Student-Centered Learning in the Social Studies Classroom: Effective Strategies that Build Critical Thinking

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STUDENT-CENTERED LEARNING IN THE SOCIAL STUDIES CLASSROOM:
EFFECTIVE STRATEGIES THAT BUILD CRITICAL THINKING

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EFFECTIVE STRATEGIES THAT BUILD CRITICAL THINKING

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MAY 24, 2022

APPROVED

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Critical thinking is a crucial skill which today’s K-12 students must develop in order to be engaged and curious global citizens. The social studies classroom is a proxy for democratic participation and therefore an exemplary setting to spark student critical thinking. This educator sought to discern the effectiveness of student-centered learning strategies as it relates to the development of student critical thinking. When educators adopt a social constructivist pedagogical practice, students are placed at the center of all classroom instruction and provided opportunities to assimilate prior knowledge with newly constructed knowledge. Research reveals that such a classroom setting pushes students to higher-order thinking, and truly develops their critical thinking skills.
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CHAPTER I: INTRODUCTION

Background

As a social studies educator, this researcher is always looking for more engaging lessons for his students. The lessons sought by this educator are ones in which students engage in more peer collaboration, active learning, and building of their critical thinking. Furthermore, it is of utmost necessity that this educator prepares his students to enter civic life fully prepared to exercise discernment. The social studies classroom should be a place of inquiry, high level discussion, and synthesis of learning. Ideally, this should be accomplished through active participation, movement through the learning space, and again, peer collaboration. It is this educator’s belief that students learn best and thrive in this sort of environment as opposed to a classroom environment of sedentary reading, writing, and lecturing. Therefore, it is this educator’s wish to explore student-centered learning strategies to effectively deploy this pedagogical approach with his students.

Purpose of the Study

Education in today’s fast-paced world of around the clock news, social media, and false news requires a different classroom model than what many people are used to, one in which the classroom revolves around the student, not the educator. This has led to the evolution of the student-centered classroom in which the student is the primary actor, not the educator. Tadesse summarized that the evolution towards a student-centered classroom requires a “rethinking of the traditional classroom, replacing the standard lecture with a blend of pedagogical approaches that more regularly involve the student in the learning process” (Tadesse, 2020, p. 70). This pedagogical shift places an emphasis on students assuming an active role in and ownership over their learning process, not the classroom educator (Acar & Tuncdogan, 2019). Educational
researchers Baeten et al. (2016) emphasized that the classroom educator now assumes the role of coach and facilitator rather than simply passing on knowledge to students. In this environment, students are often working cooperatively with their peers, while engaging in interactive inquiry and application. This research will explore effective student-centered strategies, tuned to the social studies classroom, and which will ultimately build student critical thinking.

Student-centered learning is an umbrella term. Encompassed under this umbrella are such strategies as inquiry-based learning, discovery learning, experiential learning, and project-based learning. All of these labels represent a constructivist learning model with the student at the very center. For the purposes of this literature review, student-centered learning will be the all encompassing term of choice.

A constructivist approach to learning is defined as “a learner-centered approach to learning that emphasizes the importance of individuals actively constructing knowledge and understanding with guidance from a teacher” (Santrock, 2011, p. 6). Constructivist theory is at the heart of student-centered learning because students are taking an active role in the construction of their own learning. As Tadesse (2020) stipulated, learning should be active and not passive. Students should be deeply involved in their learning through various means of discourse, in active construction, and application of knowledge. Learning is so much more than simple rote memorization of facts and data. True learning is mastery of concepts and application of the concepts to daily life. Utilization of a constructivist pedagogy emphasizes the application of concepts to students’ daily lives, while simultaneously building student critical thinking.

Learning in a student-centered environment allows students to focus solely on construction of knowledge. In a traditional learning environment, students are tasked with simultaneously listening, writing, and processing information. This environment is not
conducive to student engagement nor student critical thinking. Taking notes is certainly a critical skill, but student learning should not be based solely on this format. Instead, taking notes should simply be the foundation of student learning upon which further knowledge is constructed. In a student-centered learning environment, students would then use their notes as a reference while they embark upon an active mission of knowledge construction (Baeten et al, 2016).

A student-centered approach is based upon inquiry. Students are provided, or must seek out, a variety of sources through which they build their knowledge of a given concept. Working through these sources with their peers requires students to interpret the information, come to an understanding of the information, and finally apply what they have learned on their own while being coached by the classroom educator. Doing so requires students to “adopt a deep approach to learning, through which they look for relationships in learning content and searching for meaning” (Baeten et al, 2016, p. 57). This approach goes beyond the passive learning model of rote memorization and recitation of facts. Students must now grasp more of the larger concept and less of the basic facts as they work towards an application in a real world scenario.

Social studies classes are occasionally thought of as dry and boring while the educator lectures and students take notes. This certainly does not have to be the case. A student-centered classroom environment can become a beehive of activity, quickly setting aside the stale environment of an educator-centered social studies classroom. As students exercise their critical thinking skills through student-driven inquiry and discussion, they take ownership of their learning while increasing their intrinsic motivation to understand the world around them. A transformation of the aura of a social studies classroom from one that is passive to one that is full of activity and engaging will provide numerous student benefits. It is of utmost importance that
social studies educators present their craft to their students in this light, and so adopt a student-centered classroom that builds student critical thinking.

**Brief Overview of the Literature**

Occasionally in the social studies classroom, students will ask the perpetual question of “Why do we need to know this?” Social studies education often misses the mark of connecting to students’ lives and is then deemed an irrelevant subject. Cuenca (2021) contended that social studies can easily be deemed irrelevant when the utility of social studies content is not made prevalent. To maximize student learning, and the true utility of social studies education, concepts learned in the classroom must be contextualized in such a manner that it connects to students’ real life (Baeten et al., 2016). Where social studies has the potential to thrive is when students are provided the opportunity to apply content learned in the classroom to life in the world around them and develop into a critically thinking global citizen (Cuenca, 2021).

The social studies classroom is often thought of as a single subject classroom, when, in reality, the strands of history, geography, economics, and the social sciences are closely intertwined (Cuenca, 2021). Economics is dictated by geography, history, and government. History is dictated by geography, economics, and government. When the social sciences of psychology and sociology are added to the mix, a whole new dimension emerges. The subject areas are so closely intertwined that they cannot be examined individually, but instead must be examined as a whole. Social studies therefore nurtures the practice of inquiry, as it demands students view the content through the various lenses of social studies strands (Cuenca, 2021). This approach makes any social studies classroom a prime location for student-centered learning with the ultimate goal of building student critical thinking.
The true value of social studies education lies not in the content itself, but preparation of students for civic life through the content. According to Cuenca (2021), “social studies focuses on developing students’ understanding of social structures, relations, and issues to help students participate responsibly in the public sphere” (p. 300). In this world of around the clock instant news, some accurate, some not, it is of utmost importance that social studies educators prepare their students to be curious global citizens. A student-centered classroom is rich with inquiry, discussion, self-advocacy, and reflection, all supported by the classroom educator. These tools, whether used individually or collectively, will drive student ownership and sharpen critical thinking. Cuenca challenged educators to provide students with the opportunity to engage in various modes of discourse and draw conclusions through the synthesis of multiple perspectives. Such higher level thinking has, as Cuenca emphasized, leads to deeper understanding of social studies content while simultaneously preparing students for civic life. The social studies classroom should prepare students for civic life with educators engaging in knowledge construction that promotes students to deeply explore such critical concepts as justice, equity, diversity, and democracy (Cuenca, 2021).

Educators and parents want their children to be able to make critical decisions on their own. But it is also their responsibility to teach their students how to make these decisions. An educational setting that focuses on the construction of critical thinking skills will ensure that students are well suited for this responsibility. A student-centered learning environment is the perfect domain to do just that. Students come to the classroom with beliefs that influence their learning, yet these beliefs are able to be influenced by their formal education (Maclellan & Soden, 2012). When this formal education is rooted in inquiry, students learn to be critical thinkers both in their school and in daily life. Cuenca (2021) postulated that when learning is
rooted in inquiry, students are presented with robust learning opportunities. Students are pushed to look at and consider different perspectives, which leads students to different ways of thinking about and judging the validity of information. This necessary and critical skill transfers to daily, civic life.

