studies standards demand context-based complex reasoning, which is imperative for informed action. To bridge the gap, this study examines the specific areas in which critical thinking in social context is addressed in a sample of states' K-5 social studies.

The research questions guiding this study are:

1. What is the nature of learning objectives found in a sample of state K-5 social studies standards as they relate to context-based critical thinking in K-5 across the selected states?
2. What is the trend in levels of context-based thinking expected in K-5 social studies standards across the selected states as they relate to their

a) students' enrollment weight, and

b) textbook adoption status to advance standards, accountability test status, and K-5 grade levels?

Theoretical Perspectives

This study is situated in literature on critical thinking as it relates to young children's reasoning in contexts and their social experiences. It draws on the research insights on the current status of curricula resources, especially state standards.

Critical Thinking and Social Studies Content Standards

An understanding of the content of states' social studies standards', as they relate to critical thinking, is complex as it is interwoven with various social, political, and philosophical ideas and practices. Blurring the understanding of critical thinking in states' social studies standards, for example, are enduring disagreements on the conceptualization of critical thinking in literature (Garrison, 1991; Ryen, 2020; Kuhn, 1999; Lipman, 2003; Mulnix, 2012; Zhao, 2020), the paradigm war on national curriculum policies and teaching (Gage, 1989; Wood, 2004), and the hotly contested issue on what is worth teaching as social studies in the classrooms (Evans, 2004; Leming et al. 2003; Ross & Marker, 2005a, 2005b). Within the accountability movement, states' standards are the primary documents expected to drive teaching and learning in the classrooms (Eargle, 2016). Irrespective of states' standards content and the associated contentions, some teachers craft their instruction to help students' think critically because most educators agree formal schooling should promote critical thinking (Abrami et al., 2008; Scheer et al., 2012). Evidence is limited, however, on what states' content standards expect from K-5 as learning objectives as they relate to engaging students in complex thinking and the nature of contexts the critical reasoning is situated.

In social studies education, interest is growing in providing insight on the constraints and affordances of the states' social studies standards on engaging students in critical reasoning. For example, DeWitt and colleagues (2013) examined the extent to which four states' mandated states' social studies assessments promoted grades 9-12 students' higher order thinking, highlighting the alignment between test scores and the competences laid out in states' standards using Bloom's Taxonomy. They found several states' social studies standards content and benchmarks expected students to demonstrate higher order thinking and problem solving. The study indicated variation in the degree of higher order thinking found in the four states' high school social studies standards examined with about 44% for New York, 57% for Ohio, 48% for Texas, and 17 % for Virginia. However, the percentage of higher order thinking tested in states' mandated accountability assessment is as low as between 2-12%. These findings appear to align with the notion that the United States' education remains far from helping students develop the complex reasoning that enables them to participate fully as global citizens (Kuhn, 1999). DeWitt's et al., study calls attention to some neglected issues about social studies education and state standards requiring a new line of research. One such issue is the dynamics of critical thinking in K-5 social studies standards that expect students to engage in complex reasoning and situate such reasoning in a social context. Examination of K-5 standards is important as studies have shown elementary social studies standards contain inconsistent and incomplete narratives (Bellows & Bodle, 2017; Eargle, 2016), thus, heightening interest in critical thinking in K-5 states' standards.

Young Learners' Thinking and Social Experience

Young students are capable of critical thinking, although many research studies appear to view young students as incapable of complex reasoning and dispositions (Kennedy et al., 1991;

