Civic Ecology:

A Resilient Solution for Incorporating Environmental Justice and Social Capital in Community Planning

Dissertation Focused Annotations and References

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Annotations selected for Climate Change Education Course Specifically

A Resilient Solution for Incorporating Environmental Justice and Social Capital in Community Planning

My research brings together more than eight years of experience within the field of environmental impact assessment and community planning, degrees in Environmental Policy and Management and Natural Resource Management, and more hteen years of experience raising a child who is differently abled. I have observed remarkable recovery in many aspects of my son’s life, which I attribute to experiential opportunities, such as spending time in nature. Throughout the course of my own life and environmental studies, resiliency seems to be at the center. It is through the earth and human connection that I hope to set about understanding how valuable that connection can be. My research will continue working in my chosen field of environmental impact assessment while considering how developing a deeper connection with nature may lend itself toward shifting our mindset away from degradation and environmental impact toward sustainable decision making, especially with regards to vulnerable populations. It is the beneficial continuum of resiliency of the planet and its species, including the human species that piques my interest.

Keywords: biophilia, biodiversity, civic ecology, community planning, environmental impact assessment, mindset, natural resource management, vulnerable populations

**Civic Ecology**

Krasney, M. & K. Tidball. (2015). *Civic ecology: adaptation and transformation from the ground up.* Cambridge, Massachusetts: MIT Press.

I have selected this text as a main resource in developing my dissertation around finding resilient practices that assist vulnerable population in adapting to environmental degradation. Dr’s Krasny and Tidball explore how “people coming together to plant a tree connect with each other, and how such connections make us more likely to work collectively on future greening activities.” The author’s define civic ecology as the study of community environmental stewardship practices. They go on to share other’s who use the term in their own practices and research: Civic ecology extends across defined boundaries to include a “a community software approach to sustainability” (Timothy Smith), “building blocks for community problem solving and that determine how young people are socialized into civic life” (Lewis Friedland), “a civic realm rooted in ecological sensibility” (Kathy Poole), “people in cities and communities benefit from being involved in environmental projects, how urban ecosystems benefit communities, and how to encourage conservation behavior” (Kathleen Wolf). Krasny and Tidball use civic ecology as a framework to understand the role of environmental stewardship practices in larger social-ecological practices. They have considered how civic ecology practices have important outcomes for individuals, communities, and ecosystems. Through individuals “acting as stewards” of their environment and community, these practices create opportunities to “experience health, restorative, and social benefits” while “learning through interactions with fellow stewards and with the environment.” Civic ecology allows us to apply “ecological perspectives to understand how people, practices, communities, and the environment interact.

**Climate Change and People with Disabilities**

Global Partnership for Disability & Development and the World Bank. (2009). *The impact of climate change on people with disabilities.* Report on E-Discussion hosted by The Global Partnership for Disability & Development (GPDD) and

The World Bank (Human Development Network - Social Protection/Disability & Development Team.

The Global Partnership for Disability and Development (GPDD), in partnership with the World Bank’s Disability and Development team, held a five-day long e-discussion on the *Impact of Climate Change on People with Disabilities*, facilitated by Dr. Maria Kett, from Leonard Cheshire Disability, and Valerie Scherrer, from the Christian Blind Mission*.* Dr. Kett and Ms. Scherrer are both engaged in work for the International Disability and Development Consortium (IDDC). “Due to existing inequities and disparities, people with disabilities will face a disproportionate impact due to climate change.” The report examines how “people with disabilities and their families need adaptation and coping strategies and robust systems and mechanisms that can mitigate and minimize the harmful effects of climate change, and promote sustainable access to basic necessities, secure livelihoods, health care, and social and civic participation.” This report speaks directly to my research motivation and provides valuable insight into the topic as it was being addressed almost eight years ago. According to the Executive Summary, the “objective of the e-discussion was to share information and knowledge about the needs of people with disabilities and good practices for inclusion in situations such as natural and man-made disasters, emergencies, violence and conflict, scarcity of resources, and development efforts, all of which will be affected by climate change.” The e-discussion was divided into two main thematic areas:

I. Inclusive Disasters, Emergency, and Conflict Management, and

II. Basic Necessities & Poverty Reduction

Through this report, I will be able to assess the implications of my research toward a global conversation, although, my research will focus on a local community participatory action research project.

Lipscomb, M. & A. Stewart. (2014). Analysis of therapeutic gardens for children with autism spectrum disorders. *Perkins + Will Research Journal*, 6.02. Retrieved from <http://perkinswill.com/sites/default/files/ID%205_PWRJ_Vol0602_04_Analysis%20of%20Therapeutic%20Gardens.pdf>.

