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The Forgotten Subjects: Implementation of Science and Social Studies into Elementary Education

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Murray State University Honors College

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The Forgotten Subjects: Implementation of Science and Social Studies into Elementary
Education

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The Forgotten Subjects: Implementation of Science and Social Studies into Elementary
Education

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Abstract

The content areas of science and social studies are areas that students in today's elementary education classrooms do not interact with daily. In many general education classrooms, literacy and mathematics take up a majority of the instructional time leaving students missing out on important skills that help them grow and flourish in society. The importance of science and social studies within the classrooms goes beyond simple means of expanding their knowledge. For example, these "forgotten subjects" allow students to connect with the world around them and incorporate the higher levels of Bloom's Taxonomy. The content areas are used to deepen students' skills and boost their impact left on society. Articles, journals, and webpages from the Murray State University library database and other outlets were collected and analyzed. The purpose of this literature review is to examine both the presence and the impact of science and social studies within the classroom. This review has the potential to contribute to the field of education by giving teachers the opportunity to see the detrimental impacts due of the lack of science and social studies, providing benefits to support the inclusion of science and social studies, as well as suggesting recommendations that can be implemented to boost science and social studies content time. Within the literature, I will compare and contrast themes that emerge and potentially determine patterns between schools with or without these subjects to support the recommendation of science and social studies being implemented into everyday curricula.

Keywords

Science and Social Studies, "Forgotten Subjects", Expanding Knowledge, Impact, Library Database, Literature Review, Curriculum

If you were to travel back in time to the days you attended elementary school, what would you see? For many of us, we would remember the same elements – bright colors, read alouds, smiling faces, and even recess time outside. When looking back at the content taught in school one thing is consistent – mathematics and literacy were taught heavily back then and are continued to be taught heavily now. These content areas are heavily reinforced in the elementary education classroom leading to students who can generally read, write, and solve a semi-difficult math problem, but what about social studies and science? How often are those explicitly taught in today's general education classroom?

Science and social studies content areas provide many benefits for students that are unseen in everyday life and help students develop for many years to come. One way that science and social studies can work "behind the scenes" is through different mindsets, frameworks, or curricula. For example, the National Geographic learning framework allows students to strive to generate curiosity and create explorer mindsets. They go beyond the idea of a simple test grade or the end-of-the-year test. This leads more to skills that the students will carry with them for the rest of their lives, such as curiosity, determination, and many different social skills.

Science and social studies might be difficult to understand and teach effectively at first, but recognizing the importance of science and social studies, and implementing quality instructional practices, will guide the students to become model citizens. The need to engage with science and social studies content areas goes beyond the overview of the subject. Science and social studies both involve a deeper form of higher-order thinking. Science and social studies empower students to learn skills and attain abilities that are not otherwise attainable within general education. Although it is quite simple to teach students efficiently by integrating them into other content areas, many students go without exposure to them. In the review of the

literature acquired from the Murray State University library database and other outlets, patterns regarding the topic are explored more deeply to determine their impact on students in elementary education classrooms.

Background

The Space Race

The reduction of science and social studies content area times started around the Cold War (Kalaidis, 2013). The United States and Russia were in the widely-known Space Race, and when Sputnik was flown into the air by the Soviet Union, many people within the country had doubts and concerns regarding our ability to advance new technology and weapons. Many people, parents, politicians, and scientists became concerned about the stress and importance placed on the education system. It was believed that if we had a strong education system, we would have more advancements in different areas such as technology and even weaponry (Kalaidis, 2013). The talk of the United States falling behind Russia and possibly even other countries led to the passing of The National Defense Education Act (NDEA) on September 2nd, 1958. This act placed a very high value on education and the advancement of student knowledge. It provided funding to educational institutions within the United States at all grade levels: interdisciplinary, elementary, middle, and high. This new act pushed the government to be very involved in the learning process that occurred within the school building. It showed that the government was invested in the school systems and wanted growth and success from the students (Kalaidis, 2013).

No Child Left Behind (NCLB) Act

The Space Race was not the only item that was implemented that affected the course and outcome of schools within the United States. In 2001, the No Child Left Behind Act (NCLB)

provided disadvantaged or underprivileged students with the right and ability to receive equitable learning (Kalaidis, 2013). The No Child Left Behind Act primarily focused its eyes on four main groups of students within the school systems: impoverished students, students of color, disabled students (students receiving special education services), and students who did not or were not fully exposed to English. This act's main goal was to make the schools more responsible for the learning of their students and make it equitable learning for every student (Kalaidis, 2013).