Lai, 2011; Willingham, 2007). They are developmentally ready at early age to learn more complex ways of thinking and apply them in activities such as making rules to problem solve among themselves, proposing alternative approach to actions, and making conjecture based on reasons within the limit of their abilities (Silva, 2008; Taggart et al., 2005). Many young children can employ abstract thinking language such as 'think,' 'guess,' and 'know' when they are talking (Florea & Hurjui, 2015; Heyman, 2008; Lai, 2011; León, 2015; Lipman, 2003; Taggart et al., 2002, p. vi). For example, many young children make rules on turn-taking during unstructured play to establish the sequence on who goes first and who follows. They are aware that an attempt for someone to dominate the play while the other person has limited chance to participate may lead to conflict and need addressed. Such rule-making process is a cognitive process and actions to problem solve misunderstanding, avoid conflicts, and achieve equity for all. This is the kind of logical reasoning and actions commensurate with adults', which is performed by young learners within a given precept. The limits of critical thinking young learners expressed can be attributed to a lack of relevant experiences or of the disciplinary content knowledge needed to engage in a task. Hence, they often quickly reach conclusions on issues (Heyman, 2008; Kennedy et al., 1991). Young learners, therefore, advance in their accuracy and completeness of knowledge and thoughtfulness if the curriculum affords them the opportunity to think about aspects of disciplinary concepts (Brophy & Alleman, 2005).

Social experiences play a role in explaining children's critical reasoning. Three-year-old young learners possess the ability to understand that one individual is more trustworthy than another (Heyman, 2008). Young learners understand when inaccurate information is communicated by others. They are aware that not everything people say is true (Heyman, 2008; Kuhn, 1999). As reported by Koenig and Harris (2005) and Harris (2007), 3- and 4-year-old

children already have some awareness that individuals may not have the same level of credibility in the statements they utter and information they provide. Children as young as 4-years-old preferred sources who had earlier responded correctly by labelling familiar objects accurately 75% of the time compared to those who had responded correctly only 25% of the time (Pasquini et al., 2007). The study by Jaswal and Neely (2006) confirmed preschool children have a stronger preference for adults who had previously been accurate in the information they provided on issues. They also showed preference for sources who are older compared to their peers. The reason for the stronger preference for people with a history of accuracy suggested young learners can use social experience to enhance critical reasoning in social contexts.

Preschool-age children take general knowledge into consideration when evaluating others as sources of information, indicating they have an early awareness of differing domains of expertise (Lutz & Keil, 2002). In the same vein, preschoolers are aware speakers may make false or misleading statements as they understand verbal statements may not reflect a person's actual actions (Lee & Cameron, 2000; Moses & Baldwin, 2005). Even though young children have the ability to understand that people do not always accurately communicate what they know, children do not usually have the motive to distort information. In their study, Mills and Keil (2005) asked children aged five, eight, and 10 to evaluate a speaker's claim on an ambiguous issue about who won an athletic race. Compared to children who were five years old, some older children between ages eight and 10 showed more doubt in claims that aligned with known self-interest of the speaker. Such reasoning, Mills and Keil argued, is indicative of critical thinking, reflecting a bias toward assuming assertions are accurate as the children contemplated claims aligned with the known self-interest of the speaker.

In elementary social studies education, there are indications young leaners have the capacity to think critically. As Bickford and colleagues (2020) reported, fourth grade students for example, are able to scrutinize and make meanings from primary sources when historical inquiries are infused in curricula resources for social studies. Learners in fifth grade can draw from an inquiry of social studies concepts to construct experiences and perspectives of distant people. They can draw on historical inquiries to make sense of race and racism, to develop empathy through the experience of the curriculum focusing on Black history, to construct a developing reasoning on life choices and self-worth (Walker & Russell, 2020), and to develop creative works such as 'found poetry' (Johnson, 2019, p. 335). They may draw on volunteering to make sense of empathy (Swain & Chapman, 2017) demonstrating context-based complex reasoning with social studies activities. These findings further indicate young learners can think critically by applying social experiences, making the calls by social studies scholars for framing K-5 social studies content standards to enhance critical thinking in real-life contexts (Busey & Walker, 2017; Levstik & Tyson, 2008; Sunal & Haas, 2011) more important.