“Current research on the impacts of landscape architecture on children with Autism Spectrum Disorder (ASD) are surprisingly lacking, considering the believed benefits of the natural environment on individuals with special needs.” I found this study interesting in that it addresses methods for supporting individuals with autism, to help them better engage in their natural environment. This engagement is essential to climate change adaptation. The more time an autistic individual is able to interact on a social level, the better they will be able to adjust to changes in the future – perhaps even if they are sudden. “This study examines how outdoor design elements benefit children with ASD and specifically, how these design criteria can be implemented to inform the design of a camp that serves children with ASD.” When considering what type of adaptive built environments are available or may be incorporated in the future, this study may be relevant to future interventions necessary for resiliency and community planning input on behalf of special citizens overall. “In the study, the team used the following research methodology: a review and critique of established design criteria, an observation and analysis of built projects to evaluate experiential design criteria, and an application of design guidelines to a specific project.” The study looks at several sites that are already established from a multi-sensory perspective. “The results of the study were a refined set of design guidelines that creates a hierarchy of importance for the criteria.” Having a working set of designs that provide for the optimum environment will assist communities with getting results when meeting with local government decision-makers. “This design criteria enriched the conceptual design of a camp called Camp Southern Ground, by focusing the design on elements that appear to provide therapeutic benefits to children with ASD.” “While the complexity of ASD does not allow for simple answers, the article provides a framework to both inform better design for outdoor spaces for this unique population and expand the conversation beyond the limited research that exists today.” I found this article particularly important to conversation that is occurring globally regarding vulnerable populations. Here is yet another analysis which indicates that there needs to be more information regarding creating adaptive “landscaped” environments for children with autism.

Caritas Australia. (2011). *A just climate: our responsibility to act.* Retrieved from

<https://www.caritas.org.au/docs/campaigns/a-just-climate---our-responsibility-to-act%21.pdf?sfvrsn=4>.

This paper for discussion considers climate change on an international level and relates the issue of climate change to vulnerable populations. The paper considers climate change “a threat to authentic human development.” The paper breaks down climate change by topic of natural disasters and risk reduction, food security and livelihoods, water security, migration and displacement, health, disability and marginalized communities. The discussion allows for policy recommendations and mitigations. Caritas Australia’s expertise “lies in an integrated programmatic approach to sustainable human development, effective coordination of humanitarian emergency responses and in the active realization of the fundamental principles of partnership and subsidiary which inform all dimensions of our work.” Caritas Australia does not claim to be scientific or economic experts with regards to climate change, however, have consulted with experts in these fields for the purposes of this report, in addition to the lived experiences and observations of the communities we serve. Caritas Australia “believes that effective development is founded in our duty to be good stewards of the earth’s resources, in our commitment to the common good, and in our determination to protect human dignity in the most vulnerable communities with which we work in partnership.” The organization delves into the cost of “securing intergenerational justice” due to climate change. Caritas Australia examines the extra funds required for climate change adaptation and mitigation, “will cause a significant shortfall in financial resources needed to achieve the Millennium Development Goals (MDGs).” They fear that “should the global community fail to respond to climate change, then the devastating consequences for vulnerable communities are likely to undermine the progress already made towards the MDGs over the past decade.” The report considers the “significant evidence that, in spite of contributing the least to climate change, the poorest of the poor are the most vulnerable to its consequences.” At issue is the poor’s “capacity to adapt, heavy reliance on agriculture and their geographical location often places them at greater risk than more economically developed communities.” The chapter on disability and marginalized communities discusses the issues that I find relevant in my research. They share that “disability advocates have expressed concern that, whilst marginalized communities will likely be disproportionately affected by climate change, there has been little examination of the enhanced vulnerability of Persons with Disabilities (PWDs). They have identified key areas of concern such as reduced access of “PWDs to infrastructure, shelter, basic services, migration pathways, however it is noted that key international reports have not specifically identified such needs or proposed recommendations regarding enhanced inclusion of PWDs in adaptation or mitigation initiatives.” “Caritas Australia believes that persons with disabilities are in the best position to understand their own situations and to form solutions to the unique problems they face.” “Therefore, as the international community moves to address the emerging risks posed by climate change, it is essential that PWDs are provided with meaningful opportunities to highlight both their strengths and particular vulnerabilities, and that their views are considered in emerging strategies and research.”