Student-centered learning, in addition to the aforementioned skills, can help develop numerous other critical skills that students will carry over into their lives outside of the classroom. A student-centered learning environment provides students with ample opportunities to acquire academic skills. But just as vitally, non-academic skills of communication, collaboration, and critical thinking are practiced in a student-centered classroom (Revelle, 2019). The student-centered classroom becomes a proxy for adulthood, which in turn “help[s] students acquire academic and non-academic skills such as critical and creative thinking and improve[s] their communication, cooperation, and time management” (Revelle, 2019, p. 96). With students in charge of their own learning, guided and coached by the classroom educator, students are in a position to manage and reflect upon their own construction of knowledge (Baeten et al, 2016). Doing so allows students to fine tune these critical skills in an academic setting and then transfer the skills to their non-academic lives. Students develop both autonomy and independence since they are now responsible for their own learning (Tadesse, 2020). A student-centered learning environment promotes increased individual determination for learners as they are forced to rely less on the educator and more on themselves and their peers.

In addition to promoting a higher level of individual determination, student-centered learning also promotes an increase in student engagement. One of the hallmarks of student-centered learning is authentic assignments, or assignments that are relevant to the students’ world outside of the classroom. Such relevance enables a deeper understanding of concepts learned in
the classroom because students are better able to pinpoint the utility of these concepts (Revelle, 2019). This relevance of learning eliminates the “why do we need to know this” question that can haunt social studies classrooms, while at the same time promotes student engagement and interest in learning.

**Research Questions**

This researcher will explore three questions: 1) How does student-centered learning build student critical thinking? 2) What are effective student-centered strategies that build student critical thinking, tuned to the social studies classroom? 3) What challenges and benefits of student-centered learning? The first concentration will explore how student-centered learning strategies build student critical thinking. Inquiry-based activities require students’ brains to function at a high level, but what exactly does this look like? The second point of research will present effective student-centered learning strategies, which are fashioned for the social studies classroom. A social studies classroom is a prime location for student-centered learning, and to fully explore this topic, strategies must be looked at that are proven effective. Finally, this research will explore the benefits and challenges of student-centered learning. The implementation of a student-centered classroom has numerous benefits for the student and perhaps some challenges. Educators may be hesitant to make the pedagogical shift, reasons which will be explored more in depth, but the benefits to students far outweigh any negative effects and hesitation. All of this research will be guided by the research question: What are effective student-centered learning strategies that will build student critical thinking in the social studies classroom? It is the responsibility of educators and parents to fully prepare children for daily, civic life. Student-centered learning fully ensures that students are prepared for such responsibilities outside of the classroom.
**List of Terms:**

Authentic Pedagogy: The idea that students should utilize their prior knowledge to engage with real problems, tasks and challenges, i.e. those which connect to the world beyond the classroom. (Splitter, 2008, p. 138).

Critical Thinking: The analysis and evaluation of information to form an educated judgment.

Student-Centered Learning Strategies: Classroom instruction that places an emphasis on student ownership of their learning.

Transfer of Knowledge: The idea that when a student masters a concept in one application, the student is able to transfer that knowledge to another application.
Chapter II: A REVIEW OF THE LITERATURE

Constructivist Pedagogy: Students Constructing Meaning

Towards Student-Centered Pedagogy

At its core, the purpose of education is to help students develop cognitive skills by such rigorous means as training students in the acquisition and utilization of thinking skills (Dewey, 1916). Preparation of student’s cognitive skills is the most crucial task which educators undertake, as students are trained to use their minds to create, apply, and disseminate knowledge (Tynjala, 1999). Within the confines of the school, students should learn to utilize their minds to create a deep understanding of content (Newmann, 1995). The traditional composition of the school environment consists of the educator lecturing while students sit idly in rows of desks, passively taking notes. Yet this traditional school environment, historically, does not promote student cognitive development to its full potential. Educational philosopher John Dewey (1959) postulated that “the school has been so set apart, so isolated from the ordinary conditions and motives of life, that the place where children are sent for discipline is the one place in the world where it is most difficult to get experience” (p. 41). This failure culminates through students' inability to connect and utilize experiences gained in the classroom with those gained outside of the classroom (Dewey, 1959). Concepts which are learned in the classroom are generalized and lack context in which the true utility emerges (Petraglia, 1998). The literature suggested that a student-centered pedagogical approach, when applied thoughtfully and diligently, counteracts this deficiency and develops the cognitive ability of all students.

Students in a traditional school environment are spectators in passive reception of knowledge transmitted by the educator (Dewey, 1916). Students, therefore, become acclimated to accept knowledge at face value and do not develop a deep understanding for themselves
The traditional instructional setting focuses the learning intentions on the **educator** as opposed to the **student**. The implementation of a student-centered pedagogical strategy focuses, for all intents and purposes of the classroom, on the student. The full development of students, cognitively and socially, becomes the goal of the educator as students actively learn through experiences and garner the utility of such experiences (Dewey, 1959). Classroom instruction transitions from one in which the educator tells students what they should know (lecture) and students retell what they learned (rote memorization), to one in which students construct knowledge for themselves through active inquiry (Dewey, 1916). The learner is put first and the educator second as the classroom model becomes a learning-teaching concept, not teaching-learning (Kim, 2005). Adoption of student-centered pedagogy is a complete rethinking of instructional practices on the part of the educator, a shift in mindset and intentions, to one that constantly and consistently involves the student (Tadesse, 2020). At the heart of this pedagogy are two imperative questions, which educational researcher Frank Newmann (1995) imparted upon educators to ask themselves: What do students get out of the learning activity? What’s in it for students? When educators ask these questions of themselves, their intentions become grounded in the recognition that students are fully capable of constructing knowledge for themselves with appropriate guidance (Schreiber & Valle, 2013). Therein, the educator has adopted a constructivist mindset.

**Tenets of Constructivism**

After an extensive review of the literature, a few tenets of constructivism repeatedly appeared throughout. This literature review has identified the following tenets as a compilation of those garnered from the research (Alt, 2015; Baeten et al., 2016; Baeten et al, 2013; Kim,
Students actively construct knowledge for themselves while guided by the classroom educator.

Students are engaged in collaborative, social learning with their peers.

Students contextualize knowledge by connecting prior and newly acquired experiences in authentic educational activities.

Students are engaged in various modes of discourse and cognitive activities designed to make learning apparent for the student.

Students demonstrate complex, multi-faceted understanding of concepts and not surface-level reproduction.

When the classroom educator thoughtfully and diligently applies the above listed hallmarks of constructivism, they have effectively refocused intentions towards student learning and development of critical thinking. Research-based best practices for a constructivist classroom will be presented later in this literature review, but to fully understand the impact these proven strategies have on students, one must first review what the literature tells us about student-centered learning and critical thinking.

**Constructivist Pedagogy and Student Critical Thinking**

Constructivist classrooms challenge the widely accepted notion that the learning process is the passive transmission of knowledge to students (Newmann et al., 1996). Constructivist pedagogy concentrates on *construction* of knowledge, not *re-production* of knowledge. The passive educational emphasis of facts, single correct answers, and rote memorization falls by the wayside as students seek solutions to legitimate problems (Shah, 2019). Multiple solutions may
be present and students learn to support and defend their proposal. Such actions lead students through usage of skills and knowledge, which requires higher order thinking (Baeten et al., 2013). The focus of learning shifts from the educator passively sharing knowledge with students to students learning for themselves under the tutelage of the educator. A critical review of the literature demonstrates that constructivist pedagogy has a positive influence on student academic achievement.

In his empirical study of 76 sixth grade mathematics students, researcher Jong Suk Kim (2005) divided participants into two groups for a two week investigation. The experimental group was educated in a constructivist setting while the control group was educated in a traditional environment. Students in both groups were administered a pre-test at the beginning of the study, followed by a post-test at the conclusion of the study. After comparison of the pre- and post-test scores for both groups, a dramatic difference in academic performance was observed. Students in the experimental group scored, on average, 11.05 points higher on their post-test when compared to their pre-test scores. On the contrary, students in the control group averaged a 5.08 point decline on their post-test when compared to their pre-test scores. As Kim (2005) concluded, “the constructivist teaching group outperformed the traditional teaching group in academic achievement” (p. 12).