A consensus from these studies is meaningful content standards may support curricular offerings in schools that enhance young learners' engagement with complex thinking. States' standards may play a crucial role in regulating what gets taught and assessed (Bellow & Bodle, 2017; DeWitt et al., 2013; Eargle, 2016), in framing of curriculum materials both in content and substance (Author & Others, 2020; Avery & Simmons, 2001; Bellow & Bodle, 2017; Beltramo & Duncheon, 2013; Busey & Walker, 2017), and in shaping teachers' perspective of critical thinking (Baildon & Sim, 2009; Butler et al., 2015). Overall, research indicates states' standards of learning are a key policy factor with potential to influence teaching practices and students' learning experiences. Yet the foregoing research shows a gap, especially in elementary social

studies education. States' standards of learning are less examined than are their implementation considering the expectation to engage K-5 students' context-based critical thinking. Pertinent to enhancing the development of students' complex thinking and informed action is empirical evidence on the characteristics of states' K-5 social studies learning standards as a channel of influence for context-based critical thinking. This area is the focus of the current study.

Methods of Inquiry

This study employed descriptive quantitative content analysis (Krippendolf, 2004). The data came from the texts of six U.S. states' K-5 social studies standards of learning (SOLs). The selected states were: California (CA), Florida (FL), Illinois (IL), Michigan (MI), New York (NY) and Texas (TX). These states' standards were selected because they represent diverse cultural, household, political, economic, religion, and socioeconomic diversity metrics of States in the U.S.A (Adam, 2020). Additionally, the sample states embody diverse accountability structure (Education Commission of the States, 2018). The social studies standards from the samples U.S.A states were downloaded from their respective state department websites. Many states published supplemental documents based on the official standards to guide teachers' pedagogical decisions. The analysis intentionally focused on the K-5 parent documents to align with the purpose of the current study. Six states were selected, because the study is exploratory and to ensure the data were manageable and to ensure in depth analysis of the data.

<Insert Table 1 about here>

For analytical purposes, four variables were included: 1) the enrollment weight of the states partitioned as small, medium, and large (see Table 1); 2) textbook adoption status to advance standards; 3) summative test status for social studies, and 4.) grade levels. These variables were included to provide further depth in the analysis to capture possible differential

statuses among the sample states. The partitioning of states' enrollment weight follows the 2016-2017 National Center for Educational Statistics' average student enrolment report. In this study is small partitioned as < 2 million average enrollment (MI, ~ 1.5 million, medium partitioned as between 2 million to < 5 million (IL, ~ 2 million; NY, ~ 2.7 million, FL, 2.8 million), and large partitioned as 5 million and greater (TX, ~ 5.4; CA, ~ 6.3). Sample states' enrollment ratio rank ([2016-2017], National Center for Educational Statistics, 2019), was the latest known as at the time of this analysis. It was included as an additional variable to account for the debates around states' enrollment weights and their influence on content standards (Thevenot, 2010). Social studies textbook adoption status was included to address the suggested influence of textbook adoption on content standard framing (Crocco, 2014). Statewide social studies accountability test status was included in the analysis to address factors of accountability test waves. Since accountability tests are presumably aimed at educational reform, there are indications they may influence content standards development process and their substance (Gilmour, 2019; Linn, 2000; Schneider, 2015). Finally, grade levels were used a variable to explore the variations among grade levels and associated expected increased learning as students move up the grades. These variables were considered in the analytical process within the frame of how K-5 content standards expect young learners to engage in complex thinking in social contexts.