Lewis, D. & K. Ballard. (n.d.). *Disability and climate change: understanding vulnerability and building resilience in a changing world.* CBM.org. Retrieved from <http://www.cbm.org/article/downloads/54741/Disability_and_Climate_Change.pdf>.

CBM.org is an international organization that is over 100 years old. It was named, for its founder Ernst Jakob Christoffel – calling it the Christoffel-Blindenmission and later interpreted as Christian Blind Mission. The organization was restructured in 2007 to unify the various member agencies world-wide. “CBM is an international development organization committed to improving quality of life of the world’s poorest persons with disabilities and those at risk of disability. CBM seeks an inclusive world in which all persons with disabilities enjoy their human rights and achieve their full potential.” The Lewis-Ballad report directly addresses “the vulnerability of poor nations, communities, families and individuals to the impacts of climate change is of growing significance.” The author’s consider the “The World Report on Disability which confirms that more than 20% of the poorest people worldwide are people with disabilities (World Report on Disability 2011), and that 82% of persons with disabilities in developing countries live below the poverty line (Elwan 1999).” The report ventures to tackle the overarching concerns that “policy development and interventions at all levels need to address the specific circumstances of persons with disabilities in relation to climate change, together with those of their families.” This article also recognizes that the impacts of climate change are “intersecting with all key current concepts and priority areas of international development and poverty alleviation, including food, water and energy security, resilient livelihoods, resource distribution, public health, education, human rights, gender, ethnicity, protection, sustainability, national and regional security and migration.” The report states that “much is written about the impact of climate change on the world’s most vulnerable groups of people – who it is anticipated will be disproportionately affected. However there is little literature to date that discusses the vulnerability of persons with disabilities within these groups. Climate related reports such as the IPCC and the Human Development Report 2007-08 do not identify persons with disabilities as requiring particular inclusion measures in adapting to their changing environment (Wolbring 2009).

Seidel, B. & E. Bell. (2014). Health adaptation policy for climate vulnerable

groups: a ‘critical computational linguistics’ analysis *BMC Public Health* 2014, **14**:1235 doi:10.1186/1471-2458-14-1235

This paper became important to my overall research when discovered that yet more researchers were noticing gaps in data regarding vulnerable population and climate change adaptation.

However, this research sets out to find out “how are specific climate vulnerable groups represented in adaptation policy?” They are interested in the implications of this lack of data required for “best practice in developing policy for such climate vulnerable groups.” Through their “examination of adaptation policy documents and the modeling of best practice for such policy development, particularly for climate vulnerable groups,” these researchers concluded that this is a neglected area relevant information. Of note, the researchers found that “despite a body of climate and health research now numbering over 6,000 articles and reviews in health science journals, most published since 2005, public health policy-makers and leaders feel unprepared and unable to ensure health systems make appropriate adaptations.”

“This paper builds on previous work in the field to offer two kinds of contributions.” “The

results section maps the extent and nature of existing national adaptation policy for climate

vulnerable groups in an exhaustive sample of 20 policy documents from 12 countries.” “The

conclusion section identifies the implications of these findings in the light of emerging best

practice in adaptation informed by a ‘social determinants of health’ definition of climate

vulnerability.” And lastly, “the authors provide practical strategies for best practice in developing the purpose, processes, content and structure of national adaptation policy, including participative processes for climate vulnerable groups. In so doing, this study offers not simply findings about what is lacking in adaptation policy but also a concluding practical discussion of how to develop better health adaptation policy for these climate vulnerable groups.”

Wolbring, G. (2009). A culture of neglect: climate discourse and disabled people. *M/J Journal: A Journal of Media and Culture,* 12 (4). Retrieved from <http://journal.media-culture.org.au/index.php/mcjournal/article/viewArticle/173>.

This article cuts to the heart of how citizens with disabilities are vulnerable, especially during times of disaster. There is a tragic story to compel the audience:

**[On August 29] Susan Daniels called me to enlist my help because her sister in-law, a quadriplegic woman in New Orleans, had been unsuccessfully trying to evacuate to the Superdome for two days. […] It was clear that this woman, Benilda Caixetta, was not being evacuated. I stayed on the phone with Benilda, for the most part of the day. […] She kept telling me she’d been calling for a ride to the Superdome since Saturday; but, despite promises, no one came.The very same paratransit system that people can’t rely on in good weather is what was being relied on in the evacuation. […] I was on the phone with Benilda when she told me, with panic in her voice “the water is rushing in.” And then her phone went dead. We learned five days later that she had been found in her apartment dead, floating next to her wheelchair. […] Benilda did not have to drown. (National Council on Disability, emphasis added)**

The discussion considers how “Non-climate stresses can increase vulnerability to climate change by reducing resilience and can also reduce adaptive capacity because of resource deployment to competing needs,” as was observed in the tragic example. The article defines ableism as “sentiment to expect certain abilities within humans,” as well as disablism, the unwillingness to accommodate different needs.