While constructivist, student-centered, pedagogy is conducive to student academic achievement, it is critical for educators and researchers alike to understand why and how such instructional tactics are so positively effective. The succinct answer is that a constructivist approach leads students towards a more robust and nuanced understanding of content, as outlined by Nie and Lau (2010). In their empirical study of 3,000 ninth grade English Language students, the researchers compared students engaged in constructivist learning environments with those
occupied in a didactic classroom. The researchers measured student use of surface-level learning strategies (rote memorization, repetition) and deeper-level strategies (critical thinking) and compared them to the educator’s pedagogical practices. The researchers revealed that a clear connection between constructivist pedagogy and deep cognitive processing exists, whereas didactic instruction was closely linked with surface-level processing. Nie and Lau (2010) noted that instruction within the constructivist classroom focused on “elaboration, discussion, deep understanding, and real-world connectedness,” which led to deep cognitive processing (p. 419). Similar to the research conducted by Kim (2005), Nie and Lau likewise saw an increase in student achievement for their experimental group versus control group. The academic enterprises upon which constructivist pedagogy capitalizes, require a heavy cognitive lift by students. Yet it is not sufficient for educators to simply embark on constructivist pedagogy without consideration of the context of knowledge.

**Authentic Education**

The literature demonstrated that authentic pedagogical practices have a profound impact on student overall achievement. Newmann et al. (1996) in their empirical study of 24 public schools concluded that students engaged in authentic assignments excelled in achievement when educators deployed robust authentic pedagogical standards. Such confirmation mandates that students be occupied with educational experiences that are authentic in that they connect to the world outside of the classroom and are of importance to the student. The research alerted educators that they must have awareness of, and utilize, standards of authenticity, which ensures student achievement is being maximized. Specific standards for authenticity will be presented later in this literature review.
When the construction of knowledge is placed in the context of utility in the world outside of the classroom, the learning environment becomes a robust setting that, as research indicates, promotes a high level of student cognition. Dewey (1916) recognized that true construction of knowledge is when students are able to learn in the classroom, but in the context of the real life application. Such construction of knowledge is genuine, authentic learning that is relevant and transferable to the world outside of the classroom. Baeten et al. (2016) reiterated that “[l]earning should take place in contexts reflecting the way in which knowledge would be useful in real life” (p. 45). All students come to school with their own understanding and interpretation of experiences and educators should recognize these as legitimate prior knowledge, which should be utilized to the fullest extent possible (Shah, 2019). As students process, connect, and synthesize newly constructed knowledge with prior knowledge, they are actively engaged in higher-order thinking (Kwan & Wong, 2014). Centering all learning on the student and providing a clear connection between in-school learned content and outside-of-school experiences are hallmarks of a student-centered pedagogical strategy.

Placing learning in the context of application is not sufficient to be deemed an authentic construction of knowledge. Dewey (1916) highlighted that when schools do not employ educational activities that are applicable outside of school, they rely on nominal intellectual exercises, which result in a lost opportunity to prime student critical thinking. To demonstrate authentic learning, students must be tasked with assignments that mirror those accomplished by adult practitioners in the area of study (Splitter, 2008). Mastery and application of the tools that the experts in the field use requires students to demonstrate a different and more robust understanding of content than students in a passive school environment. The rigor of the learning activity has been intensified as students move from a fundamental understanding to a
nuanced and comprehensive understanding of the concept. Students should, as Newmann (1995) asserted, be engaged in activities that mirror those accomplished in the adult world, and thus raise the cognitive bar for students. As the research confirmed, authentic learning tasks challenge students to utilize their prior knowledge to construct a deep understanding of a real-world situation and then propose a possible solution, thus leading to critical thinking.

The cognitive exercises of elaboration, discussion, deep understanding, and real-world connectedness all provoke student critical thinking. Each application requires students to move beyond rote memorization of facts as they process and apply the concept in a complex fashion. Placed in the context of real-world utility, students learn not just the concept itself but also the application. Framed as authentic experiences that mirror those accomplished by adult practitioners, the learning activity pushes students to engage in higher-order thinking. Collectively, these tenets of student-centered pedagogy engage learners in a deep understanding of content, which in turn provokes a high level of critical thinking as evidenced by the literature.

**Authentic Social Studies Education**

Newmann et al. (1996) concluded in their research that “if the implementation of student-centered, or constructivist, practices were guided by explicit standards for authentic intellectual quality,...student performance would benefit” (p. 306). The same research concluded that secondary social studies students who engaged in authentic assignments experienced a larger increase in authentic achievement than when the same principles were applied in mathematics (Newmann et al., 1996). The social studies classroom provides myriad opportunities for students to engage in authentic tasks and as Newmann et al. (1996) demonstrated, an exemplary arena in which to engage students in authentic educational activities. Specific examples based on research will be discussed later in this literature review.
Collaborative Learning Environment

Students are not educated directly, but indirectly by means of the environment. The educator must ensure that the classroom environment is one in which learners will be stimulated (Dewey, 1916). Deliberate construction of the learning environment by the educator recognizes the dramatic influence, which the classroom environment holds on student learning. Kwan and Wong (2014) urged educators to provide a classroom environment in which students are able to unpack their own experiences, in recognition that each student brings a unique socio-cultural interpretation. As students interact with each other in the classroom environment, they do so in the context of their individual socio-cultural interpretations, which ultimately manifests in students' understanding (Schreiber & Valle, 2013). With promotion of a social environment, constructivist educators provide opportunities for students to explore outside of their current social environment (Dewey, 1916). This exploration of adjacent social environments, through interaction with their peers, allows students the opportunity to view their own experiences coupled with those of their classmates. The learning environment itself thus becomes of utmost importance and educators must be mindful of the interaction.

The social environment within the classroom provides a different mode of discipline for students, aside from any academic learning. Dewey (1938a) referred to collateral learning that occurs in conjunction with the prescribed academic learning. Students are sent to school for an academic education, yet the merits of the social environment are often overlooked. When learning is active and students are engaged in cooperative activities, learning of social control is embedded within the classroom environment, which in itself is a valuable learning experience. Vygotsky (1978), the Soviet psychologist, recognized that students operate in their Zone of Proximal Development, or the environment between what the learner can do unsupported and
what they can do with assistance from a more capable peer or an adult. Students are naturally social creatures so capitalizing on this notion in an educational setting allows students to operate within each other’s Zone of Proximal Development and jointly construct understanding in the process (Schreiber & Valle, 2013). Collaborative learning develops a community of learners, a partnership between students, as they work toward a common goal of understanding a real world problem and determination of possible solutions (Petraglia, 1998).

The literature indicated that students who are engaged in collaborative learning are better able to complete complex learning tasks. Kirschner et al. (2009) conducted an empirical study of 70 high school biology students who were randomly assigned to work either in a triadic collaborative setting or individually. Throughout the study, students engaged in a variety of educational tasks to demonstrate both retention and transfer of their learning. Kirschner et al. concluded that students who worked individually performed more efficiently in retention, while those who worked collaboratively performed more efficiently in transfer. Kirschner et al. stated that:

By making use of each others processing capacity through sharing the cognitive load imposed by the task, it was possible for group members to more deeply process the information elements and work with them by relating them to each other, and construct higher quality schemata in their long term memory. (pp. 311-312)

Students are able to collaboratively apply, critique, and re-apply learned content as they share in the workload and cognitive processing. The evidence from Kirschner et al. supported the notion that students aid one another in the Zone of Proximal Development. Each student presents with incomplete knowledge, albeit comparatively equal expertise, and then must work collaboratively
to piece together each other’s understandings and thus advance collectively in knowledge (Schreiber & Valle, 2013).

**Critical Thinking in the Constructivist Social Studies Classroom**

Student-centered learning, grounded in constructivist pedagogy, teaches students to think like mathematicians, authors, and scientists. The research, which was previously referenced in this literature review, focused on overall achievement and critical thinking in constructivist settings in mathematics and English language classrooms, yet the results should be viewed as transferable among content areas. This literature review focused on the social studies classroom, which is a prime location to develop critical thinking by means of student-centered pedagogy. Dewey (1916) declared that the function of social studies is to help students to learn their place in the world by enabling a thorough understanding of the world around them and the events of the past. For students to develop a robust comprehension of their place in the world they must engage in the construction of knowledge in which they explore multiple perspectives and think like historians, geographers, and economists. As the research indicated, such activities require students to utilize higher-order thinking skills. The social studies classroom develops learners who think critically and become true global citizens.