Analytical Procedures

The analysis of the standards' content followed the guidance of Krippendorff (2004), Riffe and colleagues' (2019) content analysis and the adapted Saldaña's (2013) multi-phase coding approach. The K-5 standards of learning for California, Texas, Florida, New York, Illinois, and Michigan were analyzed. The units of analysis for this study are the learning objectives of the standards. The initial categories of the standards' learning objectives were

created drawing insight from extant literature on conceptualizations of critical thinking and young learners' capacity to engage with and express complex reasoning in contexts (see the theoretical perspective section). The categories of the standards' learning objectives were piloted with two grade levels to establish clarity. After the piloting, each of the six selected standards were re-read focusing on the K-5 portions and the standards of learning coded. A sentence-by-sentence approach was employed to deductively categorize all six states' K-5 standards to identify descriptive text representing identifiers. Each learning objective was interpreted, and identifiers were extracted and placed in categories based on the meaning they suggested to represent different levels of expected context-based complex reasoning present in the states' K-5 social studies standards. The description of each code was modified, refined, and broadened to allow for the possibilities of emergent codes that may not suit the initial categories. This process yielded emergent and initial categorical codes to explain the alignments of the standards of learning to the expected actions from young learners and the extent to which they reflect context-based thinking. Focused coding was conducted by re-examining the learning objectives' alignment with the context-based levels description.

The analysis was thematized by levels to reflect the elements in the complexities of thinking actions present in social studies state standards of learning. Three new distinct categories were generated that were regarded as levels of complexities of thinking in social context: Surface, Shallow, and Real-situation levels of critical thinking in social contexts. In addition to these three categories, some standard's objectives were categorized as generic engagement because they can be applied to none or any of the three levels and are usually immeasurable. For example, the identifier 'know' is considered generic as it is not measurable, and its meaning can be applied across the three CTSC levels generated during the analyses. Each

level's further description and associated standards' learning objective identifiers and examples are presented in Table 2. The overarching levels resulted by grouping together some closely overlapping categories. The goals were to incorporate and explain objectives and levels of critical thinking that build on one another. The maximum attainable proportion is 100% for each of the four levels of critical thinking in social contexts. Finally, the frequencies and percentages were calculated for each category and each grade and state, and for all six states. A Kruska-Wallis analysis was conducted using the four analytical variables, highlighted above, to examine the differences in critical thinking in social contexts extracted in the states' standards.

Findings

The proportion of each level of critical thinking in social contexts (CTSC) as contained in K-5 states' standards is descriptively operationalized as, 45-100 % as large, 14-39% as moderate, 4-13% as middling, and 0-3% as non/minimal CTSCs. The results were interpreted based on the proportion of, and the overlap in, standards' learning objectives represented by each level. These were then refined to propose a new framework consisting of: surface, shallow, and deep critical thinking in social contexts based on a matrix (see Table 2 in the appendix), for analyzing social studies education curriculum materials.

<Insert Table 2 about here>

Distributive Variation of Critical Thinking in Social Contexts in Sample Standards

The findings indicate the distribution of standards' learning objectives as they relate to critical thinking in social contexts. The expectation of critical thinking in social contexts in K-5 social studies standards varies in the level of sophistication among states but favors lower-level surface thinking expectations. The expected depth of thinking ranges from those: 1) expecting basic understanding of concepts and problems, surface or superficial critical thinking in social

contexts category; 2) expecting students to apply their existing knowledge, new learning, and group interactions, to make sense of disciplinary content and issues in hypothetical contexts, shallow critical thinking in social contexts category; to 3) expecting from young learners real-world application of disciplinary concepts and ideas (real-life critical thinking in social contexts category); as well as 4) expecting generic engagement with social studies concepts.

<Insert Table 3 about here>

Predominating the standards are learning objectives expecting basic understanding of social studies concepts and expecting basic engagement with the learning contexts, which is operationalized as surface critical thinking in social contexts. All the states have their standards' learning objectives distributed within the approximate range of 45-77%, representing a large degree of lower-level thinking expectation surface critical thinking in social contexts. In contrast, they also have standards of learning representing the higher level of real-life critical thinking in social contexts within the approximate range of 4-25%, indicating middling level of sophistication. The standards' learning objectives requiring students to perform generic and immeasurable thinking and actions present in some states' K-5 social studies standards are also notable, ranging from about 22% (California) to about 25% (Texas).