During the NCLB era, state testing was the main form of pushing this common goal of learning. States now gave standardized tests to each one of their students at the end of the year from third grade to eighth grade and once within grades 10 and 12 (Lee, 2014). This practice forced teachers to make sure that all of the students were being exposed to the same type of learning material, and that they were all given the same strategies and instruction. It attempted to hold the teacher accountable for the learning of each student within their classroom despite their learning or personal differences.

NCLB was considered controversial primarily because of one reason: the yearly academic reports. Each school was essentially given a grade of how they were doing in terms of student success and then given areas where they could work on. If the government or school board deemed your progress or work "unsatisfactory," the school could receive penalties. The worst of these penalties often surrounded "Title 1," or low-income schools. If these lower-income schools did not receive sufficient marks on their adequate yearly progress (AYP) then the administrator may have been asked to leave, or worse, the school may have been shut down (Lee, 2014).

While the NCLB was good for the disadvantaged students within the classroom, it placed a lot of pressure and stress on the teachers to teach content efficiently and effectively. NCLB was an attempt at reinforcing the curriculum to support the needs of all students. According to

Wexler (2019), "...the No Child Left Behind Act legislation made standardized reading and math scores the yardstick for measuring progress..." (p.4). This created an instructional change movement within the schools of the United States – standardized test scores became a driving factor behind curricular changes that were made to various content areas (Lee, 2014). Schools all across the country wanted to receive the incentives and publicity that came with good test scores. Many schools received funding and still do, based on the test scores they receive at the end of the year. Due to this a major shift and drastic narrowing of the United States curricula occurred (Kalaidis, 2013). With the new act in place, many teachers changed their curriculum to match the end goal of higher math and reading scores at the end of the year.

As previously stated, the NCLB act was considered controversial by some, therefore plans for change and a new structure were implemented. In 2015, the Every Student Succeeds Act, or ESSA, replaced NCLB (Lee, 2014). This act is created with the same purpose as NCLB but it gives the schools more ability to be flexible and gives the schools more support in reaching the goal. For example, in regards to academic rigor and testing, each state can now set the goals for the students, states are allowed to choose which test they require students to take, such as the ACT or the SAT, the states are required to use a challenging set of students and the Common Core State Standards are recommended but not required.

Regarding student success, the ESSA assesses schools for more than test scores, this act considers items like climate and safety, the readiness of the students, and English-language proficiency. Schools also have to set goals for all students and ambitious goals for the students who are falling behind, this ambitious goal setting is used to assist the students who are falling behind (Lee, 2014). The ESSA put more emphasis on student success, requiring schools to have plans in place for students that are struggling, this group includes but is not limited to, high

school dropouts, special education, low socioeconomic class, and students that consistently struggle with their school work. This act provided students within the school building with more opportunities to succeed than they originally had with the NCLB act.

Decreased Time of Content Areas

In looking at how curricula changed as a result of NCLB, science and social studies time dropped dramatically to support and teach the concepts that were tested on standardized tests (Kalaidis, 2013). Many times, teachers and administrators assume that the social studies curriculum is "squeezed" into the daily lives of students due to the heavy emphasis on state testing (Townsend, 2007). Schools all over the United States increased math and literacy time and decreased science and social studies time. Many schools implemented reading blocks that allotted 90 minutes of structured time strictly to literacy activities and lessons to improve student's reading and writing skills (Wexler, 2019). This left the marginalized subjects particularly science and social studies, to receive less than two hours a week, which translates to around only twenty-five minutes a day (Wexler, 2020). This dramatic decrease in science and social studies class time left students falling behind on essential skills that will help them succeed in their future school careers and even for the rest of their lives.

Impacts of Lack of Science and Social Studies in the Curriculum

While many things led to the dramatic decrease in science and social studies time in the classroom, one thing is for certain: the lack of these content areas left students falling behind in terms of overall academic success. The Center on Educational Policy found that over five years 36% of departments decreased their time allotted for social studies, even more than science (Townsend, 2007). While science and social studies time decreased, the subjects that were assessed via standardized testing, that is math and language arts, took the majority of the time

within the classroom. This decrease in time for science and social studies impacted the students in different ways. Some students saw a decrease in their performance due to a lack of knowledge, while other students were never exposed to the information in the first place. \