**Environmental Justice**

Arnold, A. (2007). *Fair and healthy land use: environmental justice and planning.* Chicago, IL: American Planning Association.

“Environmental justice is about the pursuit of fairness in environmental and land-use policies, especially fair treatment of all races, ethnic groups, and socioeconomic classes.” I believe this also includes people with disabilities. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Bill Clinton February 11, 1995, sets the policy for addressing environmental justice issues at the federal level. In California, through policy actions addressed within communities General Plans, environmental justice was added in as an optional consideration by the legislature in 2001. Meaning, that cities and counties within the state could now include environmental justice issues within their General Plans – as they are revised. Generally, planning for environmental justice, or “equitable planning, is characterized by 18 principles that can be incorporated into any local planning process.” Topics within the principles include widespread participation, implementing a vision which empowers community residents, analyzing environmental and health risks from existing and proposed land uses, preserving cultural assess in the community, pursue transportation policies that reduces automobile usage, plan for open spaces, green/natural spaces, etc. This text is valuable to my research in that it covers federal and state laws and public participation within the decision-making process. In order for plans to reflect the “vision of the local residents” community leaders are held to a standard of inclusion. Essential to my research is building the capacity of the disabled citizen such that they can participate in the planning process in a meaningful way. Through the concept of civic ecology, disabled citizens gain a great level of community interactions from which they can begin to understand their role in building community, a community that provides them a safe and productive place to live and work with others.

NAACP. (2015). *Equity in building resilience in adaptation planning.* Retrieved from http://www.naacp.org/blog/entry/equity-in-resilience-building-for-climate-adaptation-planning.

I found this article relevant to my research due to the level of attention the NAACP is giving to climate change adaptation through their organization. I learned of this work through a recent webinar that I attended. This project, presentation, and policy document is recognized by the EPA and the American Planning Association. The report sets out to consider “what constitutes strengthening resilience through equitable adaptation planning?” The policists ask critical questions (of which there are many, relevant, and direct questions) such as: “how do we assess the context comprehensively so that effective methods are designed?” They posit that in order for a community to be “able to declare that community resilience has been achieved, we must develop systems that address the needs and provide protection for those most vulnerable and marginalized.” “What about the elderly woman who has a physical disability, has no private vehicle, lives in a flood plain, and has no homeowner’s insurance?” “What infrastructure and other improvements are we implementing that will effectively strengthen her resilience to the next disaster?” “What about the African American child with asthma who lives next to a coal plant?” “What will we do to strengthen his resilience as he faces the next heat wave which concentrates pollution, activates his asthma, and jeopardizes his life?” “How do we make sure he has access for emergency health needs while working on the political context that allows 68% of African Americans to be situated near these facilities?” The report looks at “indicators/measures of vulnerability and resilience in terms of infrastructure, community/population characteristics, systems, policies, programs/services, protocols, and governance/decision making.” The authors strive to open up a conversation necessary for “deepening work around incorporating intersectionality in equitable adaptation planning.” The indicators/measures fall under any of the impacts of climate change, which are realized through phenomena such as “shifts in agricultural yields, sea level rise, and extreme weather.”

**Equity Planning**

Gaber, J. & S. Gaber. (2007). *Qualitative analysis for planning and policy: beyond the numbers*. Chicago, IL: American Planning Association.

Because it is essential that my research contribute to the field of planning, I have researched texts regarding research that are central to planning. This particular text speaks to the need for qualitative planning research, various research methodologies, field research, internal and external validity, photographic research, focus groups, etc. The text has specific coverage of participant observation, which is the area I am leaning toward regarding my dissertation research. The authors delve into structured and unstructured interviews. There is ample discussion on unstructured interviews, which state that they take more time to complete than structured interviews, have a strong conversational openness to them, and the format may allow for more detailed responses. However, the text states that unstructured interviews work better with smaller sample sizes or when “community representation is less important.” Community representation is of high importance to me, thus, I would have to consider other means to gather the data that I believe is necessary to affect change in the planning field with regard to including the vulnerable population of differently abled citizens. The text also covers the unstructured observations that could also become a component of my research. According to the text, in the unstructured observational research method “you enter the field armed only with a critical eye, an open ear, and motivation to learn from the community. This ethnographic field research provides for the researcher to “regularly visit the research site to develop first hand familiarity with the community and how it operates on typical and atypical days.” This is an essential feature to my proposed research as ethnographic investigations “strive to learn the community’s perspective.”