Trend in Critical Thinking in Social Contexts Expected in Sample Standards

The analyses next considered shifts representing the differences in surface, shallow, and real-life critical thinking in social contexts across states. As a synopsis of the findings, the analyses revealed states with large enrollment weight and those adopting a textbook substantially have learning objectives promoting engaging students in shallow critical thinking in social contexts. Those with small enrollment weights favor both surface and real-life context-

based critical thinking. States that do not adopt textbooks for social studies instruction favor real-life context-based critical thinking. Notably, states with accountability testing for social studies instruction substantially favor more surface hypothetical context-based critical thinking than states without the test even though all states expected surface level than shallow and real-life context-based critical thinking. States without accountability testing for social studies instruction also substantially favor more real-life context-based critical thinking that states with the test. Grade levels influence the difference in the surface proportion of context-based critical thinking, which increases as students progresses through K-5 grade levels.

Context-Based Critical Thinking and Enrollment Weight Trends

The study found some statistically significant differences between the distribution of standards' learning objectives representing surface ($\chi^2(2) = 8.476$, $p = .014$) and real-life ($\chi^2(2) = 13.242$, $p = .001$) context-based critical thinking across enrollment weight and all states' content standards. Follow-up Dunn's pairwise tests indicate a strong difference between the pair of medium – small ($\chi^2 = 2.592$, $p = .029$) states' enrollment weights for surface context-based critical thinking. There was no evidence of a significant difference between the other enrollment weight pairs: large – medium ($\chi^2 = -2.078$, $p = .113$), and large-small ($\chi^2 = .894$, $p = 1.00$). The mean score, 26.50 for states with small enrollment weight, indicates they have the highest surface level standards' learning objectives and 13.64 for medium enrollment weight states indicates they have the lowest within the pairs. For the shallow context-based critical thinking category, the pairwise test indicates strong evidence in difference between the pair of medium – small ($\chi^2 = -2.821$, $p = .014$) states' students enrollment weights. Whereas there was no evidence of a significant difference between the other enrollment weight pairs: large – medium ($\chi^2 = .424$, $p = 1.00$), and large – small ($\chi^2 = - 1.703$, $p = .266$). The mean score 25.46 for states with large

enrollment weight indicates they have the highest shallow context-based critical thinking. Also, the mean score of 14.50 for states with medium enrollment weight reflects they have the lowest shallow context-based critical thinking within the pairs. Finally, for the real-life context-based critical thinking category, the pairwise test suggests difference between two pairs of states' students enrollment weights: medium – small ($\chi^2 = 3.636$, $p = .001$) and large – small ($\chi^2 = 2.678$, $p = .002$), while there was no evidence of a significant difference between the large – medium ($\chi^2 = .424$, $p = 1.00$) enrollment weights. The mean score of 32.17 for states with small enrollment weight shows they have the highest standards' learning objectives representing real-life context-based critical thinking. A 14.19 mean score for states with medium enrollment weight indicates they have the lowest within the pairs.

Context-Based Critical Thinking and States' Textbook Adoption, Accountability Test Statuses, and Grade Trends

When the content standards benchmarks were partitioned by states' K-5 textbook adoption status, the analysis found a statistically significant difference between the distribution of standards' learning objectives representing shallow ($\chi^2(1) = 6.465$, $p = .011$) and real-life ($\chi^2(1) = 4.204$, $p = .040$) context-based critical thinking. But, no statistically significant difference was found in surface context-based critical thinking levels in each content standard, irrespective of whether a state has K-5 textbook adoption status. Multiple comparisons are not performed because the overall test does not show significant differences across K-5 social studies content standards. The analysis further found a statistically significant difference in the distribution of learning benchmarks representing surface context-based critical thinking ($\chi^2(1) = 16.683$, $p = .000$) in the content standards' learning objectives for states with summative accountability tests and those without accountability tests. Finally, the analyses found no statistically significant differences between the distribution of standards' learning