Achievement Gap

As previously noted, with the implementation of mathematics and literacy blocks, much of the focus within the schools were placed on those content areas. The theory behind increased literacy times is that "if students just read enough, and spend enough time practicing comprehension skills, eventually they'll be able to understand more complex texts" (Wexler, 2019 p.7). Reading times became widely passive, meaning that the majority of the time spent reading short books included reading passages that were unconnected from any content area and instead are connected to skills (Wexler, 2020). For example, a teacher is starting a unit about space and the solar system, and the teacher introduces the book *There Was an Old Lady Who Swallowed an Astronaut*. This book displays items that are observable in space but truly drive home the literacy skill of sequencing rather than meaningful science content. The content of space is placed in the background and sequencing skills are placed in the foreground, with this style of learning, many students are expected to first, practice those sequencing skills, and then perhaps grasp some science content.

The best way to help students increase their overall content knowledge in science and social studies is to spend their time reading to learn instead of learning to read (Wexler, 2019). Even though science and social studies concepts are difficult to grasp, the younger students are still capable of understanding. Assisting students through reading with tougher content extends their background knowledge which helps their foundational skills grow. This is important

because the intentional integration of literacy with science or social studies can improve both subjects (Dhandhania, 2016).

When learning science and social studies content areas, much of the understanding stems from background knowledge. According to Kalaidis (2013), we are currently in a "Civic Achievement Gap" (p.4), where many students and adults are not able to recite knowledge about our country – information that is supposed to be taught in an elementary social studies classroom. Only one-third of Americans can state all three branches of government and only 23% of Americans know that the first amendment gives us the right to freely practice any religion we want (Kalaidis, 2013). Many students come from different backgrounds of life, one of which includes disadvantaged students. Disadvantaged students usually come from a lower socioeconomic status and their exposure to vocabulary is lacking and they have slower language processing speeds (Casey, 2013). Implementing explicit and intentional science and social studies content allows students to increase their background knowledge, and then they will be able to perform better and grow their comprehension skills.

Knowledge plays a crucial part in students' comprehension of passages, books, and even questions on tests. Higher vocabulary and background knowledge allow students to exceed in the skill of comprehension (Wexler, 2019). The students who don't acquire these items will be behind especially if not provided with support (Wexler, 2019). Due to the lack of exposure that occurs as a result of the exclusion of science and social studies content areas, disadvantaged students are placed further behind and are given less of a chance of succeeding compared to their peers (Kalaidis, 2013). If students don't obtain the knowledge to understand a passage they are reading, then they will never be able to perform the desired skill no matter how much it is practiced (Wexler, 2020).

Common Core Standards

In an attempt to address the learning or achievement gap noted earlier, the educational initiative of Common Core State Standards was created. In 2010, the United States government passed the Common Core State Standards, and these standards were adopted into the curriculum of many states (Bidwell, 2014). These standards were created to act as a beneficial guide to all educational stakeholders. Furthermore, the standards were used to provide a clear outline of what students would learn in each designated grade level. This new set of standards was used in an attempt to address the learning gap regarding disadvantaged students by creating a new uniform set of standards that can be used throughout the United States (Greer, 2018). Content standards would guide what content the students would learn, and performance standards would guide what students would perform. The CCSS also focused on college readiness and provided teachers with specific skills to teach and help students master to be prepared for the future (Greer, 2018).

Despite the implementation and numerous modifications to the Common Core State Standards, students' academic performance did not waver much from the original (Kalaidis, 2013). The standards are a cohesive progression of content starting at kindergarten and spanning throughout the academic career of students until grade 12. The lack of the forgotten content areas of science and social studies proved to be important, as students lacked many of the key items that would assist them in effectively processing the standards.

Benefits of Science and Social Studies in the Curriculum

There are many added benefits to including science and social studies content areas, and many of these added benefits come in the form of the students growing through foundational skills that can be used at numerous points in their later lives. Often, the important benefits

provided by science and social studies content areas go unseen on standardized tests. Instead, these benefits work behind the scenes to create higher-order thinkers and developed citizens.

Higher-Order Thinking

Science and social studies can impact a student's academic achievement simply by giving students context to different scenarios or ideas in the past, promoting and encouraging higher-order thinking. These content areas give the schools the best chance of creating a "well-rounded education for the students" (Dhandhania, 2016 p. 3). A major component of learning is higher-order or critical thinking, and often higher-order thinking requires background knowledge.