Social Studies Professor John Zevin (2015) stated that the product of a social studies environment that focuses on critical thinking “might well be a shrewd consumer, an intelligent and well-informed voter, an active participant in community life, and a life-long seeker of new ideas and new skills” (p. 10). Students learn to view concepts and events through multiple perspectives, ask questions, and be critical of the knowledge they gain. Social studies subject matter are intimately intertwined with one another and should be taught as such. Ignoring this entanglement results in rote learning. Therefore each strand must be explored together to fully
develop the outside of school connection and application. Concepts in social studies may have an economic perspective, while simultaneously harboring a political perspective and social perspective. When students are tasked with unraveling the entanglement to gain the different perspectives, a nuanced and complex understanding emerges. Such actions, when grounded in proven, research-based constructivist methods will, as the literature has shown, increase student critical thinking by raising the cognitive bar.

**Effective Student-Centered Strategies**

Student-centered pedagogy, grounded in constructivist methods, places all classroom intents and purposes on the best interest of the student. The primary concern should be intellectual quality, not the often sought after correct answer (Wehlage et al., 1996). Tadesse (2020) highlighted that student-centered learning therefore is a de-emphasis on facts and a single interpretation of knowledge. Placing less of an emphasis on facts grounds instruction in the development of skills, most crucially, cognitive skills that students will be able to apply in all aspects of their life. As the research indicated from the preceding literature review, these methods effectively build student critical thinking. But what, from a practical standpoint, does this actually look like? Following are research-based strategies for an effective student-centered environment to promote the development of critical thinking.

**The Classroom Environment**

To encourage students to construct knowledge for themselves, the role of the educator must shift to promote a “cooperative enterprise, not a dictation” (Dewey, 1938a, p. 85). The educator is still responsible for the classroom and the students who occupy it but ownership of learning passes into the hands of students. To facilitate this culture of learning, Newman (1995) encouraged educators to hold unrelenting high expectations of all students. While students are
engaged in their learning activities, the educator is busy circulating the classroom to interact with as many students as possible, supporting and challenging their learning (Newmann, 1995). The educator’s purpose now is to ensure that students achieve mastery, through monitoring and questioning. By asking appropriate questions of students the educator is able to monitor student learning while at the same time promote further discovery (Schreiber & Valle, 2013). The educator pushes and supports students, and with the proper questioning, may lead students toward an even more difficult task and, thus, deeper understanding (Vermette & Foote, 2001). When the classroom educator changes their role to that of classroom coach, they promote a student-centered classroom and a culture of student ownership while students construct knowledge for themselves.

In a student-centered setting, students gain “more training of attention, more power of interpretation, of drawing inferences, of acute observation and continuous reflection” than from a traditional school setting (Dewey, 1959, p. 65). To facilitate construction of knowledge, a constructivist classroom adopts the persona of a workshop as students are engaged in various forms of active learning (Dewey, 1959). A kinesthetic learning model becomes the norm as students work with and learn from a variety of tools. The classroom becomes a community of learners who support one another while constructing knowledge collaboratively (Tynjala, 1999). To enable this community of learners, educators must diligently and purposefully create the workshop environment of tools and physical materials that make learning an active process, fully centered on the student.

**Building the Collaborative Learning Space**

As the research indicated, a collaborative learning environment is one that promotes a high level of academic achievement. Group members work within each other’s Zone of
Proximal Development, supporting and guiding each other through educational experiences, while simultaneously constructing knowledge and exchanging differing ideas. Students support each other in their Zone of Proximal Development since they can, as Alt (2016) pointed out, “describe things to one another in a simpler way that is easier to comprehend than explanations by a person with a very different mental stage” (p. 102). Success of the group materializes when students utilize social instinct to exchange ideas and interpretations. Through this interaction, what each group member accomplishes is both dependent upon and influences what other group members achieve (Dewey, 1916). Research indicated that individual accountability and a group reward must be present in order for academic achievement to peak in a collaborative setting (Slavin, 1983). Through collaborative activity students learn from each other as they exchange ideas and explore each individual’s perspective.

To capitalize on the benefits of a collaborative learning environment, educators should invest time and energy in assigning cooperative groups of students. Powell and Kalina (2009) noted that cooperative learning is vital to students developing deep understanding, but the dynamics of the group are just as important. While constructing the groups of students, educators should have a goal to make the group as diverse as possible, thus allowing students broader perspectives from which to learn (Schreiber & Valle, 2013). Likewise, arranging permanent groups of three to six students, preferably ones who are not familiar with each other, should also be a goal for educators (Schreiber & Valle, 2013). Any fewer than three students and sufficient perspectives will not be represented, while any more than six and the group will be too large to appropriately function. Additionally, it is important that group membership remain stable so as to not interrupt the ebb and flow of group dynamics. When students are not familiar with each other, they do not enter the group setting already knowing the experiences of their
colleagues. This will be crucial for students once they begin the exchange of ideas and experiences (Schreiber & Valle, 2013). Educators should, however, consider that group work can easily become non-collaborative.

As research has guided, for a grouping of students to truly be collaborative in nature the groups must, as Schreiber and Valle (2013) pointed out, be interactive with each other, dependent on each other, accountable to one another, engage in social control, and evaluate the group individually and as a whole. Without these parameters, the groups are simply students who sit together. The educator must diligently and thoughtfully prepare the learning environment to encourage group collaboration. Absence of these considerations does not capitalize on the natural socialization energy, which students bring to the classroom and divert this energy into promoting deep understanding.

**Promoting Collaborative Group Cohesion**

When students first enter their collaborative group they will, provided the suggestion to make groups as foreign to one another as possible is observed, need some encouragement to begin their socialization. In that spirit, Schreiber and Valle (2013) promoted a few tactics for collaborative groups to begin the process of cohesion. First, students should introduce themselves along with sharing three strengths and three weaknesses, which they bring to the group. Examples being “I take good notes” and “I am not organized.” If students record collective strengths and weaknesses on one graphic organizer, “the performance of self-managed groups can be improved when members learn enough about one another to make optimal use of the group’s human resources” (Schreiber & Valle, 2013, p. 399). Secondly, collaborative groups should discuss and record behavioral norms by which the group members will abide. Examples of norms being “One person talks at a time” and “All group members will contribute.”
Development of these norms not only becomes the rulebook by which the group members will play and hold each other accountable, but also starts to develop the collaborative group’s identity. These tasks may, especially for younger students, need to be modeled by the educator, but it is imperative that the educator not modify or intervene in the collaborative group’s establishment of cohesion (Schreiber & Valle, 2013).

**Promoting Group Dependence and Accountability**

The research is clear about the positive relationship between academic achievement and collaborative learning. One collaborative learning strategy not often considered is collaborative testing. Bloom (2009) conducted a two year long empirical study to fully understand the potential pedagogical value of collaborative testing. The researcher’s own college-level students were the subjects of the study. In the Fall semester, students completed their first test individually and without notes/textbooks. Immediately after completing this test, students began a second test, which consisted of the same questions. On the second test students were able to utilize class notes and textbooks and work collaboratively. Spring semester students followed the same pattern, with the exception that they worked individually on the second test. Bloom’s research indicated that students who engaged in the collaborative test had significantly higher test scores than when they worked individually.

Schreiber and Valle (2013) contended that completion of the test individually indicates individual learning for each student while the collaborative test drives accountability and interdependency of the group members. Students are now dependent upon each other and must hold the group members accountable since each student’s grade is subject to the outcome of the collaborative test. Each individual’s success is now intertwined with each other. Research also indicated that the strategy of group testing has the added benefits of increased retention and
increased critical thinking while students have to engage in conversation, and sometimes debate, about the content (Bloom, 2009; Schreiber & Valle, 2013).

Periodically through the school year, each collaborative group should be given the opportunity to evaluate their group. Schreiber and Valle (2013) encouraged educators to provide a means by which group members provide anonymous feedback on the members of their group. It is critical that students provide specific, detailed feedback regarding their colleagues and focus on members' behavior as opposed to their personality. This opportunity for reflection holds students accountable to each other, and can discourage one student from doing all of the work and one student from not participating in any group activity (Schreiber & Valle, 2013). The strategy of group evaluation is grounded in confirmation by research that collaborative groups require both accountability and interdependence to capitalize on the effectiveness of such an instructional setting.

**Collaborative Learning in the Social Studies Classroom**

As previously presented in this literature review, research indicated the positive effects of collaborative learning in the classroom. The collaborative organization can be utilized in any content area, but the social studies classroom is especially well suited. Zevin (2015) suggested that social studies educators “use small groups, panels, or teams to carry out tasks that are made easier through the efforts of students working together” (p. 69).