objectives across grade levels representing surface ($\chi^2(5) = 3.124$, $p = .681$) and real-life ($\chi^2(5) = .524$, $p = .991$) contexts-based critical thinking across grade levels. However, the analysis provided results indicating that grade levels influence the difference in the proportion of shallow ($\chi^2(5) = 11.687$, $p = .039$) context-based critical thinking levels in each content standard, which increases significantly between Kindergarten and 5th grade. The results allude to the position that social studies content standards are a foundational document with powerful forces that may interact with various aspects of schooling (Mathison, 2006). The nature of the social studies content standard may shape the nature of complex engagement expected of students and the extent to which students engage in active learning that involves cycles of planning, fact-finding, action taking, and contemplating the real-life effects of actions (NCSS, 2013).

Discussion and Conclusions

This study examines the specific areas in which critical thinking in social context is addressed in states' K-5 social studies standards represented in expectations of standards' learning objectives.

Critical Thinking in Social Contexts and Social Studies Standard Dynamics

The results indicate states' social studies standards demand critical thinking in social contexts among young learners, albeit, at varied proportions. This variation aligns with existing research findings suggesting states' standards of learning are a key policy factor with potential to influence students' schooling experience (Bellow & Bodle, 2017; Busey & Walker, 2017; Butler et al., 2015). States' K-5 social studies standards expects young learners to engage in some degree of context-based critical thinking, although the situation of such expected critical thinking varied as some focus on superficial contexts (surface CTSC), some focus on hypothetical

contexts (shallow CTSC), and some focus on real-word contexts (real-life CTSC). The finding is also consistent with the existing literature suggesting differences in paradigms may influence expectations on complex reasoning among students (Ryen, 2020; Kuhn, 1999; Mulnix, 2012; Zhao, 2020), and what the nature of complex reasoning looks like, especially among young learners in social studies education (Evans, 2004; Leming et al., 2003; Ross & Marker, 2005b).

Notably, critical thinking in social context promoted in the K-5 social studies content standards is largely superficial and lower level, which may be insufficient for supporting students' informed action. The findings show the standards' learning objectives are limited in their requirements for young leaners to integrate new curriculum knowledge with the existing student knowledge. The standards' learning objectives are also limited in expecting young learners to construct new solutions. The standards have lesser orientation towards requiring K-5 students to engage in critical thinking that helps them position learning in real-life contexts for informed actions such as creating new ideas, proffering alternative solutions, proposing coordinated action, validating claims, and applying concepts to personal life and new related situations (Sunal & Haas, 2011). This finding further indicates K-5 content standards appear to subscribe to the view that young students are incapable of complex reasoning and dispositions (Kennedy et al., 1991; Lai, 2011; Willingham, 2007). Such skewing of thinking expectations to a surface level, as the study's findings indicate, can be construed to counter evidence-based ideas about young learners' capacity to engage in complex thinking (Jawal & Neely, 2006; Pasquini et al., 2007). Young learners are developmentally ready at an early age, 3- and 4-years-old, to learn more complex ways of thinking and apply them in learning activities (Florea & Hurjui, 2015; Heyman, 2008; Lai, 2011; León, 2015). Since content standards appear to be demanding less

complex thinking, one may conclude that they are behind in matching the current research on young learners' abilities.

States large enrollment weight and those that adopt textbooks favor shallow critical thinking in social contexts. Those with small enrollment weight favor both surface and real-life context-based critical thinking. States that do not adopt textbooks for social studies instruction favor more real-life context-based critical thinking. States without accountability testing for social studies instruction favor both surface and real-life context-based critical thinking. The findings support the existing literature indicating a wide range of forces exist influencing content standards development (National Research Council, 2002; Wixson, Dutro, & Athan, 2003). As hinted by Crocco (2014) and Linn (2000), the accountability tests' demand appears evident in K-5 social studies standards. Yet, despite the accountability-laden nature of social studies standards, the standards still have the expectation for students to develop critical thinking (DeWitt et al., 2013). The current study suggests a range of forces associated with schooling are present in the sophistication of levels of critical thinking in social contexts expected from young learners in elementary social studies education.