Background knowledge on a topic has a great impact on the student's success and understanding of different skills and topics. While the Common Core State Standards placed efforts to eliminate the gap between students within the classroom, it seemed to not help in its entirety (Kalaidis, 2013). A student's background knowledge can only grow if they are exposed to the content on numerous occasions. With the addition of repeated content, the disadvantaged students in the classroom are placed on a level playing field with the content if time is spent building their background knowledge (Wexler, 2019). Adding science and social studies content areas is a great way to increase background knowledge. For example, if teachers want to learn more about the branches of government and they are only mentioned once, not much learning will occur. But, if the class repeatedly learns about the branches of government throughout the week, and then repeatedly revisited, then the student's exposure increases and student knowledge increases alongside it.

Science and social studies content areas help students grow their skills within the related content area classroom as well as within the core content areas of mathematics and language arts (Wexler, 2020). By diving into rich content, such as science and social studies, students can ask

complex questions which expose them to higher-order thinking. If exposed to the science and social studies content within the regular education classroom, students can grow their reading comprehension as well as background knowledge (Wexler, 2019). The exposure leads to higher-order skills that are depicted on the top tiers of Bloom's Taxonomy. For example, students will develop the skills of application, analysis, synthesis, and evaluation through the exploration and investigation of the complex ideas found within science and social studies content areas. This increase in content would allow students to develop an interest in the topics and have the ability to logically explore those topics in greater depth (Wexler, 2020). There is a vast amount of information that is learned through science and social studies content. As previously mentioned, much of the information allows for more background knowledge to grow and strengthen. Skills that are obtained within science and social studies impact a student's achievement while in the classroom as well as outside of the classroom. Critical thinking, reasoning, and abstract abilities allow students to obtain and strengthen the knowledge that will guide their success in secondary education as well as later in life (Ciullo, 2015). Additionally, these content areas allow students to learn how to become critical thinkers and become strong and striving oral and written communicators, articulate their opinions and understand how to make their voices be heard – skills that are currently lacking in today's workers (Kalaidis, 2013). This gives students opportunities to explore these content areas, provides them with a "leg up" with their peers who might not have been exposed to these before, and creates a developed, critical thinker who can explore complex topics.

Transfer

Many of these complex ideas and topics do not have a direct relation to everyday life. For example, while talking to college students about science and social studies content areas, most of

them can recite that the mitochondria is the powerhouse of the cell and that Christopher Columbus sailed the ocean blue in 1492. While these items are important to specific concepts in science and social studies, many added benefits are seen through transfer. Transfer is "...a phenomenon in which something a person has learned at one time affects how a person learns or performs in a later situation (Ormrod & Jones, 2018, p. 75). For example, a preschool student could be learning about shapes in math class, and when that student reaches fourth grade they will learn about geometry. The student's prior knowledge of shapes will assist them in understanding the concept of geometry.

Positive transfer is using previously learned information to help learning in other contexts. Many students do not understand how to retrieve information that has been previously learned in order to help them learn something new and difficult. When students are explicitly taught content that is interconnected to skills, students will be better able to use that information in future situations, "learners are much more likely to apply new knowledge and skills when they engage in meaningful rather than rote learning" (Ormrod & Jones, 2018, p. 76). Making connections between different content areas allows students to pull items from longer-term memory and access them more readily.

Students can transfer more than just old content knowledge to new content knowledge, students can also transfer their beliefs, attitudes, behaviors, and ways of thinking. These items of transfer can have a huge impact on their learning and achievement (Ormrod & Jones, 2018). This emphasizes the importance of exploring the world around students and creating a strong mindset within students. If students have the confidence to explore complex ideas and discuss those ideas in class, then they can continue that confidence throughout their academic careers. Teachers determine the mindset of their students and increasing students' belief in themselves is rather

important to their academic success and their mental stability while completing their journey through education.

Developed Citizens

The information learned also allows students to recognize the benefits and challenges of the living world, and interpret a world with multiple cultures and ideologies (Dhandhania, 2016). Additionally, these content areas influence citizenship, teach students about key events and figureheads, and integrate literacy skills (Ciullo, 2015). Citizenship allows students to become active members of society and have a plethora of social skills that can be used to create friends, have empathy for people living in different situations, and develop a personality and uniqueness about themselves.

The research gathered and discussed within this literature review has many different meaningful implications that should be considered in terms of the overall course curriculum and, more specifically, the implementation of the science and social studies curriculum. A study from the Carnegie Corporation of New York found that students who receive effective social studies content are likely to become active and participating members of society (Kalaidis, 2013). These students are more likely to vote in relevant elections, four times as likely to volunteer in their community and work on community issues, and are confident in their ability to communicate their ideas and opinions with their elected representatives (Kalaidis, 2013).