**Standards for Authentic Education**

As the research conducted by Newmann et al. (1996) verified, authentic pedagogical practices led to increased student achievement when certain standards for authenticity were met. The standards, which Newmann et al. (1996) highlighted were: 1) construction of knowledge, by means of 2) disciplined inquiry, which will produce 3) meaning beyond the value of a grade.
These standards for authentic pedagogy should, as Newmann et al. (1996) stipulated, be included in daily instruction. The characteristics housed in these standards replicate those of higher-order thinking utilized by adults. Research indicated that what follows in the present study are best-practices for educators across the content areas to utilize in pursuit of an authentic learning environment.

**Authentic Classroom Instruction**

Dewey (1938a) reminded educators that one must have full awareness of student needs, capacities, and prior knowledge to successfully utilize constructivist pedagogy. Educators must have a grasp of what students are capable of accomplishing and what supports students need in order to reach the learning goals. With such knowledge in hand, the educator is able to create the educational experience that lies within the parameters of student capacity and needs. Failure to take student capacity and needs under consideration may cause students to struggle through an experience that is beyond their capacity, making the educational task ineffective (Dewey, 1938a). The educator must, as Dewey (1938a) pointed out, see to it that the problem through which to work is within the capacity of students and be of sufficient interest to students that their motivation to work through the struggle is present. Diligent scaffolding by the educator becomes of utmost importance to ensure that student growth occurs as a result of the educational experience. This requires the educator to be actively engaged with the students, locked in observation, questioning and challenging.

Authentic classroom instruction is grounded in constructivist practices that coax students toward higher cognitive capabilities. The construction of knowledge, as Newmann et al. (1996) reminded educators, is based on a foundation of prior knowledge. Students must have a solid grasp of vocabulary, facts, and concepts not to reproduce but to recall the knowledge in order to
assimilate with what is learned by means of disciplined inquiry (Newmann, 1995). This assimilation requires higher-order thinking skills, which results in meaningful learning for students.

**Concept Mapping.** Research indicated that an effective strategy for prior knowledge recall and assimilation is concept mapping. Gonzalez et al. (2008) conducted an empirical study in which students were divided into a control group and intervention group. The control group engaged in traditional pedagogical methods while the intervention group constructed concept maps and utilized them to solve problems. Gonzalez et al. revealed that 19.23% of the intervention group failed the problem-solving exam compared with 40.96% of the control group. It is also worth noting that the research conducted by Gonzalez et al. showed no change in performance between the intervention and control groups on multiple choice exams. This would indicate that concept maps are an effective strategy to encourage higher-order thinking, a requirement to be able to problem solve. Concept maps move students beyond rote memorization because it tasks students with purposefully creating a link between appropriate prior knowledge and new knowledge. Students furthermore must make specific connections between key concepts and provide an elaboration. Schroeder et al. (2018) provided credence to the usage of concept mapping by delineating a strong correlation between student cognition and the use of this powerful learning tool. Research tells us that powerful metacognitive activities such as concept mapping provide strong results for students.

**Disciplined Inquiry.** Genuine learning occurs through disciplined inquiry, which promotes a high degree of cognition for students. Dewey (1938b) reminded educators that students, when engaged in inquiry, must work with content-specific tools and materials, and make observations throughout. Such operations are experiential in nature and introduce students
to new ways of thinking with multiple perspectives about prior knowledge (Dewey, 1938b). Inquiry-based learning sparks cognition while students are pushed to think through the learning activity and utilize their instinct to be meaning-makers.

Inquiry requires not only the decision of what data to *include* but what data to *exclude*; what is relevant and what is irrelevant to the inquiry at hand (Dewey, 1938b). Likewise, inquiry is as much concerned about agreements and disagreements, or compare and contrast. Dewey (1938b) postulated that the most important part of inquiry is identifying where the elements of inquiry contrast from one another. Operations such as compare and contrast or relational propositions (if-then statements) build a powerful connection as students push their cognition beyond simple agreement of data (Dewey, 1938b).

Previously in this literature review, research was presented regarding the importance of prior knowledge. Disciplined inquiry utilizes prior knowledge and, as Newmann et al. (1996) reminded educators, pushes students to develop a deeper understanding of their prior knowledge. Research indicated that disciplined inquiry is a valuable and effective pedagogical tool when, as Lazonder and Harmsen (2016) stipulated, scaffolded appropriately by the educator. Incorporation of disciplined inquiry effectively links student learning with knowledge that is considered authoritative in the field of study, mastery that adult practitioners demonstrate (Splitter, 2008). Students are tasked with mastery and application of tools, which are used by the authoritative practitioners. This pushes students to develop their own interpretation of the problem at hand in recognition that differing interpretations may be present (Splitter, 2008). Students themselves become true thinkers in the content area thus prompting critical thinking (Splitter, 2008).
Application in the Social Studies Classroom

The social studies classroom presents innumerable topics, which are open to disciplined inquiry, making them a prime location for such an activity. Like any inquiry-based activity, “historical inquiry is an affair (1) of selection and arrangement, and (2) is controlled by the dominant problems and conceptions of the culture of the period in which it is written” (Dewey, 1938b, p. 236). Understanding the context in which the tools for the inquiry were produced requires students to engage further into cognitive activity, while they contemplate the context of the event in question (Dewey, 1938b). Such situations present themselves as exemplary opportunities for students to explore more in depth in a student-centered classroom.

Social studies educator Bruce Lesh (2011) challenged fellow social studies educators to organize disciplined inquiry around thought provoking essential questions that demand an answer supported by evidence. Furthermore, the essential question should be one that does not lead to one single correct answer. Lesh also suggested that by focusing disciplined inquiry around a rich essential question, the educational activity itself mirrors historians whose primary focus is to answer historical questions. The act of disciplined inquiry has now moved into the realm of being an authentic learning experience being that it mimics what adult practitioners accomplish on a daily basis.

An adaptation of a lesson from Lesh (2011) will sufficiently illustrate the research, which preceded it. As Lesh pointed out, a historical lesson on the Bonus Army provides an excellent entrance into disciplined inquiry. As the research indicated, the crucial first step is to recall student prior knowledge. With this in mind, students at this time should construct concept maps to recall prior knowledge about both the economic depression embroiling the United States at the time, and the Bonus Army itself. After students have individually constructed their concept
maps, collaborative groups should critique each other’s maps. Doing so allows students to ensure that everyone in the collaborative group has the same knowledge, and students engage in discourse as they must defend, explain, and evaluate their concept maps. The educator should diligently ensure that all students have demonstrated the appropriate prior knowledge before moving forward with the lesson.

At this point in the lesson students listen to the song “Brother, Can You Spare Me a Dime?”, which as Lesh (2011) pointed out, provides a glimpse not only into the economic depression of the 1930’s but also into the predicament of the Bonus Army. Students are then shown a variety of images that depict the Bonus Army, while the educator utilizes these images to review student prior knowledge about the events. As Lesh indicated, students now have a solid foundation upon which to construct their knowledge of the Bonus Army via disciplined inquiry. The essential question of “Why were the marchers forcibly removed, and who should take responsibility for that decision?” is posed to students to begin their investigation (Lesh, 2011, p. 106).

The basis of the disciplined inquiry is eight primary sources, each with a different perspective of the events surrounding the Bonus Army’s march in Washington, D.C.. Lesh (2011) listed the primary sources as:

- Telegram from Secretary of War Patrick Hurley,
- Presidential press release one day after the removal of the marchers,
- General Dwight Eisenhower’s memoirs, written 36 years after the event,
- Excerpt from General George Van Horn Moseley’s unpublished autobiography written between 1936 and 1938,
• General Douglas MacArthur’s memoirs, published thirty two years after the event,
• Article from the liberal magazine *The Nation,*
• Article from the liberal magazine *Harper’s,*
• Speech by Senator Hiram Johnson, a liberal Democrat and supporter of the Bonus Bill.

The above list of primary sources challenges students as they must probe potential political bias in journalism, the effect that time has on memory and the reliability of memoirs (Lesh, 2011). Utilization of these primary sources will require educators to understand the capacity and needs of students and scaffold appropriately. Lesh suggested scaffolds such as providing a list of names for individuals who students will encounter and a description of their involvement in the Bonus Army events. Additional scaffolding may be needed to help students process the context and subtext of the primary sources.

