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Civic Environmentalism: Integrating Social Studies and Environmental Education through Curricular Models

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Abstract

Presently, we are being inundated with climate news and its ever-expanding impact on the world around us. We are at a tipping point and how we choose to respond will have long-term consequences for current and future generations. Historically, we have responded with the view that these issues are scientific and not social and have been addressed through scientific advancements. However, this approach has fallen short. Specifically, this is due to social studies and civic responsibility being framed as entirely separate from environmental education and environmental responsibility. We need to reframe our thinking and view these areas as cohesive and civic responsibility includes environmental responsibility. The purpose of this paper is to describe the need for integrating social studies education and environmental education to foster a new framework of civic environmentalism. Civic environmentalism is the extension of civic responsibility to include all human and non-human life forms and the entire natural world around us. We showcase that this can be achieved through new ways of curricular modeling to create an integration between these two areas which have been traditionally viewed as separate. We present the frameworks of three nations who have started to reframe their perspectives as well as various practitioner models. We believe that civic environmentalism and an accepted responsibility to the environment is essential for all the world's inhabitants.

Key words: *Social Studies Education, Environmental Education, Civic Activism, Curriculum*

Introduction

By integrating social studies education and environmental education in a way that instills a sense of civic duty to be environmentally aware and responsible, collective environmental activism can be achieved in order to address ecological issues such as climate change. Some believe that civic engagement is the duty of all members of a democracy, and thus, it is required for successful governance. In this paper, we argue that these duties extend beyond civic responsibilities such as

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voting, and include civic responsibilities to one's local, regional, and global environment. An education system that is geared towards educating a citizenry that is informed, engaged, and active will ensure success in the fight over environmental matters. This can be achieved through several objectives outlined by the National Council for the Social Studies (NCSS) and the North American Association for Environmental Education (NAAEE).

Our paper focuses on the United States and the integration of social studies and environmental education for three reasons. First, both authors are educators in the United States and are heavily involved in teaching social studies and environmental education. Second, the United States has the world's largest economy with a GDP per capita of $65,111 US dollars and with this comes a great deal of consumption (Bajpi, 2020). Presently, resource consumption has the largest impact on the global environment due to a shift towards a throw away view of materials which drives further resource consumption and the United States is a key player in global consumption (Chen et al., 2018). Third and lastly, we believe that integrating social studies and environmental education in order to foster a civic responsibility to the environment will do much to reduce existing consumption and address pressing environmental issues which can no longer be passed on to another generation.

The discipline of social studies is one that is ubiquitous in many curricula across the globe. A common theme in these curricula is to create responsible citizens who are aware of problems and possess the necessary skills to address them. The curriculum model for social studies in the United States is centered in the social sciences, which includes but is not limited to the following courses: history, geography, government (political science), economics, psychology, and sociology (NCSS, 2011). The primary goal of social studies is to facilitate the development of citizens, who will become active and engaged members of local, regional, and global communities (NCSS, 2010; 2013). It is possible to consider the goals of the social studies curriculum as goals that are directed towards the civic and the collective, rather than the personal and the individual.

Environmental education is a way to affect real change in a world currently besieged with numerous issues that are threatening our planet such as climate change, access to fresh water, population growth, pollution, land use, and human sprawl**.** Today, environmental education has been included in various curricular models across the globe (Chan et al. 2017; Short, 2010). Environmental education is a tool to combat global ecological stresses whose causes draw from a

variety of events which may be centered locally or globally (Chen et al., 2018; Johnson et al., 2012). Globalization is causing existing environmental issues to be exacerbated, further impacting local, regional, and global environments (Chen et al., 2018; Palmer, 1998). The purpose of environmental education is to produce citizens who are aware of their environment and who have the tools and knowledge necessary to deal with current and emerging environmental issues (Meyer, 2002). There are a number of ways in which individuals may combat environmental issues, but education is key in first creating awareness. To create a more participatory population in the 20th century, leaders in the U.S. used education to create a new generation of citizens that could participate fully and eventually lead the country (Dewey, 1954). The impact of human beings on the global environment is felt more today than it has been in the past. This may be due to industrialization, modernization, and the progressive lengthening of human life spans (Simmons, 2003). As human populations grow and continue to utilize more of the world's resources, we must find a means to alleviate these existing pressures and adequately deal with new pressures that emerge.

Problem

Presently, what is known as environmental education began with the Tbilisi Conference in 1977, where the major goals of environmental education were discussed by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) (Potter, 2010). The global importance of environmental education can be seen in the outlined values of the Tbilisi declaration, which focuses on concern, skills, action, and change on the part of citizens (Potter, 2010). The United States congress passed the National Environmental Education Act of 1990, which gave the U.S. Environmental Protection Agency (EPA) the responsibility of providing national leadership regarding environmental education in the United States (Potter, 2010). Since the passage of this act, the EPA has spent almost $100 million dollars towards this effort (Potter, 2010). This commitment to environmental education is important. There are various reasons this curricular merger has not happened previously. First, environmental issues by their very nature are controversial which can push teachers towards not addressing the issues (Ho & Seow, 2015). In addition, environmental issues are framed in the sciences as they are viewed as issues of science and not civics which furthers the afore mentioned compartmentalized approach to the issues. This is also exacerbated by the fact that some may view issues in science as less controversial given the scientific lens through which one can view events around them. Lastly,

the capitalist's system within the United States does not always lend itself to addressing environmental issues through a civic lens as this can run counter to the intended goals of the existing economic model. However, all these issues are exactly why these curricula should be merged and framed cohesively.