Limitations of the Study and Further Research

This study is not without limitations. The argument in this work is not whether states K-5 social studies standards promote critical thinking in practice or not. Rather, the foci are to examine the specific areas in which variation in critical thinking in social context is addressed in states' K-5 social studies represented in learning objectives expecting the transfer of complex reasoning to social context. In agreement with Thornton (2005), there is a shared understanding that individual teachers of social studies are curriculum leaders with broad perspectives on the goals of schooling and how to navigate competing standards. Teachers also have varied abilities

as they interact with curriculum resources and they shape curriculum in fundamental ways (Ball & Cohen, 1996; Mathison et al., 2006). Combining these perspectives within teachers curricular interactions, teachers and curricular resources may engage in recursive exertion of influence in curricular-instructional process, which the current study does not capture. The forces influencing the trend of sophistication of critical thinking in social contexts represented by standards' learning objectives may also depend on other factors not included in this analysis. The states' status as it relates to the limits of its practice of engaging a larger pool of multidisciplinary experts in education as the standard's framers can also be a force influencing the trend in sophistication of critical thinking in social contexts. The enrolment weight employed in this study follows the available students' enrolment data by states (National Center for Educational Statistics, 2019). This is an aggregate of K-12 students, which cannot be partitioned further for K-5 students group only. Aggregation, therefore, becomes a limitation. The study does not represent all geographical regions in the U.S. as there is no primarily rural state's standard in the set of the sample, for example.

Future research is needed to characterize the dynamics of teachers' interactions with social studies standards' learning objectives within the frame of critical thinking in social contexts transcending the mainstream notion of higher order thinking. Interested researchers may focus on understanding the profile of teachers' curriculum design and instructional practices to engage young learners in complex thinking situated in real life contexts. Also worthy of exploration are the range of capacity for and performance of informed action students developed when they are taught by teachers with different profiles of lesson design and instruction within the expectations of critical thinking in social context. To help young learners develop the

capacity for complex reasoning for informed action, understanding content standards expectations for students' engagement in complex context-based thinking in schools is essential.

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Table 1

K-5 Social Studies State Standards Analytical Criteria Matrix

			Summative test status	
States	Average enrollment, 2016-2017 (in millions)	Textbook adoption status	Summative testing status	Grade levels
California	***6.3	√	X	X
Texas	***5.4	√	√	8th
Florida	**2.8	√	√	6th, 7th, & 8th
New York	**2.7	X	X	X
Illinois	**2.0	X	X	X
Michigan	*1.5	X	√	5th & 8th

Note. X = No, √ = Yes. U.S. States by region: West- California; South- Texas & Florida; Northeast- New York; Midwest- Illinois & Michigan. NA = Not applicable as the states' standards were not included in the analysis. Enrollment values sources (National Center for Educational Statistics, 2019) and approximate value indicated. *** = Large, ** = Medium, and * = Small students enrollment weights.