Inquiry of this number of primary sources is a heavy lift for students, so this is where the benefits of a collaborative learning environment will manifest. Deciphering primary sources is not an easy task for adults, therefore students, especially those who are unfamiliar with the utilization of primary sources, would require considerable time to complete all eight documents. Lesh (2011) recommended utilization of a jigsaw method, where each student covers one or two primary sources and then is responsible for sharing details with the collaborative group. Once each group completes discussion regarding the primary sources, Lesh provided each group with two sentence stems to complete:

• We believe that the Bonus Army was forcibly removed from Washington because…
We believe that ______ was/were responsible for the decision to remove the Bonus Marchers because…

These sentence stems require students to synthesize the various perspectives of the primary sources and then decipher the evidence to determine responsibility. Students must supply robust evidence to support their theory. The capstone to this inquiry is engaging students in a full-class discussion in which they must defend their position, even as other classmates provide other interpretations of the evidence. Students are engaged in various modes of discourse, which raises the cognitive bar for students.

Assessment

Wehlage et al. (1996) reminded educators that assessment in an authentic setting must have merit beyond issuance of a grade. While assessment is a crucial part of any pedagogy, the true value of authentic pedagogy is not solely to assess competence in the subject matter (Splitter, 2008). Authentic assessment should, certainly, assess student knowledge of the basic concepts and facts, which support the learning activity. But the assessment should also move beyond this demonstration of rote memorization and reflect student’s deep understanding of the concept.

Lesh (2011) encouraged educators to move assessment beyond multiple choice testing to assess students’ deep learning. Multiple choice reflects rote memorization of facts, and while students should demonstrate understanding of these concepts, different assessment strategies reflect student mastery at a higher level. Inclusion of questions that reflect student thinking and require synthesis will reflect students' complex understanding.

Application in the Social Studies Classroom

To assess students’ mastery of the Bonus Army lesson, and adhere to the recommendations laid forth by Lesh (2011), assessment would begin with 10-15 multiple choice
questions that reflect key concepts of the event. This section of the assessment reflects students' understanding of the basic concepts, facts, and figures of the Bonus Army and Great Depression, crucial contextual and foundational knowledge, which students must master. Lesh then recommended two questions rooted in historical thinking and reflecting students’ ability to utilize inquiry, such as inclusion of another primary source, (i.e. a picture of the Bonus Army), and posing two questions (ex. What information is presented in the image?). The final portion of the assessment, again in adherence to the advice of Lesh, educators should include an essay question, which requires students to formulate an argument using historical evidence. Posing a historical question, even repeating the original inquiry question (Why were the marchers forcibly removed, and who should take responsibility for that decision?) will assess students’ ability to utilize inquiry methods and think like a historian, which is a clear indication of critical thinking.

**Strengths and Weaknesses of a Constructivist Classroom**

Student-centered learning has many benefits, which have already been highlighted in this literature review. Likewise, student-centered learning also hosts some challenges to educators and students alike, which must be addressed. This literature review seeks to delve more deeply into some of the benefits and challenges, which students and educators face in a student-centered learning environment.

**Strengths of Student-Centered Learning**

*Academic Achievement*

As research indicated, student-centered learning provides numerous opportunities for increased academic achievement (Kim, 2005; Kwan & Wong, 2014; Newmann et al., 1995; Newmann et al., 1996; Nie & Lau, 2010; Revelle, 2019; Tynjala, 1999). The tasks prescribed by student-centered learning, grounded in constructivist pedagogy, set a higher cognitive and
metacognitive parameter for students. This literature review highlighted that various modes of active learning such as disciplined inquiry, concept mapping, and relational propositions drive students beyond rote memorization of facts to nuanced, robust mastery and application of concepts. When diligently applied in a real-world context, the utility of concepts becomes clear for students, which further drives academic achievement.

Revelle (2019) conducted research, which consisted of interviews with 24 educators who practiced student-centered learning in social studies and literacy content. In the interviews, all 24 educators “reported improvement in their students’ social studies learning over the course of the unit” (Revelle, 2019, p. 100). Many of the educators also noted student growth in such areas as usage of examples to support an opinion, overall writing ability, and literacy (Revelle, 2019). The educators, who Revelle interviewed, credited increased student achievement to the fact that student-centered learning is more experiential in nature, hands on, and authentic. These lessons transform once abstract curriculum into realistic, relatable concepts, which students are able to apply. Thus student achievement is pushed to a higher level.

Increased academic achievement is not limited to mainstream students. Research indicated that students of varying abilities witnessed positive gains in achievement when learning occurred in a student-centered environment (Brkich, 2014; Daher & Saifi, 2016; DiCamillo & Gradwell, 2012; Revelle, 2019; van Schijndel, Jansen, & Rajimakers, 2018). An active learning environment provides students with a differentiated way of learning that for many students may be easier to process. Research conducted by Revelle (2019) indicated that student-centered learning is highly adaptable to easily conform to student needs and capacity, thus enabling a wider swath of the student body to achieve at a high level. Brikich (2014) identified that students with disabilities who were taught in a constructivist setting outperformed their general
education peers who were taught in a traditional setting 62% of the time. Furthermore, Brikich noted that students with disabilities who were engaged in a student-centered environment surpassed their disabled colleagues from a traditional setting 51-58% of the time.

**Engagement**

In a student-centered classroom students are engaged in academic activities that encourage conversations where students exchange and challenge ideas. Social and collaborative learning keeps students “alert and active, instead of passive and receptive” (Dewey, 1959, p. 38). Students become more of a stakeholder in their learning and therefore become more engaged. When the construction of learning is connected to a real life experience, the in-school experience not only holds student attention to a high degree, but simultaneously provides a valuable educational experience. Students see themselves in the curriculum and notice the utility of the content, which in turn motivates students to learn.

A student-centered learning environment prompts a higher level of overall engagement in learning (Alt, 2015; Revelle, 2019; Shah, 2019; Vermette & Foote, 2001). Students take an active role in their learning, which provides a sense of ownership and investment. As students reflect on their learning, Alt (2015) suggested that students develop a stronger sense of self-efficacy when they recognize that they are learning and have successfully completed a complex task. Student confidence is boosted, which in turn provokes a higher level of engagement.

Revelle (2019), in her interviews with 24 student-centered educators, noted that all of the educators mentioned higher levels of student engagement. The educators highlighted that students enjoyed the lessons, were invested in the learning process, and recognized their higher-level thinking (Revelle, 2019). The hands-on, exploratory nature of student-centered learning keeps students engaged and interested in learning. Likewise, placing students at the center of the
learning process in which they take ownership, students are encouraged to become more invested in the act of learning.

**Transferable Skills**

As this literature review presented, student-centered learning leads toward a high level of critical thinking. This is but one skill that is developed in school and is transferable to life outside the classroom, especially into adulthood. Research speaks to the myriad transferable skills, which a student-centered learning environment fine tunes for students (Acar & Tunçdoğan, 2012; Cuenca, 2021; Maclellan & Soden, 2012; Revelle, 2019). Revelle (2019) provided that student-centered teaching “helped students acquire academic and non-academic skills such as critical and creative thinking and improved their communication, cooperation, and time management” (p. 96). All of the aforementioned are skills that students will carry forward into their adult career. Society and the workplace demand that students develop skills that will enable one to question and challenge the norm. A student-centered learning environment is a proxy for societal engagement and the development of the necessary skills.

**Collaborative Learning**

This literature review has presented the benefits of a collaborative learning environment on student achievement. But one aspect of collaborative learning that was not presented is that while students are working collaboratively, the classroom educator is freed up for small group tasks. Petraglia (1998) pointed out that since students are busily working in each other’s Zone of Proximal Development and scaffolding each other, the educator now has time to check in with individual students or small groups. If a small group or an individual warrants an intervention or assistance beyond what peers are able to provide, the educator is now able to do so with minimal disruption to the ebb and flow of the classroom. Dewey (1916) noted that when low performing
students are placed with high performing students, the low performing students will eventually assimilate while they are assisted by their higher performing peers.