There is a confluence of goals between civic education and environmental education. In each of these models there is an objective to be active in one's community (UNESCO, 1977). Community buy-in is vital to any civic or environmental education model because it allows participants to draw upon their commitment to the local to foster change (Chen et al., 2018). Environmental education in the United States has been predominantly framed in the sciences over recent decades and currently is still primarily framed in science disciplines in K-12 education (NAAEE, 2011). We argue that co-framing environmental education in the social studies and the sciences may be a more effective way to accomplish environmental civic action. Framing in this way could do much for the activism required in environmental education and could lead to a much stronger sense of duty than one currently may observe.

It must be noted that some see the term *activism* in a very narrow view of what it might mean. For the purposes of this paper, the idea of activism will be drawn from the National Council for the Social Studies (1994) definition, which advocates individuals take an active role in their civic and environmental community. The National Council for the Social Studies (2010) national curriculum standards stress active citizenship at the local, regional, national, and international levels with ten goals that focus on Culture, Time, Continuity and Change, People, Places, and Environments, Individual Development and Identity, Individuals, Groups, and Institutions, Power, Authority, and Governance, Production, Distribution, and Consumption, Science, Technology, and Society, Global Connections, Civic Ideals and Practices (NCSS, 2011). These standards are expansive in order to reflect the complexity of social studies as a discipline and the necessity to cut across multiple disciplines in order to fulfill the goals of an active 21st century citizen. Furthermore, NCSS has designed these standards with inherent flexibility so they may be applied by multiple stakeholders across the diverse geographic, social, political, and demographic strata. These standards are very closely aligned with the expressed goals of environmental education, which according to UNESCO (1978) and the North American Association of Environmental Educators (NAAEE) (2011) center on five main topics: awareness, knowledge, attitudes, skills, and participation. In contrast, three out of four goals identified by

the National Science Foundation (NSF) suggest how students can use science in a personal way, while only one goal suggests the use of science in a public way which appears to support a curricular model of co-framing and integration of environmental education and the social studies (NSTA, 2011). There is a clear confluence of terms, goals, and standards between the methodologies of environmental education and social studies (social sciences).

Environmental education has been framed primarily in the sciences and the curriculum in most primary and secondary schools reflect this model (NAAEE, 2011). In addition, when environmental education is a topic in other disciplines it tends to be presented in a limited and supplemental role (Ho & Seow, 2015; Lange, 2009). Framing environmental education in one discipline creates a fragmented approach (Drake, 2004; Johnson et al., 2012). For example, sustainability has become an environmental issue that is being addressed in the social studies and only provides a very limited offering of materials (NCSS, 2011). In addition, issues such as climate change, acidification of oceans, and a rise in global temperatures are all issues that citizens in every part of the planet must face (Evans, 2010). According to the NCSS (2011), the goals of the social studies curriculum are to ensure that citizens are prepared to be active, engaged, and participatory citizens at every level, while the goals of environmental education are to ensure that students are aware, understand, and know what to do about issues concerning the environment (NAAEE, 2011).

The synergy between social studies and environmental education is drawn from each suggesting that students be active, engaged, and participatory in order to fully be stewards of that which surrounds them. Recognizing the benefit of creating a strong and reciprocal relationship between civic education and action and environmental awareness and action through the integration of these two curricula is the goal of this paper. This paper will examine how two nations, Australia and the Republic of South Korea, frame environmental education to determine how they might inform curricular practices in the United States and offer a pathway for the integration of social studies and environmental education while broadly examining the paths taken by England and Italy.

Theoretical Framework

Our paper is underpinned by the following theories radical constructivism, discovery learning, and democratic education. These four theories underscore how learning takes place in the classroom, what that learning looks like, and how knowledge is constructed. Curriculum is in a

position of authority therefore our paper focuses on a merger of curriculum as the most effective way to facilitate a confluence of social studies and environmental education.

Radical constructivism suggests that students possess a great deal of power in the construction of their cognitive framework when encountering new constructs like the merging of civic and environmental responsibility. It espouses that knowledge construction is not a passive endeavor but one that is intentional (Gibson, 1999). Radical constructivist views of knowledge construction align with critical pedagogy and the work of social justice with regard to the belief that work towards solving issues of social justice and inequity must be taken up through action, not through passive education (Freire, 2000, Gibson, 1999). Constructivism focuses on the construction of knowledge and is intended to be an active process.

Discovery learning research highlights that learning is active and based upon prior experiences (Bruner, 1961). Discovery learning suggests that when students discover ideas and issues on their own they will better learn and retain information (Xuan & Perkins, 2013). Discovery learning also fosters the creation of relationships between existing knowledge and newly acquired knowledge, which is important in social studies (Bruner, 1961; Xuan & Perkins, 2013). An example of discovery learning includes problem-based learning which requires students to solve problems through a combination of pre-existing knowledge and new information (Svinicki, 1998). Discovery learning fosters cognitive growth and deep Individuals must first understand their positions regarding the environment and their previous experiences in order to make tangible connections between their understandings of environmental issues. When fostering change, it is important to connect the social and the environmental (Bruner, 1961; Svinicki, 1998; Wilson, 2006).

John Dewey's (1963) theory of democratic education suggests that for true, legitimate, and lasting learning to take place, instruction must occur under the conditions of a free and democratic classroom. NCSS' (2010) goals of developing engaged, active, and informed citizens who are capable of defining problems, fostering solutions, and enacting those solutions are framed in the context of democratic citizenship. The nature of Dewey's (1963) theory of democratic education requires inclusion, participation, and the belief that all stakeholders' ideas are valid. Environmental stewardship and the nature of citizenship are two sides of the same coin as they intersect through a shared responsibility to what and who surrounds them. (Dewey, 1963; Kim, 2013).