Table 2

A Synopsis of Critical Thinking in Social Context Matrix

Depth of Expected Thinking in Social Context Levels	**Description (Synoptic description for guidance only)**	**Sample Identifiers (Examples only)**	**Example of Social Studies Standards Learning Objectives**
Cognitive engagement/Generic Thinking Expectations in Social Contexts	A category representing standards' learning objectives requiring students to perform too generic and immeasurable thinking and actions. This can be applied to all levels of the critical thinking in social contexts.	Students will: Understand, know, recite, immerse, made aware, concentrate	Students will: "Learn about government institutions and practices" (CA, 2017, p. 49, Grade Two).
Surface/Superficial Context CTCS	Standards' learning objectives expecting *basic* understanding and expecting basic engagement with the learning contexts. These learning objectives may expect stimulating students' interest in studying problems. Surface critical thinking would not typically require the integration of new curriculum knowledge with the existing student knowledge nor involve construction of new or alternative solutions.	Observe, study, identify, link, argue, refer to materials, build on, explain, compare, consider, describe, locate, label, recognize, develop question, ask question, participate in discussion, and summarize, among others.	"Explain significance of national holidays and heroes" (TX, 2010, p. 19, Kindergarten)
Shallow/Hypothetical Context CTSC	Standards' learning objectives require students to use the combination of learnings from the curricular materials, self-learning, and group interactions as the basis to formulate and express a more sophisticated approach to problems or issues in hypothetical contexts. Although, shallow	Infer, induce, deduce, propose solution, refer to experience outside the course materials, test, design, predict, survey, consider alternative, reflect on, research, and investigate,	"Analyze the effects of specific catastrophic and environmental events as well as technological developments that have impacted our nation and compare them to other places" (Illinois,

	critical thinking's degree of sophistication would be higher than surface critical thinking, it also does not typically involve students' creation of solutions that are grounded in the real world but goes beyond superficial engagement represented by basic understanding of concepts, problems, and issues, among others.	analyze, clarify for solution, draw on/from, interpret, demonstrate, defend, and create argument, among others.	2013, p.17, Grade Five). "Investigate how people perceive places and regions differently by conducting interviews, mental mapping, and studying news, poems, legends, and songs about a region or area" (Florida, 2014, p. 8, Grade 3).
Real-life/ Real Life Context CTCS	Standards' learning objectives require students to develop and demonstrate cognitive and constructive elaborations, to connect the new learning processes or activities with the existing repertoire, and create a more complex critical thinking structure for crafting alternative solutions, new ideas, and ground the solution in the real world.	Propose coordinated actions, apply to personal life or secular world, implement, follow through, act, develop product, construct, build, solve, mediate, refine, communicate results, incorporate, proffer alternative solution, and create new idea, among others.	"Use location terms and geographic representations, such as maps, photographs, satellite images, and models, to describe where places are in relation to each other, to describe connections between places, and to evaluate the benefits of particular places for purposeful activities" (New York, 2017, p. 7, Grade Four) "Develop and implement an action plan to address or inform others about a public issue" (Michigan, 2018 Draft, p. 15, Grade One)

Note. CTSC = Critical thinking in social contexts

Table 3

The Distribution of Learning Objectives in k-5 States Social Studies Standards relative to Critical Thinking in Social Contexts Levels

State	Levels of Critical Thinking in Social Context				Total Frequency Count
	Cognitive Engagement	Surface CTSC	Shallow CTSC	Real-life CTSC	
CA	22.7(55)	45.0(109)	26.0 (63)	6.3 (15)	(242)
TX	25.0 (149)	55.7(332)	8.0 (53)	10.4 (62)	(596)
FL	4.3 (10)	71.9 (166)	19.5 (45)	4.3 (10)	(231)
NY	1.4 (3)	77.2 (166)	9.3 (20)	12.1 (26)	(215)
IL	1.4 (2)	48.3 (69)	24.5 (35)	25.9 (37)	(143)
MI	6.9 (26)	60.1 (227)	10.1 (38)	23.1 (87)	(378)
Total CTSC Proportion	13.6 (245)	59.2(1069)	14.6 (254)	13.5(237)	(1805)

Note. CTSC = Critical thinking in social contexts, CA = California, TX = Texas, FL = Florida, NY = New York, IL = Illinois, and MI = Michigan. Values in parentheses represent the frequency count for standards' learning objective and value outside the parentheses represents associated percentages of standards' learning objective as they relate to critical thinking in social contexts categorization.