**Challenges of Student-Centered Learning**

**Classroom Management**

As this literature review presented previously, the student-centered learning environment assumes the persona of a workshop in which students are busily constructing knowledge. Byproducts of the active classroom are more noise, more movement, and more manipulatives all of which open the door for increased mischief to occur. Dewey (1959) reminded educators that the classroom will evolve from a quiet, passive environment to a louder, active environment. Research indicated that the classroom management aspect was of major concern to educators, and not to be taken lightly (Revelle, 2019; Parsons et al., 2011; Tadesse, 2020). Parsons et al. (2011) interviewed educators at an elementary school that implemented student-centered learning methods. A recurring theme among educators interviewed by Parsons et al. was that it was difficult to locate the balance between student autonomy to conduct their learning, while maintaining classroom behavior. Educators expressed concern over the volume level among students and that when given freedom, students sometimes cannot resist the urge to not participate in the learning activity. Research urged educators to embark on a proactive approach to classroom management, and stay keenly aware of the occurrences in the classroom.

**Lack of Time**

Research indicated that educators are increasingly concerned about available time when it comes to implementation of a student-centered curriculum (Ciftci, 2015; Parsons et al., 2011; Revelle, 2019; Tadesse, 2020; Vermette & Foote, 2001; Voet & De Wever, 2019). Educators are concerned about the amount of class time which inquiry methods take to administer. In the
presence of a large number of state standards, educators expressed concern that active learning will inhibit educators from covering all necessary curriculum. Inquiry based learning requires a slower pace for students to process complex cognitive exercises and for educators to diligently scaffold students through the process. Educators may, as Voet & De Wever (2019) highlighted, find it difficult to incorporate inquiry-based learning into their lesson plans. Such activities can be viewed as eating a significant amount of valuable time and energy.

Educators interviewed by Parsons et al. (2011) likewise voiced concern over the time required to embark on student-centered learning. Parsons et al. noted that a recurring theme among educators interviewed was sufficient time in the academic calendar to cover the necessary ground. With state standards and standardized testing as backdrops, educators voiced concern to Parsons et al. about having to prioritize remediation of basic skills, which added to the timeline of completion of student-centered units.
Chapter III: DISCUSSION AND CONCLUSION

Summary

Research illustrated that a student-centered learning environment effectively increases critical thinking ability for students. How does student-centered learning increase critical thinking? When educators adopt a constructivist mindset they are focusing intentions of the classroom on the student taking ownership of their learning. A passive learning environment of teacher-centered lecturing and notetaking falls by the wayside in exchange for students learning in an active, collaborative environment engaged in tasks, which build knowledge through interaction. Emphasis is placed on learning through multiple perspectives and not looking for a single correct answer (Shah, 2019). Construction of knowledge in this manner is supported by a solid foundation of prior knowledge that contextualizes the learning for students. Instead of learning in the abstract, students now learn in the real-world application of the concept. Constructivist pedagogy emphasizes authentic education, which requires students not only to learn within the real-world application, but demonstrate learning in a manner that mirrors that used by authoritative practitioners (i.e. think like a historian, write like a journalist). Students explore multiple perspectives, engage in various modes of discourse, and actively manipulate learning materials. The act of student-centered learning, grounded in constructivist pedagogy, drives students to engage in deeper, more meaningful learning as they demonstrate a complex and nuanced understanding. All told, as research stated, led to a dramatic increase in critical thinking (Baeten, 2013; Kim, 2005; Newmann et al., 1996; Nie & Lau, 2010).

The impact on critical thinking, as demonstrated by research, is a mandate that educators should engage in student-centered learning practices (Baeten, 2013; Kim, 2005; Newmann et al., 1996; Nie & Lau, 2010). But what are effective student-centered strategies, backed by research, that build critical thinking? First and foremost, learning should be collaborative. Students are
engaged in constructing knowledge together, supporting one another, exchanging ideas, and assimilating their collective knowledge. This places students within one another’s Zone of Proximal Development (Schreiber & Valle, 2013). While students are actively and collaboratively learning, the classroom educator, who has assumed the role of coach and facilitator, circulates the room to scaffold students by posing questions that ultimately can raise the cognitive bar higher yet.

Research further stipulated that learning should be framed in authentic modes and focus on disciplined inquiry (Baeten, Docy, Struyven, Parmentier & Vanderbruggen, 2016; Newman, 1995; Newmann, Marks, & Gamoran, 1996; Splitter, 2008). In the social studies classroom, this disciplined inquiry takes the shape of analyzing primary sources that present multiple perspectives of the same event with the goal of answering an essential question (Lesh, 2011). Students must glean evidence from the primary sources, decipher the evidence and perspectives, and ultimately form a conclusion. When students have to defend and debate their conclusion, supported by evidence, higher-order thinking is engaged and students are learning by authentic means. As students engage in constructing knowledge, specific strategies such as concept mapping, compare and contrast, and relational propositions push students to process knowledge in different, more complex manners, which promote critical thinking.

By default, student-centered learning de-emphasizes learning of facts and rote memorization. Assessment of student learning should reflect this de-emphasis of facts, except those required to set the foundation, and instead gauge to what depth student learning has occurred. Usage of open-ended questions or essay prompts require students to utilize evidence, which in turn demonstrates synthesis and higher-order thinking.
While research illustrated that student-centered learning increases critical thinking, this shift in pedagogy has other benefits and certainly challenges, all of which behoove educators to consider. Research demonstrates that a higher level of academic achievement and engagement is realized in a student-centered classroom. The fact that learning is active, collaborative, and authentic drives students to be more engaged and therefore achieve higher levels of learning. Students also receive innumerable opportunities to build transferable skills, which will pay dividends outside of the classroom. Crucial skills such as communication, time management, and cooperation are learned and practiced in the student-centered classroom. Dewey (1938a) spoke of the often overlooked value of such collateral learning which occurs within the confines of the classroom. Yet, like anything else, student-centered learning has its challenges.

A by-product of a more active learning environment is that the classroom educator must engage in a higher degree of classroom management. Classrooms become a more active environment as students are busily constructing knowledge (Dewey, 1959). With increased activity comes increased volume and there arises more opportunities for student misbehavior. Classroom educators expressed concern about the increased level of classroom management, which presents with a student-centered environment (Revelle, 2019; Parsons et al., 2011; Tadesse, 2020). A delicate balance exists between students autonomously constructing knowledge and the educator maintaining control of the classroom. Educators must carefully consider the balance and proactively manage their classroom in a student-centered environment.

The nature of inquiry-based instruction and the potential cognitive load on students requires that learning occur at a slower pace. For some educators this could be a challenge in the context of numerous state standards, which must be met (Ciftci, 2015; Parsons et al., 2011; Revelle, 2019; Tadesse, 2020; Vermette & Foote, 2001; Voet & De Wever, 2019). Additionally,
educators may find the time required for planning and implementation to be too demanding. It should be noted that while a higher percentage of the student population will achieve at a higher degree, it is not a guarantee that all students will learn. There will always be a segment of students who are hesitant, if not resistant, to engage in school. Educators should carefully weigh the benefits and challenges of student-centered learning but not be intimidated by the challenges.

**Professional Application**

During his long career, psychologist and philosopher John Dewey encouraged schools across the United States to adopt a progressive model of schooling, which utilized constructivist practices. Much of the preceding literature review was centered on John Dewey’s historical perspective. Even now a hundred years on, little has changed in the P-12 education system across the United States. Passive, teacher-centered pedagogy still predominates classrooms across content areas. As was illustrated in this literature review, student-centered learning grounded in constructivist practices increases the level of student achievement, engagement, and certainly critical thinking. These implications alone should be reason enough for educators across the country to adopt student-centered pedagogy.

Today’s employers are demanding that employees be capable of thinking critically, solving complex problems, be curious, and not complacent. It is the responsibility of the P-12 education system across the United States to send students forth into the world with these skills, whether students choose to immediately enter the workforce, military, or post-secondary education. Without this solid foundation, students are not being fully prepared for adulthood. To ensure that the students entrusted to educators are fully prepared for their future, educators across the United States and across all content areas, should consider the usage of student-centered pedagogy.
P-12 education in the state of Minnesota mirrors that across the United States, in that passive, teacher-centric learning is still the predominant mode of instruction. The outcomes for student learning and engagement are the same in Minnesota as they are for students across the United States. Likewise, educators in Minnesota receive the same encouragement to adopt the philosophy of constructivist learning, which John Dewey touted.

The preceding literature review was equally for myself as it was for other educators who wish to utilize student-centered learning to its fullest potential. It is a professional goal to shift towards a constructivist, student-centered learning model in my classroom. But to effectively shift my own pedagogical practices, I sought to learn what research stipulated not only as best practices, but potential pitfalls and benefits. I know that I learn best in a kinesthetic environment, and have witnessed firsthand my students enthusiasm for similar learning methods. This alone is motivation for me to better understand student-centered learning and deploy the usage in my own classroom.