Radical constructivism, discovery learning, and democratic education all come into play when examining the convergence of social studies and environmental education. Current events and controversial issues are crucial ingredients of a democratic education; of which civics and environmental stewardship are both (Dewey, 1963; Freire, 2000; Letizia, 2013).
Constructivism's focus on the construction of knowledge is important to understanding how teachers construct knowledge and impact their students' construction of knowledge (Doolittle & Hicks, 1994). Because of the classroom and the use of curriculum as a guide it is imperative to view the convergence of social studies and environmental education environmental as two important issues citizens must effectively address and solve as members of a diverse democracy, discovery learning theory is relevant to this study as well (Bruner, 1961).

Definition

Environmental education is a very broad topic that cuts across many areas of focus. For the purposes of this paper, the focus will be on the following goal of environmental education, which is to "teach children and adults how to learn about and investigate their environment and to make intelligent, informed decisions about how they can take care of it" (NAAEE, 2011). The planet has a finite amount of natural resources, which in most cases, cannot be increased through human effort. This leads to added environmental concerns, as humans attempt to deal with these issues. Environmental education is not exclusive to the United States and many nations throughout the world practice some variation of environmental education (Ho & Seow, 2015; Chan et al., 2017; Veeravatnanond & Singseewo, 2010). The actions various nations take to implement the practice of environmental education in national curricula may provide insight into best practices for implementation in the United States.
According to Short (2010), two major foci of environmental education include sound, research-based educational methodologies engaging learners as active participants, and an environmentally literate and active citizenry capable of thinking critically about environmental issues to work toward improvement or maintenance of environmental conditions. Additionally, Chan et al., (2017) suggests that in order to achieve these goals one must have cultural capital which helps to create sense of shared success. UNESCO discerns three major goals of environmental education. First, to foster a clear awareness of and concern about economic, social, political, and ecological interdependence in urban and rural areas. Second, to provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and

skills needed to protect and improve the environment. Third, is to create a new pattern of behavior among individuals and groups towards the environment (UNESCO/UNEP, 1978). For this paper environmental education will be defined as "the process aimed at developing a local, national, regional, and global population that is aware of and concerned about the total environment and its associated problems, and which has the knowledge, attitudes, motivations, commitments and skills to work individually and collectively toward solutions of current problems and the prevention of new ones" (NNREC, 2005).

Educating about issues that concern the environment to elicit critical thinking to counteract the passive reception of knowledge is the goal of environmental education (Short, 2010). Critical thinking is an important aspect of any curriculum because it is a skill set that is required of any citizen to be able to navigate an ever increasingly complex and diverse global landscape (Freire, 1973). Issues concerning the environment are numerous but one that is particularly important is climate change. The trends that exist presently regarding climate change are very difficult to ignore. Issues such as reductions in sea ice, thinning ozone, increasing global temperatures, increases in greenhouse gas emissions, and water scarcity are just a few of the major issues facing the planet (Chan et al., 2017; Solomon, et al, 2007). To many, non-science persons, these may appear to be issues for science to address, but these are issues that face all persons, regardless of education level, wealth, gender, or any other classifying indicator (Powers, 2004).

The Alternative

Social studies education and civic engagement are defined by NCSS (1994; 2011) as providing help to students to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world. The goals of the social studies curriculum and those of environmental education may appear to be very different, at first. However, upon further review the goals of these two disciplines have a much stronger connection than may be initially gleaned (Schug, 2000). NCSS (2010) standards on civic responsibility and activism are a great starting position to begin to consider change in discipline. This section will conclude by establishing cohesion between environmental education and social studies while making the suggestion that it is easier to meet the goals of environmental education with integration and co-framing it in social studies.

The goal of a democratic education is to facilitate the development of citizens who are informed decision makers and who possess the ability to make choices for the well-being of one's

community (Dewey, 1954). These were the goals outlined by John Dewey, a prominent American educational philosopher in 1954, long before the formal idea of environmental education existed. When reading those statements, it seems to be apparent that ensuring the well-being of a citizen's surroundings could be easily extended to include the environment. NCSS (2011) released standards included the specific topic of sustainability education in social studies, for the first time. The standards in social studies cite sustainability education as a requirement of a 21st century curriculum (NCSS, 2011). However, these standards are limited to awareness and activity that do not go beyond basic actions (NCSS, 2011). The alternative model to this is to frame environmental education in the social studies to achieve a stronger and broader impact for change through collectivism. Presently, environmental education is framed in a supplemental fashion that allows curricula to plug in parts of environmental education into current curricular models where they are deemed to fit best (Potter, 2010).

An alternative model for an integration of social studies and environmental education is to frame much of what is done in social studies through environmental concerns. Presently, the complete list of academic disciplines that fall under the social studies are anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology (NCSS, 2011). Incorporating environmental education with social studies is important to do especially considering that there is a convergence of goals between these two disciplines; both the social studies and environmental education seek to facilitate critical thought, awareness, and action (Lange, 2009).

Increasing students' environmental awareness between in-class activities and external non-academic experiences is an important component to fully incorporating environmental education into social studies classrooms (Stern et al., 2011). It is important that students in the social studies see and believe that environmental concerns are important to the overall role of a citizen. Encouraging a tangible connection to one's community, both human and non-human, is especially important for many students who are attempting to understand a world often characterized by a nature deficit (Louv, 2005).