Becoming a developed citizen goes beyond simply becoming active within the community, it is also understanding and learning from the world around you. Science and social studies are extremely important for understanding the world and the people that live in it (Dhandhania, 2016). Much of the learning is concerning the past and what has shaped our communities and where we live. By being exposed to content, students can understand the

societal structure, and governing, and give the students more knowledge to support understanding who they are and their place in the world. It also gives them the opportunities to understand the roles and responsibilities by giving them relevant information and knowledge, along with skills and attitudes that help create active, responsible, and reflective members of society (Dhandhania, 2016). Making relevant observations, identifying similarities and differences, and making connections only scratches the surface of skills that students can benefit from by experiencing these content areas.

Recommendations to Implement Science and Social Studies in the Curriculum

Many teachers that are a part of the United States school systems want to incorporate science and social studies content areas into their classroom time. Based on a survey given in 2020, many teachers and administrators believe that these content areas are important to teach to younger children. Many students share these same opinions, expressing positive attitudes towards science: exciting, valuable, important, and understandable (Wendell & Rogers, 2013).

While many teachers believe that the incorporation of these subject areas is important, they struggle to find appropriate ways to incorporate them into their daily schedules. With the implementation of reading blocks, structured specials such as recess, library, and computers, along with opportunities for the student movement, there seems to not be enough time in the day (Wexler, 2020). Teachers also face difficulties teaching science and social studies content because of the low content knowledge and experience, low self-efficacy, and insufficient support from their mentor teachers and even other administration figures (Brunner & Abd-El-Khalick, 2019). With the lack of knowledge over the content areas, many teachers look for different ways to teach these topics, the most common resource being relying on outside curriculum materials to assist with the deficits within their knowledge.

Inclusion into Other Content Areas

There are many ways that teachers can incorporate science and social studies content areas into other content areas, such as language arts and mathematics (Tallman, 2016). Selecting passages that have a content meaning instead of simply picking a read-aloud that aligns with only a literacy standard allows students to be connected to appropriate-level content as well as grow their literacy skills (Wexler, 2020). Even an easy transition like substituting a daily reading with an article that is aligned with the standard and gives access to explicit historical context and provides meaningful access to different forms of content that allow students to learn. (Ciullo, 2015).

Allowing students to practice specific skills through proper text selection allows for opportunities to address both comprehension development as well as content acquisition (Ciullo, 2015). For example, a teacher wants to include science and social studies in her literacy class but has to teach the Core Content Standard of making connections. The teacher could introduce a unit regarding the light bulb and electricity. Giving the students access to literature pieces regarding the invention of the lightbulb by Thomas Edison in 1880 and exploring how electricity works through a science experiment gives students a direct correlation to science instruction. Social studies could be introduced into the unit through the effects that the lightbulb has made on our community, and how lightbulbs have changed over time. The teacher could incorporate primary sources that directly relate to the topic. With all of this combined, the unit could be wrapped up with making connections in students' daily lives regarding the use of electricity and the lightbulb. An extension for this would be looking at connections to the world and seeing how other people in the community, country, or world use electricity or their access to electricity.

Incorporating science and social studies into writing rotations or class time can have a heavy effect on students' ability to comprehend and connect to what they are learning. Scientific writing usually comes from the processes of estimating, hypothesizing, recording, explaining the process in which an experiment takes place, and writing conclusions that can be used to enhance future experiments (Tallman, 2016). Using these types of writing in writing rotations, helps shift the goal from learning to reading by reading passages with no relation, to reading to learn by implementing information that will be useful to their content knowledge in the future. It allows the students to learn how to use the skills which can then be used multiple times and on many different styles of passages.

National Geographic Framework

Another way that teachers can receive assistance implementing these content areas is by incorporating different frameworks within the daily life of students to increase the processes of thinking that are desired. The National Geographic Explorer Mindset Framework is an excellent example of a framework that can be used to increase students' participation, interest, and learning surrounding the science content area. This framework outlines a way of thinking that each "explorer" should embody and that is the ASK mindset. This ASK mindset incorporates attitudes, skills, and knowledge that each student should embody. This framework provides students with a way of engaging with the world around them through attributes, competencies that can be learned, demonstrated, and assessed, and descriptors of what attributes should look like (Society, n.d. 2019).