Lewis, D. & K. Ballard. (no date). Disability and climate change: understanding vulnerability and building resilience in a changing world.

“CBM is an international development organization committed to improving quality of life of the world’s poorest persons with disabilities and those at risk of disability. CBM seeks an inclusive world in which all persons with disabilities enjoy their human rights and achieve their full potential.”

Sarkissian, W. & D. Hurford. (2010). Creative community planning: transformative engagement methods for working at the edge. New York, NY: Earthscan.

This book stands apart from most planning books I own and have read, as it explores terrain that many in planning have not gone, or are afraid to go. In an opening interview with a friend, one of the author’s Wendy asks her friend Collette an interesting question: “Why do you think we need to focus on changing community planning?” Collette’s response is appropriate for the world we are faced with “the problem’s planner’s are now grappling with – global climate change, Peak Oil, sustainability, global economic interdependency – are very different in scale, complexity, and urgency from what most of us have worked on up until now.” The author’s go on to share a point of view that is closely connected with my experience in local planning “local government is the level of government that is accessible to most people in general.” “It is the one that most people have the greatest contact with and the one that has the most direct and visible effect on people’s daily lives.” The author’s feel that it in order for community planning is to be successful, “we need to change the way we engage people in the planning process” (p. xiv). The book delves into including children and youth in the planning process, using stories and art in community engagement practices, utilizing participatory design workshops, and even poetry as a creative process in community planning. This resource is valuable to me as I too want to consider create ways to include vulnerable populations into the planning process. Their work opens the door for my work to be a valid approach to working at the edge of what planning has been in the past and where it is headed in the future.

**Photo Elicitation as Participatory Research**

Van Auken, P., S. Frisvollb, & S. Stewart. (2010). Visualizing community: using participant driven photo-elicitation for research and application. *Local Environment 2010, 14:4, p. 373-388.*

**Sustainability Education**

Hart, R.A. (2008). *Children’s participation: the theory and practice of involving young citizens in community development and environmental care.* New York, NY: Earthscan.

This text is very relevant to my research as it considers involving children in community development, as well as environmental stewardship. The text breaks out chapters such as “Children’s Developing Capacity to Participate,” “New Models for Involving Children and New Institutional Models,” “Action Research with Children,” “Environmental Planning, Design, and Construction, by Children,” “Public Awareness and Political Action by Children,” etc. All of these chapter’s speak directly to how one might involve a child in community planning and civic ecology. I especially like how the author works in a discussion of a growth centered vision for a community development versus a people-centered vision. The text explores children’s rights and responsibilities under the United Nations Convention of the Rights of the Child. Very compelling since climate change will affect their future greatly. As we know, the global heating we are currently experience comes from past emissions – as climate change is back loaded. Children will be inheriting our emission decisions. The text discusses the need for a strong local democracy. I consider how children can be protagonists for their own rights, as the book suggests, and who do you teach that concept to children who are learning disabled. The book does consider the “capacity of a child’s understanding of community development and what they would like their world to look like” (p. 6). It is through “direct participation that a child is able to build capacity such that they can gain a genuine appreciation of democracy and a sense of their own competence and responsibility to participate” (p. 17).

Krasny, M. & K. Tidball. (2007, November). *Civic ecology education*. Paper presented at meetings of the North American Association for Environmental Education, Virginia Beach, VA. Abstract etrieved from <http://www.researchgate.net/publication/242363593_Civic_Ecology_Education_Paper_presented_at_meetings_of_the_North_American_Association_for_Environmental_Education_Virginia_Beach_VA_>.