When presented with the question of what do tadpoles, environmental education, and social studies education have in common, the answer may not be clear. Therefore, nature deprived students may well have difficulty in determining a connection. Place-based learning and education is the use of direct environmental surroundings as a teaching tool. This teaching style

allows students to make direct connections between the school curriculum and the local environment (Smith, 2002). Considering place-based learning and the abundance of small ponds that some schools may have access to, it is understandable that examining ecological systems is a natural fit for environmental education. The existence of tadpoles, spiders, and ants may seem trivial. However, social studies teachers can use local social and environmental issues to integrate environmental education and social studies (Basile & White, 1999).

What do the rainforests do for the environment around the world and why should students care that rainforests regions are disappearing at the alarming rate of 240 square miles every day (Cline & Van Leuvan, 2009)? These types of questions are the foundation for a model of education in which the experiences of student advocates are used to facilitate the convergence of social studies standards and environmental education standards into one model curriculum (Cline & Van Leuvan, 2009). In this model, the work of one student, who sought to make an impact through civic and environmental action, is used as a model for civic action while promoting the ecological and biological diversity of the rainforest through the use of inquiry. This model begins with an essential question that all educators must ask their students which is "Why are the rainforest disappearing" (Cline & Van Leuvan, 2009). Through this question teachers can begin to mold the curriculum into a joint model of social studies, environmental education, and science education, by developing a plan of analysis that examines the rainforest from multiple perspectives and layers of civic and environmental responsibility and how we might respond to each (Cline & Van Leuvan, 2009).

Civic responsibility can take many forms, and for most students, the main example of civic responsibility is voting. The notion of civic, social, and environmental responsibility all being connected through the use of environmental causes initiated by "green kids", who are students seeking to make a lasting impact upon the civic and environmental landscape (Lange, 2009). Presently, much is being done to expose students to these responsibilities. Lange (2009) calls students who answer these calls "earth Angels" (those who are watchful of the earth) or "environpreneurs" (those who raise money for environmental causes), which allows students to examine economic, environmental, and civic based actions. Lange (2009) suggests that these titles should be given to those who are determined to make a difference socially, civically, and environmentally. Some critical questions that are raised are: first, how do kids begin to think about joining a global effort to save the earth; and second, how can teachers assist in promoting

critical thinking skills that will increase civic literacy through these sorts of actions? The main premise of this curricular model is to suggest to young people that critical action must accompany critical thought because separately these are endeavors that may produce a less impactful result. Simply put, critical thought requires critical action (Freire, 1973). In this curricular model, Lange (2009) presents a series of case studies of young people, ranging in age from 12 up to 18 years, and showcases how these students are model examples of the integration of the social studies civic action requirement and the call for action in environmental education. Allowing students to see other students making an environmental impact does much to foster future involvement (Lange, 2009). Teachers should present stories of active students that have similar ages to those students in the teacher's classroom. This ensures that the stories presented are the most relatable to the classroom students (Lange, 2009). Much of what is presented by Lange (2009) suggests lesson applications, detailing how social studies teachers might be able to teach civic engagement through environmental issues that are locally based with global applications. This plays heavily upon the notion of place-based learning on the part of the students and allows for the organic creation of a sense of civic responsibility.

Economic issues and concerns are at the forefront of many headlines and are a wonderful means by which there can be an integration of social studies and environmental education. Mark Schug's (2000) article titled, "What Does Economics Contribute to Environmental Education?", presents examples of economic issues that may be examined in a social studies classroom while simultaneously examining these issues from an environmental education perspective, thereby achieving an integration of the two curricula. Examples of issues showcasing the intersection of economic and environmental issues include population shift and the economic and environmental impact of change that is associated with population shift, both demographically and geo-spatially. Current projections suggest that the world population will exceed 10 billion people by the year 2050. Using this projection, teachers can educate social studies students about the economic and environmental influence of humans on a global scale (Schug, 2000). It is acknowledged that comprehending these numbers may be difficult for some students. However, if teachers encourage discussion about the effects that humans have on the environment, especially at a local level, this will allow for a more global discussion to take place naturally (Schug, 2000). Economic factors that are directly associated with environmental factors include food use, water consumption, land use, natural resource use, pollution, and the need for

employment of a growing population. Schug (2000) suggests that by co-framing economic issues with environmental education, one may be able to better present material that is relevant to the students.

In the last five years research about and for environmental education as an extension of citizenship has started (Chan et al., 2017). However, there is limited research about the confluence of social studies and environmental education. Furthermore, in many cases this research has not focused exclusively on social studies curriculum changes but has instead examined informal education, the work of NGO's, and environmental education separate from social studies (Chan et al., 2017; Ching & Seow, 2015; Williams & Chawla, 2016). Much of this research connects to our work but does so in a way outside of curriculum and does not attempt to foster systematic change through organized curricula. Our paper focuses on the intersection of social studies and environmental education in order to achieve the goals of other existing research but through a sense of civic environmentalism through merging the two curricula in order to frame civic and environmental responsibility as synonymous.

The goals of the social studies and environmental education have more areas of convergence than they have areas of divergence. Ultimately, there must be teacher and teacher educator buy-in to ensure that environmental education and social studies are fully integrated (Ho & Seow, 2015). The national social studies standards include requirements for the examination of sustainability issues, the interaction of people and their local environments, and the need for action. However, standards are only meant to be a loose framework for teachers to use in their classrooms. It is up to the all parties involved in the educational process to decide to fully embrace the integration of social studies and environmental education (NCSS, 2011).