The charts given by resources included within this framework span from preschool to senior year of high school, and the content within the charts is grade-level appropriate and distinguished by categories. The Attitudes Chart breaks down three attitudes that should be

exhibited in every grade level: curiosity, responsibility, and empowerment. The Skills Chart breaks down the components into four broad categories: observation, communication, collaboration, and problem solving. This attitude and skills chart supports the idea that even younger students can grasp the ideas taught in science and social studies at a developmentally appropriate level.

The incorporation of this framework can empower students to learn about the world around them and develop new ways of understanding and exploring the world around them. One piece, in particular, the Understanding Perspectives Chart, displays an interconnected model of how we can relate items that are being discussed or are happening to multiple different levels of perspectives. The perspectives shown are spatial, cultural, political, economic, historical, geological, and ecological. It exhibits a direct definition and guiding questions regarding how to choose which relation suits the topic best. Using charts such as this presents a way of thinking to the students that goes beyond simple mindsets and develops deeply-constructed understandings of the content and the world around them. It also provides a guide for teachers to help them plan meaningful instruction.

Certifications

Alongside the framework, National Geographic offers a teacher certification that any style of teacher can obtain through the National Geographic program. This certification program qualifies teachers leading students in the grades pre-k through 12th grade to uncover curiosities, explore the world around them, and express their creativity to bring different experiences into the classroom (National Geographic Society, 2019). Completing this certification requires educators to go through three stages in order to be considered a National Geographic Educator. The first stage is a workshop style program where educators collaborate to learn the material and receive

exposure to the content areas. The second step is designing and implementing the materials from stage one into classroom activities – creating unique and interesting outlets for the students to learn. The third stage is reflecting on the growth that has been made during the duration of the program. This is a great form of professional development that the teachers can not only use during the program but throughout their educational profession to improve and succeed in the world of education.

Additionally, other certifications can be applied for and completed within these content areas that can add a new level of development within your classroom. PBS, Project Wet, Project Wild, NAAEE, and KAEE are a few of the names of additional certifications or extended resources that can be used to provide this development. PBS has a wide variety of extended resources involving social studies content that can help enhance the classroom experience. Project Wet and Project Wild have researched based curriculums that provide students with hands-on activities in relation to the science content area. For example, Project Wild has activities such as one labeled Oh Deer. This is an interactive scenario that is created with the students to learn about the basic needs of survival. Some students are selected to act like deer and the rest of the students get to pretend to be food, water, or shelter. The students who represent the deer have to close their eyes and pick what they think is most important: food, water, or shelter. The students then turn around and attempt to make pairs. If pairs are made then more deer are reproduced, but if pairs are not made then those deer are considered dead. This activity directly relates to math because there is an opportunity to graph the population growth and fall, and it teaches students science by showing them what are necessary means for survival. Resources such as these can also provide interactive lessons as well as online resources that can give students

opportunities to participate in online field trips or connections with the outside world (Project Wild et al., 2014 p.34)

By taking courses, attending conferences, or paying a fee, teachers are exposed to new ways of thinking and new lessons that they can use within the classroom. These additional certifications can shape the format or outlook of the classroom and introduce students to a new way of thinking that they did not have in the past. Students can be exposed to new forms of mindsets that can shape the rest of their academic careers and help them succeed in the future.

Conclusion

As noted throughout this review, there are many negative impacts and added benefits that science and social studies content areas have on elementary-aged children. Negative impacts include creating an achievement gap and setting disadvantaged students at a greater deficit. These negative impacts play a major role in students' later academic success. Added benefits include higher-order thinking, greater ability to transfer, and produce more developed citizens. Whether you teach these content areas or not, integrating these content areas into daily instruction can be a simple task with some guidance.

When looking closer at the benefits and recommendations there are many reasons to implement science and social studies into the daily routine of the classroom. Whether it's to increase students' background knowledge, close the achievement gap, or create developed citizens, the students in the classroom will be positively impacted. Through the intentional inclusion of science and social studies within other content areas, exploring the National Geographic Framework, or completing educator certifications, many teachers are qualified to expose their students to a differentiated experience that allows them to grow and strengthen their minds through creative thinking and outlooks they most likely did not understand.

Allowing students first-hand experiences with these content areas allows them to think broader and focus on the world around them, it also pushes them to become involved and learn more than simple ideas taught in a textbook. We can equip students with items that can lead them to become successful in their academics and have a lasting impact on society. Therefore, next time that you think about creating a lesson using a simple read-aloud or a textbook, think about how implementing science and social studies might have a lasting impact on the students within your class.

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