Dr. Krasny’s work is essential to my research. Civic ecology practices and education provide the opportunity to build capacity among the disabled. This approach is just one example of how society can address the adaptation of vulnerable populations in the wake of climate change and disasters. “Civic Ecology practice encompasses community gardening, urban woodland restoration, wildlife and stream habitat enhancement, and similar community-driven volunteer

activities focusing on the environment.” In this paper, Krasny and Tidball, prepared for a national conference share how such “practices result not only in enhanced “natural capital,” including biodiversity, landscape heterogeneity, and ecosystem services (MEA 2005, Walker & Salt 2006), but also foster social capital, such as when adults working together develop trust, become involved in local policy-making, and form partnerships with non-profit associations (Golding 2006). The ability to foster social capital is essential to my research with building capacity of special citizens, so they are better equipped to manage changes in the climate and actively participate in their community decision-making process. “Civic Ecology practices embody a new kind of citizen environmentalism that integrates social and biophysical elements in a system, and thus may be more relevant in today’s urbanizing world than a traditional environmentalism focused on preserving pristine natural areas (Light 2003, Tidball & Krasny 2007).” The paper explores the “integration of learners into groups of adult or other more

experienced “civic ecologists,” socio-cultural theories that emphasize learning as moving

from peripheral to full participation in communities of practice are relevant (Rogoff *et al*

2003, Wenger *et al* 2002).” I can see this happening in my local garden. Exploring the interaction of learners with their environment through civic ecology practices is known to evoke changes in both the learner and their environment. “For example, Barab & Roth (2006) use the term “affordance network” to describe the multiple elements of the context

in which learning takes place (*e.g.*, people, environment, and tools), and the term

“effectivity sets” to refer to the skills or behaviors that allow an individual to realize the

learning possible through an existing affordance network.” “Further, learners may

transform existing affordance networks in the process of learning.” This paper is critical to my research, as I am witnessing the affordance network, effectivity sets, and the transformation of an individual as they spend time in a community garden.

Muttarak, R. & W. Lutz. (2014). Is education a key to reducing vulnerability to natural disasters and hence unavoidable climate change? *Ecology and Society* 19(1): 42. <http://dx.doi.org/10.5751/ES-06476-190142>.

The collection of articles in this Special Feature is part of a larger project on “Forecasting Societies’ Adaptive Capacity to Climate Change” (an Advanced Grant of the European Research Council to Wolfgang Lutz). “In investigating how global change will affect population vulnerability to climate variability and extremes, the project aims to help develop strategies that enable societies to better cope with the consequences of climate change.” This research is critical to my overall research in that it provides supporting data regarding how to empower vulnerable populations to become resilient through climate change, and that is through education. The report shares that the “basic hypothesis being tested is that societies can develop the most effective long-term defense against the dangers of climate change by strengthening human capacity, primarily through education.” The authors claim that “education can directly influence risk perception, skills and knowledge and indirectly reduce poverty, improve health and promote access to information and resources.” The study determines that “when facing natural hazards or climate risks, educated individuals, households and societies are assumed to be more empowered and more adaptive in their response to, preparation for, and recovery from disasters.” The study looks at the “findings from eleven original empirical studies set in diverse geographic, socioeconomic, cultural and hazard contexts provide consistent and robust evidence on the positive impact of formal education on vulnerability reduction.” The authors found that, “highly educated individuals and societies are reported to have better preparedness and response to the disasters, suffered lower negative impacts, and are able to recover faster.” It is evident that these findings suggests that “ public investment in empowering people and enhancing human capacity through education can have a positive externality in reducing vulnerability and strengthening adaptive capacity amidst the challenges of a changing climate.” This information will provide ample evidence to support my interest in studying how educating disabled individuals through community gardens or farming will provide the impetuous for this vulnerable population to perhaps survive climate change, which they might otherwise not be able to do without such intervention or focused experiential resilience education.

Sterling, S. (2011). *Sustainable education: re-visioning learning and change*. Bristol, England: Schumaker Briefings.

I am considering keeping the concept of sustainability education in my research, as it pertains to my program at Prescott College, and it plays such a vital role in disseminating information through education across generations and educational settings. An ecological view incorporated into education implies putting relationship back into education and learning, where Sterling claims that it can “seek synergy between all aspects of education: ethos, curriculum, pedagogy, management, procurement and resource use, architecture and community links – with emphasis on such values as respect, trust, participation, ownership, democracy, openness, and environment.” Sterling envisions this change, and considers that it can be realized in practicable steps in our own working contexts. He shares what he believes is the essence in the work, that we are we all engaged in the ‘learning about learning’ process, and one which will directly affect the chances of a more sustainable future for all. He speaks directly to the transformative feature of learning. Where we no longer learn for the sake of learning, but the learning changes us. Since the focus of my research will entail a group of special education students taking public transportation to the garden as part of their curriculum, this text will be essential for my dissertation research development and proposal. The text will help me glean valuable knowledge regarding sustainability education as a transformative platform for building capacity among the differently abled such that they can begin to have a voice in their own lives and within their community. This is a primary source.