International Models of Social Studies and Environmental Education

There are currently nations which are already leading the way through curriculum that are focused on the convergence of human and non-human species through the lens of citizenship. Furthermore, these nations have created the curricular support for classroom teachers to begin to tackle these issues with students and for students. The use of critical examination and inquiry is a truly powerful recipe for merging social studies and civic responsibility with environmental responsibility to create a sense of civic environmentalism. We have chosen to highlight the work of Australia, the Republic of South Korea, and offer an overview of England and Italy. Each of these nations has a curriculum which is fostering these ideas and attempting to create a sense of

responsibility to the environment. These countries, while not perfect, are examples of a beginning to fostering civic environmentalism through a systematic curriculum for students, teachers, and the environment.

Australia

Australia was again in the top ten of world education rankings, finishing 9th (OECD, 2011). This paper has chosen to examine Australia, in part because of the numerous similarities that exist between it and the United States. However, in addition to similarities, there are many examples of differences that make Australia unique, not only from the United States, but from many other parts of the world. Particularly, the geography, political framework, and history of the nation offer, what may be unique views and responses to social and environmental issues. Australia is the world only continental nation and is subject to a unique set of environmental, economic, and educational circumstances. In addition, much of Australia's operating systems are based upon western models.

Australia has traditionally had a Western style application of both economics and education, with an emphasis placed upon industrial manufacturing and core subjects in education (Australian Department of Education, 2011). When examining the social studies and environmental education in Australia, one realizes that what is outlined in the United States as social studies is not necessarily the same as in Australia (Australian Department of Education, 2011). In Australia, the four major curricular areas are science, math, English, and history. For the purposes of this paper, the focus is upon the subject of history because it is the subject that most relates to the discipline of Social Studies in the United States (Australian Department of Education, 2011; 2019). In the Australian National Curriculum (2011), there are three cross-curricular areas that must be covered in all four academic disciplines. These areas are Aboriginal and Torres Strait Islander histories and Cultures, Asia and Australia's engagement with Asia, and Sustainability (Australian Department of Education, 2011). Of these, the focus will be upon the third cross-curricular item, which is sustainability. In the goals outlined by the Australian National Curriculum (2011), sustainability education addresses the ongoing capacity of Earth to maintain all life. Australia's national government recently established a council on sustainability, whose goals are to equip all Australians with the knowledge and skills required to live sustainably (Australian Department of Education, 2019; Australian Department of Sustainability,

2011). According to the Department of Sustainability, Environment, Water, Population and Communities (2011) the listed goals of this council are:

1. 'Demonstrating Australian Government leadership' aims to strengthen the government's leadership role in education for sustainability as an exemplar for change through its own policies, programs and operations and by promoting system-wide change through greater coordination and collaboration with state, territory and local governments.
2. 'Reorienting education systems to sustainability' focuses on achieving a culture of sustainability in which teaching and learning for sustainability are reinforced by continuous improvement in the sustainability of campus management.
3. 'Fostering sustainability in business and industry' will build capacity in business and industry to plan for sustainability, adopt appropriate frameworks and tools, and harness incentives for change such as improved efficiencies, cost savings, corporate reputation, and staff morale and retention.
4. 'Harnessing community spirit to act' emphasizes collaboration with the many diverse providers of education for sustainability to help improve community and practitioners' access to knowledge and tools. It also supports research to better understand issues, attitudes and behavior.

These goals are lengthy and may not seem like they are entirely about education, but it is important to examine all because they are directly tied to goals of the social studies. These goals are related to the social studies in the following reasons: the first goal is associated with the study of government action, goal two is associated with sociology to achieve sustainability, goal three is based on economics, and goal four is most notable because it discusses the issues of being civically engaged in one's community.

Merging environmental education in the social studies via the use of literature in a classroom is a curricular model teachers can use to find a bridge point between the two disciplines (Imeson & Skamp, 1995). Imerson and Skamp (1995) present the use of children's books in Australian social studies classrooms. These books offer the view of a landscape from the position of a young child, which allows the teacher to use the child's perspective of landscape as a point of connection. This framework relies upon the use of students' prior knowledge and preexisting

social and environmental constructs. The author of the children's book suggests that humans are changing the world so rapidly that eventually all landscapes will have been experienced and there will be no more wild areas to experience (Baker, 1991). This belief is an example of a position statement that can used to frame an entire unit of study that integrates the social studies and environmental education. This unit allowed classes to meet both the social studies and the environmental education standards, while framing the lesson in the social studies curriculum. According to Imeson and Kamp (1995) teachers arranged a lesson that allowed the students to examine local, historical, and geographical landscapes to facilitate a general appreciation for the environment and the need to be civic environmentalists. Allowing students to see the connections that exist between the social studies classroom and environmental education will only benefit students understanding of the civic environmentalist. Framing environmental education questions in the social studies questions allows educators to present concepts and material in such a way as to encourage a civic environmentalist approach to education (Imeson & Skamp, 1995). At the time the Imeson and Kamp (1995) study was conducted, the regional government of Queensland had recently issued an Environmental Education Curriculum Statement that required curriculum wide integration of environmental education (EECS, 1989). Many see this statement as the beginning of incorporating environmental education across curricula.