The concept of student-centered learning may simultaneously sound appealing and daunting to P-12 educators. But deployment of this pedagogy need not be daunting and will be worth the investment in student cognition and achievement. Educators who wish to adhere to John Dewey’s principles should start small and grow their repertoire gradually and purposefully. A strong starting point is the classroom organization, moving from solitary seating to one that promotes collaborative learning. This initial shift allows the educator to become comfortable with the level of classroom management required to successfully operate a collaborative learning environment. The educator will almost immediately notice the level of student engagement and achievement escalate. From this point, the educator should continue to deliberately expand their student-centered pedagogy into the curriculum itself.
As was highlighted in the preceding literature review, a challenge of student-centered learning is the amount of time required to plan and implement. The initial investment of time will be paid in dividends in the form of student engagement and achievement. Educators who are shifting to this mode of learning should pick one unit in which to utilize constructivist practices. Plan out the lessons, slow the pace, solicit student feedback, and then review the data at the end of the unit. Ask onerself: How did students respond to the lessons? What did students learn? How did the achievement and engagement compare and contrast to other lessons? The data, like the research, will be a mandate to continue the practice of student-centered instruction.

P-12 educators who are implementing a shift to student-centered instruction should capitalize on the collaborative nature of their Professional Learning Community (PLC), work together to implement the shift, review research on best practices, and utilize the unique human resources that each member brings, and divide and conquer the planning and implementation. Then return to the PLC with data and, perhaps most importantly, student feedback. Not all educators who wish to adopt a student-centered pedagogy will find themselves in a collaborative PLC. The application for these educators is to take a pass at the planning and implementation, then return to the PLC with the data. Let the data and student feedback speak for itself. In the end, let the guiding light be why one is an educator: to serve students.

**Limitations of the Research**

The research available was ample but still required restriction. As I reviewed each piece of literature, some did need to be eliminated from usage. Some articles were very succinct and provided few details, to the point that I deemed them unusable. Other articles provided research, which could not be corroborated by other sources. Without such corroboration, as the act of disciplined inquiry teaches, the source should be eliminated from consideration. One final
criteria for elimination was the age of the literature. With the exception of works from John Dewey, which were utilized for historical context, I sought to only incorporate articles from the 2000’s unless researchers and/or specific articles were explicitly mentioned and deemed an authoritative voice.

Despite the magnitude of literature that was reviewed, there were a few gaping holes that were quickly realized and unexpected. Much of the existing literature focused on student-centered learning in secondary science (Daher & Saifi, 2016; Gonzalez et al., 2008; van Schijndel et al., 2018). Additional, much existing research concentrated on post-secondary studies (Alt, 2015; Alt, 2016; Baeten et al., 2016; Bloom, 2009; Scheiber & Valle, 2013; Tynjala, 1999). Secondary school in general is minimally represented and many specific content areas are largely absent altogether. Social studies, which I focused on, has minimal existing research despite this content area being a prime setting for student-centered learning (Ciftci, 2015; DiCamillo & Gradwell, 2012; Newmann, 1995; Newmann et al., 1996; Revelle, 2019; Shah, 2019; Tadesse, 2020; Voet & DeWever, 2019).

Within the realm of constructivist-based social studies research, all of the research which I studied for this literature review focused on history courses and how educators can entice historical thinking. History is but a small portion of the social studies portfolio. The absence of geographic thinking, economic thinking, psychological thinking, is a missed opportunity in the research which was not expected.

**Implications for Future Research**

While ample literature is in existence regarding student-centered learning, I believe that future research should be conducted in a variety of areas. Following are a few areas of importance that are crevices in the existing research.
This literature review was conducted under the shadow of the COVID-19 worldwide pandemic, which disrupted daily life in myriad manners. Education was certainly not immune to this disruption. P-12 schools in Minnesota, where I practice, abruptly shifted to online learning in March 2020 and closed out the 2019-2020 school year in this manner. The school district in which I am employed began the 2020-2021 school year in a blended learning model with half of the student body in distance learning and the remainder in-person on alternating days. Even after shifting from the blended learning model to full distance learning and eventually to full in-person learning, the common theme was that there was always a segment of the student population learning remotely. My school district briefly shifted to distance learning during the 2021-2022 school year to accommodate a severe staffing shortage. Even as the COVID-19 pandemic continues to wane, the presence of remote learning will likely not follow suit.

The COVID-19 pandemic has illustrated that school can be conducted in a virtual platform. Whether due to a worldwide pandemic, a weather event, or student choice, digital learning will remain a segment of P-12 public education. Therefore, it is essential that research consider best practices for student-centered learning in the virtual space. How can student-centered learning be conducted in a remote learning environment and still capitalize on student critical thinking skills? How can the full force of collaborative learning be used effectively? What constructivist pedagogical strategies are effective in the online classroom? These questions are timely and imperative points of inquiry that warrant the energy of educational researchers.

Research hinted that student-centered learning practices may be more equitable than traditional practices, and could also narrow the achievement gap between students of color and their white peers. As was illustrated in this literature review, student-centered learning reaches a
broad swath of the student body from special needs to gifted and talented. Inclusive in this wider audience are students from a variety of socio-economic and cultural backgrounds. Student-centered pedagogy, as demonstrated in this literature review, is favorable to a larger constituency due to the emphasis on authentic education and exploration of multiple perspectives. Therefore, it could be deduced that student-centered learning is more equitable and has the potential to narrow the pervasive achievement gap. It would behoove educational researchers to dial in on these hypotheses to investigate the actual connection between student-centered learning practices, equity, and the achievement gap.

Much of the existing literature concentrated on student-centered learning in the science and mathematics classrooms. This critical pedagogical practice, however, can be utilized across all content areas. Research into the effectiveness of student-centered learning in various content areas would benefit educators. Narrowing the lens, as was demonstrated in this literature review, the social studies classroom is a prime setting for student-centered learning to transpire. Yet there is limited research that focused specifically on the social studies classroom. As was demonstrated in this literature review, the intent and purposes of social studies classes is to grow and empower students to become curious, active, global citizens who think critically. The opportune manner to fashion future global citizens is by means of student-centered learning. Therefore, additional research, specifically, for student-centered learning in the social studies classroom would be most beneficial.

Along the same lines, there is sufficient research that focused on historical thinking. While social studies is heavily focused on history, such classes are not the extent of the social studies portfolio. As was illustrated in this literature review, application of knowledge in a fashion that mirrors that of adult practitioners in the field is authentic education and leads to
higher-order thinking. Student-centered pedagogy is deployed to encourage historical thinking, guided by research-based best practices. But there is little to no research on geographic thinking or economic thinking to steer educators in this endeavor. Educational researchers should explore effective best practices to provoke critical thinking across the social studies portfolio.

**Conclusion**

Research confirms that student-centered learning is an effective pedagogical strategy, which promotes critical thinking. How do these strategies build student critical thinking? Educators who utilize student-centered pedagogy adopt a constructivist mindset, which requires students to build knowledge for themselves. This construction of knowledge is rooted in inquiry, exploration, and manipulation of materials in a social environment. Students must assimilate prior knowledge with newly acquired knowledge, forming new meaning. Knowledge construction focuses on real-world applications. Forming knowledge in this manner leads students to higher-order thinking since the concepts of study are no longer abstract. What are effective strategies that build critical thinking? First and foremost, utilization of a collaborative learning space is paramount. Students learn from their peers, supporting one another in their respective Zone of Proximal Development. Concept maps, disciplined inquiry, compare and contrast, and relational propositions all are effective strategies, which promote critical thinking for students. Finally, what are some benefits and challenges of student-centered learning? Adoption of student-centered pedagogy leads, as research stated, to higher student academic achievement and engagement for a wide swath of the student population. Additionally, students gain and sharpen transferable skills, which will pay dividends in the real-world. At the same time, some challenges are posed to educators such as increased vigilance of classroom management due to a busier, more active space. Educators may also struggle with the time
needed to accommodate the slower pace of student-centered learning, in the context of a large number of standards, which must be covered. While student-centered learning leads to higher academic achievement and engagement, it is far from a guarantee that all students will perform and successfully meet expectations. In the end, student-centered learning is an effective pedagogy that educators should adopt to build critical thinking and truly prepare their students for adulthood.
References