A more detailed evaluation of children's literature may lead to an enhanced ability to evaluate the types of resources that teachers select for presentation in their classrooms. Meyer (2002) suggests that there are three paradigms being used in environmental education today and that these must be addressed. The first view is a dominant western worldview where humans see themselves as being above all other creatures. The second view is human exceptionalism paradigm, where humans are different from other creatures because of the existence of human culture. The last view is the new ecological paradigm, which suggest that humans are but one of many species that exist in the biosphere (Meyer, 2002). The human culture model is currently used by most environmental education authors (Meyer, 2002). Due to the third paradigm being the most widely used in environmental education, Meyer (2002) suggests that there might be a bias that needs to be addressed when presenting information from only one standpoint. Presenting a model of literature that ensures exposure to all three paradigms is important. Integrating social studies and environmental education with a goal of a democratic representation of ideas is acceptable to ensure that all sides are presented (NCSS, 1994; 2010; 2013). It appears

that in some cases, one set of goals might overshadow the goals of the other discipline, causing a disproportionate understanding of relevant material (Potter, 2010).

Considering how environmental education, place-based education, and the social studies in Australia are framed, one must realize the distinct set of circumstances that Australia finds itself in. There are several local, national, and regional issues that are unique to Australia. Putting those aside, the objective of its educational system is to educate children to become knowledgeable of the environment, which is essential to the long-term environmental viability of the continent. Furthermore, the Australian model that requires cross-curricula incorporation is a sound starting point for ensuring long-term environmental education through the social studies with the use of literature. Using a model of required introduction to these issues may enable a civic environmentalist opinion of the responsibilities of all citizens.

Republic of South Korea

The Republic of South Korea has been ranked in the top ten of world nations, by the OECD (2011) and based upon data, is considered to be a top performer academically (National Center on Education and the Economy, 2020). Due in part to these rankings, this paper chose to examine South Korea to determine what, if any, material differences exist regarding social studies and environmental education. The Republic of South Korea has many similar parallels to the United States, in terms of economics, education system, and political structure. However, much like Australia, South Korea has a unique set of geographic, social, and educational components sets South Korea apart from the United States and other world nations.

As an emerging market from the 1970's to the late 1990's, South Korea's economic plan was growth first, followed by distribution, with economic advancement and environmental responses last (National Center on Education and the Economy, 2020; Chung-in & Sung-hack, 2003). The philosophy of environmental responsibility is a relatively new idea that has emerged in the last 20 years in South Korea. Presently, The Republic of South Korea is the world's 7th largest emitter of CO2, and is the 3rd largest in Asia (Jo et al., 2009; Union of Concerned Scientists, 2020). With a rapidly expanding economy that required double and sometimes triple previously used levels of coal and petroleum based products, environmental degradation became a big issue but was not addressed for fear of slowing economic growth (Chung-in & Sung-hack, 2003). Seventy-five percent of the South Korean population lives in cities. Additionally, since 1953 the South Korean population has expanded 130 percent (Jo et al., 2009). These changes are due in

large part to improved living conditions, improvements in infrastructure, and the end of the Korean War (National Center on Education and the Economy, 2020; Jo et al.„ 2009). A little less than half of the entire South Korean population lives in what is called the Seoul metro region, which consists of the city of Seoul proper and adjoining suburbs that surround the city (Jo et al., 2009). Given all these conditions that face the Republic of South Korea, this nation of 40 million citizens faces a unique set of challenges regarding environmental education with some unique benefits (Jones & Yoo, 2010). When considering a model for integrating social studies and environmental education, educators must be mindful of the local, national, and regional social implications of the country in which the models are being implemented (Lange, 2009).

The Korean model of education is similar to the United States in framing environmental education in the sciences. Environmental education in social studies is framed in much the same way as in the U.S., which is in a limited role with minimal amounts of focus. In the Korean model of education, an element of choice allows for students to mold their curriculum in later grades and select elective classes, so that it best fits their learning goals (Hye-Eun, et al., 2007). This model provides an opportunity for integration of social studies and environmental education by allowing students with interest in environmental education, however, the issue pertains to how does one address those with no interests.

The Korean educational model is centered upon core values, one of which is moral education (Hye-Eun, et al., 2007). The Republic of Korea Ministry of Education, Science, and Technology is focused on the creation of citizens who possess the proper moral attitudes towards all interactions, to ensure that individuals can be successful in whatever they might choose to do (Korean Ministry of Education, 2011; 2018). According to the Qualification and Curriculum Development Agency (2011), these are the core goals of the Korean Education system:

- Seeks to develop his/her individuality on the basis of well-rounded and wholesome development.
- Demonstrates creative ability on the basis of a solid grounding in basic knowledge and skills.
- Explores career paths on the basis of broad intellectual knowledge and skills in diverse academic disciplines.
- Creates new values on the basis of understanding the national culture.

- Contributes to the development of the community where he/she lives, on the basis of democratic citizenship

The last goal contributes to the development of the community on the basis of democratic citizenship and is most significant to the integration of environmental education and social studies. Being aware of one's surroundings and having an additional sense of responsibility to those surroundings is especially important to the development of a sense of civic duty and environmental responsibility (Potter, 2010; Smith, 2002).

Given the amount of stress placed on the environment in South Korea and limited space, the requirement for civic environmental education is especially important. While the present South Korean model primarily frames environmental education in the sciences, there is room for cross-curricular integration. A curricular model used in South Korea is the use of stories that aim to pass on moral and academic knowledge simultaneously (Hye-Eun, et al., 2007). It is understood that the goal of these personal stories or experiences of the students, along with traditional classroom models of education will make students aware of the pressing need for heightened environmental awareness, concern, and activism (Hye-Eun, et al., 2007). In South Korea, as determined by Hye-Eun et al. (2007), environmental awareness and activity are increased only when science test scores increase, suggesting a need for basic science knowledge and understanding, in order to facilitate an increases environmental awareness. Although this fact seems to contradict the use of stories as a model of integration between social studies and environmental education, it is important to understand that while science scores indicated an increased understanding of environmental education, the curricular model in place was still one that encouraged cross-curricular integration of disciplines and concepts (Qualification and Curriculum Development Agency, 2011).

The primary model of integration for social studies and environmental education is "Sul-gi-ro-un-sang-hwal", a term which refers stories of wisdom in Hangul, the native language of Korea (Hye-Eun, et al., 2007). These stories are intended to teach students how to be mindful of themselves in respect to their surroundings, interactions, and overall place in society (Hye-Eun, et al., 2007). Through the use of these literary stories, students are presented with moral and ethical dilemmas that they might face in everyday life. An example might center on the following question: *How does one ensure economic viability while still maintaining environmental sustainability*? The use of questions meant to elicit moral thought meets one of

the primary goals of the Korean National Curriculum, while setting the framework for an integration of social studies and environmental education to become civic environmentalists. The Korean model for framing environmental education meets the goals of the national curriculum by placing heavy emphasis on the increase in science education. Formal integration of environmental education in the social studies in South Korea may be a selection of the individual student and this does not occur until the later grades. The model outlined above is used in the primary grades of the South Korean curriculum and was deemed to be effective in increasing awareness only when students had what was deemed required knowledge for a basal understanding of materials regarding environmental awareness and activism (Hye-Eun, et al., 2007). The use of similar stories may be much more effective in the upper grades as well, given the emphasis placed upon civic responsibility and the assumption that upper level students will possess the required scientific knowledge to not only understand the environmental concerns, but also the underlying causes, potential solutions, and the means by which to take appropriate civic action.

England and Italy

Environmental standards vary across the European Union and the United Kingdom. We have chosen to focus briefly on two countries, England and Italy, due to differences in their approaches. Although ranked in the top-five in OECD indicators for graduation rates (OECD 2011), the United Kingdom has experienced a reduction in curricular requirements for environmental education, while Italy (below average in graduation rates) will become the first country to require climate change and sustainability education beginning in the fall of 2020. In 1990, environmental education was introduced as a cross-curricular theme in the National Curriculum for England (Green, 2015). At the time, there were seven cross-curricular topics: Climate; Water; Energy; Plants and Animals; Soil, Rocks and Minerals; Buildings, Industrialization and Waste; and People and Communities. However, a revision of the curriculum in 1994 made no mention of these cross-curricular topics (Green, 2015). Subsequent revisions in 2000 and 2006 introduced non-statutory elements of sustainability into the curriculum, but these were mostly focused on the school buildings themselves based on the Government's *Sustainable Schools Strategy (S3)*. Incorporating principles of Buildings and Grounds; Energy and Water; Travel and Traffic; Food and Drink; Purchasing and Waste; Local Well-Being; Inclusion and Participation; and Global Dimensions was left to the individual

schools (Green, 2015). These principles were eliminated in 2010. The 2006 revisions also called for inclusion of outdoor learning in the curriculum, again left to the individual schools to decide how to implement local and residential field trips and outdoor opportunities. A 2014 revision of the curriculum lacked explicit references to environmental education and the government itself has reduced its focus on sustainable development since 2010 (Glackin & King, 2018; Green, 2015). Although the UK has signed-on to the *Sustainable Development Goals* stemming from the 2015 Paris Agreement, England has not agreed to incorporate the goals into the curriculum in any meaningful way, unlike Wales, Scotland, and Northern Ireland. The later countries will make them statutory, while England will leave implementation up to individual schools (NAEE, 2019). There is, at least, recognition of the importance of *Global Citizenship Education* and civic competency while appearing to push the environmental responsibility on to local efforts (Bourn et al. 2016).

Italy has also responded to recommendations from the Paris Agreement, with a more direct approach than any other nation. Beginning in September 2020, Italy will make lessons on climate change and sustainability mandatory (BBC, 2020). Initially, teachers will incorporate 33 hours per year of instructional time devoted to climate change and environmental sustainability. Method of content delivery will vary by student age (stories in younger children, specific lessons in older students), with the goal of eventually having the topics of climate change and sustainability incorporated across the entire curriculum (BBC, 2020). Italy has made great strides in a relatively short amount of time. At the time of the incorporation of cross-curricular environmental education in the UK, which were eventually abolished, Italy was taking its first steps (Mayer, 1991; Galvani, 2000). Such topics as 'Man and the Environment,' 'Environmental Education,' Scientific Progress and Society,' 'Energy,' or ' Science and Society,' would have typically been introduced within the geography and science curriculum which the US has also traditionally done (Mayer, 1991). These early curricular models lacked any initiative for converting knowledge into action; the focus was content delivery and not application (Mayer, 1991). More recently, education initiates have been more fluid, sometimes statutory, sometimes not (Mayer, 2005). Even with a lack of government-led directives for environmental education, there continued to be action supporting some level of education on the environment and sustainability (Mayer, 2005). Into the early 2000's, environmental education in Italy focused on parameters of environmental education established in 1996. At that time, environmental

education was defined as: "education for responsible and caring citizenship; a means for connecting the school world with what goes on outside school; a cross-curricular subject which shows the links between disciplines and concrete issues; something that acts on the real world and on the present with a view to the future; a subject which takes complexity into account and does not simplify or reduce problems; a subject which deals with local issues in a responsible manner in solidarity with the rest of the planet" (Mayer, 2005, p. 256). Italy has continued to make progress toward the incorporation of environmental education standards, no greater example of which is the new requirement for specific climate change education.

While Italy moves forward, England has taken a step back with respect to environmental education in public schools. As with the United States, education policies often fluctuate with national leadership from the administrations of chief executives. Nevertheless, both countries provide examples, at various times, of a strong commitment to environmental education, even if that commitment is lessened at other times. It will be interesting to observe the development of Italy's plan for curricular lessons on climate change and sustainability, and to monitor changes in the strategies of neighboring European countries. As has been shown in the other examples presented, a strong cross-curricular incorporation of environmental education and sustainability is the most effective model for fostering students' sense of civic environmentalism while embracing a connection to other people, other species, and the planet.

Conclusions

Legitimate impacts on climate change begin with education (Potter, 2010). Civic environmentalism is the integration of social studies education and environmental education. The key issue is to decide how to best create lasting change through an educated populace (Dewey, 1954). Before educators can educate students in the affairs of environmental concerns such as climate change, they must first be educated in these areas (Chan et al., 2017; Palmer, 1998). The benefits of creating a curricular model that integrates social studies and environmental education are social, environmental, and economic (Schug, 2000). This model makes students aware of pressing environmental issues such as species and subsequent biodiversity losses through a civic education model. Creating an understanding of the underlying causes of these changes can only benefit current and future generations to be able to effectively deal with continually increasing environmental stresses being placed upon the earth (Evans, 2009).

As educators are given the task of facilitating a thoughtful, thorough, and insightful education, it seems that one might border on negligence to not include environmental identity into the discussion. Ultimately, our goal has been to facilitate the co-framing of social studies and environmental education and to ensure that this model is conscious of the many factors that play out in the lives of individual students before, during, and after they are in a classroom. For this to be achieved all factors of influence must be deemed relevant to the process. Thus far, we collectively tend to find marginalizing humans and non-humans entirely too easy. However, it is still possible to alleviate some of these issues if models of thinking, structure, and instruction are changed to accommodate all factors of influence.

As the United States, Australia, the Republic of South Korea, England, and Italy progress through the twenty-first century and beyond, the global citizenry is faced with a number of environmental concerns, of which climate change is the most impactful (Evans, 2010). Climate change is the result of many other environmental factors; for example, rapid population growth in some of the poorest parts of the world creates a much larger need for economically driven resource consumption (Evans, 2010). Population and resource use leads to increased CO2 production based upon consumption of fossil fuel based resources, which in turn will lead to further environmental degradation! How nations choose to respond to anthropogenic environmental pressures resulting in climate change will be critical to the long-term environmental health of the world. There are those that suggest that these pressures are not real or are caused by non-human factors. However, regardless of one's position on climate change, the fact remains that climate change is occurring (Solomon et al, 2007). The main issue is that many determine the language of environmental issues to be described in science terms, such as global warming related to the rise in CO2, caused by a spike in the use of carbon based fossil fuels that increase rates of sulfur related chemicals such as sulfur-dioxide, hydrosulfide, and other sulfur based chemicals that contribute to the growing problem. But citizens cannot separate themselves from the environment and the impact they have on the world around them. We are the creators of our future, regardless of whether we care about what this future will look like. It is every citizens responsibility to be active, informed, and engaged in these issues.

These problems are identified in scientific terms, the natural transition is that the solution will be a result of science-based interventions. However, while the problems may be framed in the sciences, the solutions may be found in the social sciences due to the civic activism and

specifically civic environmentalism. A key component of the social studies curriculum is to encourage civic environmental activism and a viable solution to the problems we are currently facing is the transition of environmental concern and activism from an option to a civic duty. While we are not suggesting that the health problems and well-being of our ecosystems and greater planetary environment can be solved over night by citizens who take environmental action and view it as a requirement of citizenship, we do believe that by co-framing environmental education in this model will do much to effect real change for an environment that is currently under siege.

We have seen that the works of Greta Thunberg and other young climate activists have already begun to take up these efforts on their own and without the benefit of an integrated curriculum. Young people across the United States and around the world have merged the civic and environmental outside of the formal classroom. Amazingly, most teachers want their students to see their content beyond the four walls of their classroom and to see it in the world they exist in every day. A merged curriculum of social studies and environmental education which fosters civic environmentalism through a civic responsibility to and for the environment and all it contains can help to begin to address the environmental degradation which has put the world at a tipping point. Our suggestion is that we begin to frame these conversations in the classroom and leverage these movements for lasting change.

The curricular models presented in this paper are just the beginning of affecting educational change. The use of literature, personal stories, moral tales, and other examples found in this paper are wonderful examples of how a curricular model of integration between the social studies and environmental education might look if applied at the classroom and school level. It is the suggestion of this paper that more needs to be done to impact curricular changes at the local, national, and regional levels of education to ensure there are much broader applications of educational models that place an emphasis upon environmental concerns and begin to view them as environmental necessities and civic responsibilities. Teaching environmental education through the social studies to allow for a framing of issues like climate change, acidification of oceans, water scarcity, and species loss in a civic duty model may do much to elicit a response among those students who may not hold the same moral convictions of Greta Thunberg and who presently view environmental action as a choice. This has now become a civic and environmental duty, just as important as any other civic responsibility. Using this model can

create a new generation of civic environmentalists who, as citizens, understand both the social and environmental concerns of a changing globe and that we all must act to save ourselves and all that surrounds us.

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